



# **IP Surveillance API User Guide**

**Version 2.5**

**Revision 6**

**2016-04**



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| Revision History       | Description                                                                                                                                                                                                                                                                                                                           | Reviser                                | Date    |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------|
| Version 2.0 Revision 1 | Initial version                                                                                                                                                                                                                                                                                                                       | Hong Meng                              | 2012-04 |
| Version 2.0 Revision 2 | merge qi's document                                                                                                                                                                                                                                                                                                                   | Hong Meng                              | 2012-06 |
| Version 2.0 Revision 3 | add bond and holiday service                                                                                                                                                                                                                                                                                                          | Minglei Yu                             | 2012-10 |
| Version 2.0 Revision 4 | Combine front-end devices and back-end devices together                                                                                                                                                                                                                                                                               | Minglei Yu<br>Linming He<br>Guangmu Ma | 2013-12 |
| Version 2.0 Revision 5 | New resource <b>/ISAPI/System/Hardware/ABF</b> is defined.<br>The new <b>&lt;isSupportSpareException&gt;</b> and <b>&lt;isSupportPoePowerException&gt;</b> tag in service <b>/ISAPI/Event/capabilities</b> is optional.<br>The new <b>&lt;intelliBackSearch&gt;</b> tag in service <b>/ISAPI/Smart/FieldDetection/ID</b> is optional. | Minglei Yu<br>Linming He               | 2014-01 |
| Version 2.0 Revision 6 | The new <b>&lt;VideoInputList&gt;</b> tag in service <b>/ISAPI/System/Network/SIP/&lt;ID&gt;/SIPInfo</b> is optional.                                                                                                                                                                                                                 | Minglei Yu<br>Linming He               | 2014-02 |
| Version 2.0 Revision 7 | Add email、ip、ftp、ntp test server.<br>The new <b>&lt;frontColorMode&gt;</b> and <b>&lt;frontColor&gt;</b> tag in service <b>/ISAPI/System/Video/inputs/channels/ID/overlays</b> is optional.<br>Add face detection trigger and schedule.<br>New resource <b>/ISAPI/System/Hardware/LED/ISAPI/System/Network/EZVIZ</b> is defined.      | Minglei Yu<br>Linming He               | 2014-04 |
| Version 2.1 Revision 1 | Add <b>/ISAPI/System/Video/inputs/channels/ID/heatMap</b> server.<br>Add <b>/ISAPI/System/Video/inputs/channels/ID/counting</b> server.<br>Add                                                                                                                                                                                        | Minglei Yu<br>Linming He               | 2014-05 |

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------|
|                        | <p><b>/ISAPI/Security/serverCertificate</b> server.</p> <p>New resource <b>/ISAPI/Security/webCertificate</b> is defined.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |         |
| Version 2.2 Revision 1 | <p>Update the <b>/ISAPI/Security/previewLinkNum</b> resources</p> <p>Update the <b>/ISAPI/Streaming/channels/ID/dual VCA</b> resources</p> <p>Update the <b>/ISAPI/Event/triggersCap</b> resources</p> <p>The new &lt;audioSamplingRate&gt; tag in service <b>/ISAPI/System/TwoWayAudio/channels/ID</b> is optional.</p> <p>Add <b>/ISAPI/GIS</b> server.</p>                                                                                                                                                                                                                                                                                 | Minglei Yu<br>Linming He | 2014-07 |
| Version 2.3 Revision 1 | <p>Add the</p> <p><b>/ISAPI/Smart/regionEntrance...</b></p> <p><b>/ISAPI/Smart/regionExiting...</b></p> <p><b>/ISAPI/Smart/loitering...</b></p> <p><b>/ISAPI/Smart/group...</b></p> <p><b>/ISAPI/Smart/rapidMove...</b></p> <p><b>/ISAPI/Smart/parking...</b></p> <p><b>/ISAPI/Smart/unattendedBaggage...</b></p> <p><b>/ISAPI/Smart/attendedBaggage...</b></p> <p><b>/ISAPI/Streaming/channels/&lt;ID&gt;/regionClip...</b></p> <p><b>/ISAPI/System/Network/WirelessDial</b></p> <p>...</p> <p>Update the &lt;NetworkCap&gt;</p> <p>&lt;EventTriggersCap&gt;</p> <p><b>/ISAPI/Event/triggers</b></p> <p><b>/ISAPI/Smart/capabilities</b></p> | Jun Ying                 | 2014-10 |

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |        |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|
| Version 2.4 Revision 1 | <p>[add]<br/>         /ISAPI/Streaming/channels/&lt;ID&gt;/ht<br/>         tppreview<br/>         /ISAPI/System/Video/inputs/chann<br/>         els/ID/VCAResource<br/>         /ISAPI/System/Audio/channels/&lt;ID<br/>         &gt;/dynamicCap<br/>         /ISAPI/Image/channels/&lt;ID&gt;/lensDi<br/>         stortionCorrection (HIKVISION<br/>         ISAPI_2.0-Image Service)</p> <p>[mod]<br/>         /ISAPI/System/Video/capabilities<br/>         /ISAPI/Smart/RegionEntrance/&lt;ID&gt;/<br/>         capabilities<br/>         /ISAPI/Smart/regionEntrance/ID/re<br/>         gions/ID<br/>         /ISAPI/Smart/rapidMove/&lt;ID&gt;/capa<br/>         bilities<br/>         /ISAPI/Smart/rapidMove/ID/region<br/>         s/ID<br/>         /ISAPI/Smart/regionExiting/ID/regi<br/>         ons/ID<br/>         /ISAPI/Smart/regionExiting/&lt;ID&gt;/ca<br/>         pabilities<br/>         /ISAPI/Smart/FieldDetection/ID/reg<br/>         ions/ID<br/>         /ISAPI/Smart/LineDetection/ID/line<br/>         Item/ID<br/>         /ISAPI/Streaming/channels/&lt;ID&gt;<br/>         /ISAPI/Security/capabilities</p> | Xiaomin wang | 2015-2 |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|



|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |        |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|
| Version 2.5 Revision 1 | <p><b>[add]</b><br/>/ISAPI/System/Network/DDNS/CountryID/capabilities</p> <p><b>[mod]</b><br/>/ISAPI/System/Network/DDNS/ID<br/>/ISAPI/System/Network/EZVIZ</p>                                                                                                                                                                                                                                                                                           | Zhenlei Zhu  | 2015-3 |
| Version 2.5 Revision 2 | <p><b>[add]</b><br/>/ISAPI/System/Video/inputs/channels/&lt;ID&gt;/counting/capabilities</p> <p><b>[mod]</b><br/>/ISAPI/System/Video/inputs/channels/&lt;ID&gt;/counting</p> <p><b>[add]</b><br/>ISAPI/System/Video/inputs/channels/&lt;ID&gt;/counting/RecommendValue</p> <p><b>[add]</b><br/>/ISAPI/System/Video/inputs/channels/ID/heatMap/pictureInfo</p> <p><b>[mod]</b><br/>/ISAPI/System/Video/inputs/channels/&lt;ID&gt;/heatMap/capabilities</p> | Xiaomin wang | 2015-9 |
| Version 2.5 Revision 3 | <p><b>[mod]</b>/ISAPI/System/capabilities</p> <p><b>[mod]</b>/ISAPI/System/Network/interfaces/&lt;ID&gt;</p> <p><b>[mod]</b>/ISAPI/System/Video/inputs/channels/ID/overlays</p> <p><b>[add]</b><br/>/ISAPI/Streaming/channels/&lt;ID&gt;/capabilities</p> <p>/ISAPI/Streaming/channels/&lt;ID&gt;/dynamicCapWithCondition</p> <p>/ISAPI/GIS/channels/&lt;ID&gt;/reviseGPS/capabilities</p> <p>/ISAPI/GIS/channels/&lt;ID&gt;/reviseGPS</p>                | Xiaomin wang | 2015-9 |

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |         |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------|
| Version 2.5 Revision4 | [add]<br>/ISAPI/System/onlineUpgrade/serve<br>r<br>/ISAPI/System/onlineUpgrade/versi<br>on<br>/ISAPI/System/onlineUpgrade/upgr<br>ade<br>/ISAPI/System/onlineUpgrade/statu<br>s<br>/ISAPI/System/firmwareCode<br>/ISAPI/System/onlineUpgrade/judg<br>eVersion<br>/ISAPI/System/onlineUpgrade/capa<br>bilities                                                                                                                                                                                                                                                                                                                  | Zhenlei Zhu  | 2015-10 |
| Version 2.5 Revision5 | [add]<br>/ISAPI/Image/channels/<ID>/supple<br>mentLight<br>/ISAPI/Image/channels/<ID>/capabi<br>lities<br>/ISAPI/Image/channels/<ID>/shutte<br>r<br>/ISAPI/Image/channels/<ID>/expos<br>ure<br>/ISAPI/System/Video/inputs/chann<br>els/<ID>/roadInfo/<ID>/overlays/ca<br>pabilities<br>/ISAPI/Streaming/channels/<ID>/re<br>freshFrame<br>/ISAPI/Streaming/channels/<ID>/re<br>freshFrame/capabilities<br>/ISAPI/System/time/capabilities<br>/ISAPI/System/time/<br>/ISAPI/Image/channels/<ID>/lensDi<br>stortionCorrection<br>/ISAPI/Event/schedules/HVTVehicle<br>Detects<br>/ISAPI/Event/schedules/HVTVehicle<br>Detects/ID | ZhenbangShao | 2015-10 |

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------|
| Version 2.5 Revision5  | /ISAPI/Security/onlineUser<br>/ISAPI/Event/schedules/storageDetection<br>/ISAPI/Smart/storageDetection<br>/ISAPI/Smart/storageDetection/rwlock<br>/ISAPI/Smart/storageDetection/rwlock/capabilities<br>/ISAPI/Smart/storageDetection/unlock<br>/ISAPI/Smart/storageDetection/unlock/capabilities<br>/ISAPI/System/Network/ftp/<ID><br>/ISAPI/System/externalDevice/supplementLight<br>/ISAPI/System/Network/interfaces/<ID>/capabilities<br>/ISAPI/System/Network/interfaces/ID/wireless/accessPointList/ID<br>/ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition | ZhenbangShao   | 2015-12 |
| Version 2.5 Revision5  | [mod]/ISAPI/Event/triggers/<ID>/notifications,add notificationMethod<br>"cloud"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Hongshuai Wang | 2016-02 |
| Version 2.5 Revision 6 | [mod]<br>/ISAPI/Streaming/channels/<ID>/capabilities<br>[add] /ISAPI/Streaming/channels/ID<br>/ISAPI/Streaming/channels/ID/dynamicCap<br>/ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition<br>/ISAPI/Streaming/channels/<ID>/capabilities<br>/ISAPI/Streaming/channels/ID/refreshFrame<br>/ISAPI/Streaming/channels/ID/refreshFrame/capabilities<br>/ISAPI/System/Network/ANRArmin                                                                                                                                                                               | Carrie Feng    | 2016.4  |

|  |                                                                                                                                    |  |  |
|--|------------------------------------------------------------------------------------------------------------------------------------|--|--|
|  | <b>gHost</b><br><b>/ISAPI/Snapshot/channels/&lt;ID&gt;/capabilities</b><br><b>Add a new error code:</b><br><b>UnSupportCapture</b> |  |  |
|--|------------------------------------------------------------------------------------------------------------------------------------|--|--|



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---

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# 1 Scope

This specification defines a HTTP-based application programming interface that enables physical security and video management systems to communicate with IP media devices in a particular way.

With regard to Media Streaming, please refer to “develop API of RTSP protocol”.

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] RFC2616 Hypertext Transfer Protocol-HTTP/1.1
- [2] W3C XML 1.0 specification
- [3] W3C Character encodings
- [4] RFC 2396 Uniform Resource Identifiers (URI): Generic Syntax and Semantics
- [5] RFC 2617 HTTP Authentication:Basic and Digest Access Authentication
- [6] International Electrotechnical Commission “ISO/IEC standard on UPnP device architecture makes networking simple and easy”, 2008-12-09. Retrieved on 2009-05-07.
- [7] International Organization for Standardization “ISO/IEC standard on UPnP device architecture makes networking simple and easy”, 2008-12-10. Retrieved on 2009-05-07.
- [8] UPnP Forum “UPnP Specifications Named International Standard for Device Interoperability for IP-based Network Devices”, 2009-02-05. Retrieved on 2009-05-07.

# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

**Standard Resources:** “index”, “indexr”, “description” and “capabilities” resources, that are

contained in all Services and General Resources, and provide a special description for these resources.

**Services:** a set of resources consisting of relevant General Resources.

**General Resources:** physical resources that supported by the devices.

**Node:** Services and General Resources.

## 3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

|      |                                 |
|------|---------------------------------|
| FQDN | Fully Qualified Domain Name     |
| REST | REpresentational State Transfer |
| IO   | Input/Output                    |
| UPnP | Universal Plug and Play         |

# 4 Architecture and Transmission Mechanism

The IP Media Device Management Protocol is based on REST architecture. The management and control interfaces defined in this specification are treated as resources utilizing the REpresentational State Transfer (REST) architecture. This architecture facilitates users by grouping related resources within hierarchical namespaces, and is more flexible for service discovery and future expansion.

REST architecture consists of clients and servers, among which clients initiate request to servers, while servers handle requests and response accordingly. Requests and responses are established via the transmission of “representations” of “resources”. REST architecture need to be based on an Application Layer protocol which provides various of standard communication formats for applications based on the transfer of meaningful representational state. HTTP[1] has a very rich vocabulary in terms of verbs(or “methods”), URIs, request and response headers, Internet media types, HTTP request and response codes etc. In addition, HTTP also has some features particularly suitable for REST architecture. So HTTP is used as external Application Layer protocol in this specification. In the architecture, clients are physical security and video management systems; servers are IP media devices.

This specification also contains full XML schema for the introduced resources.

## 4.1 REST and HTTP Methods

The following table shows how HTTP verbs are typically used to implement a web service based on REST architecture.

Table 1

| Resource                                                                                          | GET                                                                                                               | PUT                                                                                             | POST                                                                                                                                                                                     | DELETE                                                     |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Collection URI, such as <a href="http://webServer/resources">http://webServer/resources</a>       | <b>List</b> the members of collection, complete with their member URIs for further navigation.                    | Meaning defined as “ <b>replace</b> the entire collection with another collection”.             | <b>Create</b> a new entry in the collection where the ID is assigned automatically by the collection. The ID created is usually included as part of the data returned by this operation. | Meaning defined as “ <b>delete</b> the entire collection”. |
| Member URI, such as <a href="http://webServer/resources/7416">http://webServer/resources/7416</a> | <b>Retrieve</b> a representation of the addressed member of the collection expressed in an appropriate MIME type. | <b>Update</b> the addressed member of the collection or <b>create</b> it with the specified ID. | Treat the addressed member as a collection in its own right and <b>create</b> a new subordinate of it.                                                                                   | <b>Delete</b> the addressed member of the collection.      |

## 4.2 XML

A device must support the syntax defined by W3C XML 1.0 specification [2] and UTF-8 character set [3]. All XML files must adopt UTF-8 encoding according to RFC3629. Additionally, all resources share a common XML schema as defined in Annex.

Any resources can specify separate input and output XML Documents. If a specific data structure is defined inside these documents, then they must be specified as XML Schema Documents (xsd) in Annex.

Lists contained in XML blocks will be represented in the format of <ISAPIList>, and each <ISAPIList> tag may contain one or more nodes.

## 4.3 Resources overview

Three kinds of resources are defined in this specification. They are “Standard Resources”, “Services” and “General Resources”. Related General Resources are grouped by Services. Services and General Resources contain Standard Resources. Figure 1 shows their relationship.

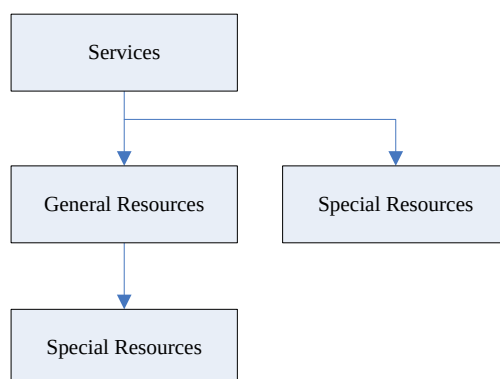


**Figure 1**

The “index”, “indexr”, “description” and “capabilities” are defined as Standard Resources in this specification. Both “index” and “description” will be mandatorily included by each node, and both “indexr” and “capabilities” will be optionally included by each node. For more detailed description see Section 6.

Services defined in this specification are divided into different services categories. Each category has its own name spaces (see Section 4.6 for the name space definitions). The following services are defined:

**Table 2**

| Services         | Description                                              | Reference |
|------------------|----------------------------------------------------------|-----------|
| System           | Configure and operate the general system functions.      | 8.1       |
| Network          | Configure network interfaces.                            | 8.2       |
| IO               | Configure the Input/Output (IO).                         | 8.3       |
| Video            | Handle video-related configuration.                      | 8.4       |
| Audio            | Configure the Audio.                                     | 8.5       |
| Two way audio    | Control two ways audio.                                  | 8.6       |
| Serial           | Configure and control the Serial ports.                  | 8.7       |
| Security         | Provide Security functions.                              | 8.8       |
| Streaming        | Configure and control the streaming media content.       | 8.9       |
| Motion Detection | Configure and control the motion detection of the device | 8.10      |
| Event            | Provide event notification functions.                    | 8.11      |
| PTZ              | Control the device pan tilt and zoom.                    | 8.12      |

## 4.4 Protocol URL

The URL scheme is used to locate device resources via a specific protocol in the network. This section defines the syntax and semantics for http(s) URLs.

```
<protocol>://<host>[:port][abs_path [?query]]
```

**protocol:** URL scheme for the particular request. The http and https protocols are allowed in this specification.

**host:** The host field refer to the hostname, IP address, or the FQDN of an IP device.

**port:** The port field refer to the port number of that host on which the identified resource is located at the IP device listening for TCP connections. If the port is empty or not given, the default port is assumed. For HTTP, the default port 80. For HTTPS, the default port 443.

**abs\_path:** The Request-URI [1] for the resources is abs\_path [4]. The abs\_path in this specification is most often of the form “[/Services][General Resources][Standard Resources]”, which is suitable for resources to update or restore device configurations. “ID” which appears in the abs\_path identifies one resource of a list resource in this specification.

**query:** The query field is a string of information to be interpreted by the resource. It can include some resource-related parameters. It must be listed in name-value pair syntax (p1=v1&p2=v2&...&pn=vn). Each resource can define a set of parameters. Defining input data which is specific to the resource will be prior than query usage.

## 4.5 Messages

HTTP messages are used for communication between physical security and video management systems and IP media devices in this specification. In order to configure and control the device, some provisions are specified for these HTTP message.

### 4.5.1 Connection Header Field

Devices that implement HTTP/1.1 should support persistent connections in order to meet video management systems or client applications’ requirements that issue multiple HTTP(s) transactions. HTTP/1.1 is implemented and utilized according to RFC 2616 in the IP devices. For a video management system or client application that uses persistent connection for multiple transactions, it is required to implement “Connection: Keep-Alive” HTTP header field, while also adopt the “Connection: close” HTTP header field for the last transaction of the persistent connection. This process will assume that the application can identify the last request in a sequence of multiple requests.

### 4.5.2 Authorization and WWW-Authenticate Header Fields

When a video management system or client application sends any request to the device, it must

be authenticated by means of Basic Access [5] according to RFC 2617, and thus all the devices are required to support Basic Access. Authorization header field is sent along with each request, and if a user is authenticated, the request will follow the normal execution flow. If client HTTP request is with no authentication credentials, unauthorized HTTP response (401) will be returned with WWW-Authenticate header field.

### 4.5.3 Entity Body

The Content-Type entity-header field indicates the media type of the entity body. The Content-Type may be designated as “application/xml; charset=’UTF-8’”, “application/octet-stream”, etc.

For configuration information, the Content-Type is usually “application/xml; charset=’UTF-8’”. For example,

**HTTP Request Message:**

```
GET /ISAPI/System/status HTTP/1.1
...
```

**HTTP Response Message:**

```
HTTP/1.1 200 OK
...

Content-Type: application/xml; charset="UTF-8"
...
<?xml version="1.0" encoding="UTF-8"?>
<DeviceStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
...
</DeviceStatus>
```

For data (i.e. firmware, configuration file, etc.), the Content-Type may be “application/octet-stream”. For example,

**HTTP Request Message:**

```
PUT /ISAPI/System/configurationData HTTP/1.1
...

Content-Type: application/octet-stream
...

[proprietary configuration file data content ]
```

**HTTP Response Message:**

```
HTTP/1.1 200 OK
...
```



```
Content-Type: application/xml; charset="UTF-8"
...
<?xml version="1.0" encoding="UTF-8"?>
<ResponseStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
...
</ResponseStatus>
```

## 4.5.4 Operations

Different resources will specify different operation.

- The "set device configuration" resources use PUT operation. If there is an XML block parameter for the request, the inbound XML format is defined according to a resource-special XML schema. Request status will be returned by the XML response information of the device, and can be used for indicating the PUT operation status. The responded XML format is defined by "XML Response Schema" (please refer to section 4.5.5 for detail description). After the device configuration is updated successfully, it will return an XML response with status code "OK"; while another status code will be used for indicating unsuccessful operations. In either case, the device only responses after it is ready to continue normal operation, i.e. accepting streaming request, receiving configuration commands, etc.
- The "get device configuration" resources use GET operation. After a successful GET operation, the result will be returned in XML format according to the resource description. For an unsuccessful request (i.e. users is not authenticated), the result will be returned in XML format according to "XML Response Schema".
- Resources to create device configurations information will use the POST operation. If there is an XML block parameter for the request, the inbound XML format is defined according to a resource-special XML schema. The request status will be indicated by the XML response information returned from the device, and can be used to indicate the status of the POST operation. This XML format is defined according to "XML Response Schema" (see section 4.5.5 for details). After successfully creating the data, the device returns an XML response with status code "OK". A separate status code is used for unsuccessful operations.
- Resources to delete device configurations information will use the Delete operation. If successful, the result will be returned an XML response with status code "OK". A separate status code is used for unsuccessful operations. This XML format is defined according to "XML Response Schema" (see section 4.5.5 for details).
- Data uploading resources (i.e. firmware upgrade, import configuration, etc.) will use PUT operation. The content of the data will be stored in the body of the HTTP request. If successful, the result will be returned an XML response with status code "OK". A separate status code is used for unsuccessful operations. This XML format is defined according to "XML Response Schema" (see section 4.5.5 for details).

- Data receiving resources (i.e. export configuration file) use GET operation. If successful, the result will be returned the data according to the resource description. An XML block is used for unsuccessful operations. This XML format is defined according to “XML Response Schema” (see section 4.5.5 for details).
- For Standard Resources, GET operation will be used. For more detailed description see Section 6.

If there is an XML block for the HTTP request or response, the Content-Type and Content-Length will be set in the headers of the HTTP message.

## 4.5.5 Error Handling

As with any other protocol, errors may occur during communications, protocol or message processing, and the specification classifies error handling into categories below:

- Protocol Errors, which are result of an incorrectly formed protocol message. Protocol Errors may contain header value or be received in an not expected or experience a socket timeout. To indicate and interpret protocol error, HTTP protocol has defined a set of standard status codes [e.g., 1xx, 2xx, 3xx, 4xx, 5xx]. According to this specification, the IP devices will use appropriate HTTP protocol defined status codes for error reporting and when received handle accordingly.
- Application Errors, which are generated as a result of REST operations errors. All such application errors must be reported and handled through HTTP messages. The following table indicates the mapping relationship between HTTP status codes and REST operations, and also the information contained in response header and bodies.

**Table 3**

| HTTP Status Codes | REST Meaning                                                                                                                                                                                                                 | GET | PUT | POST | DELETE |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|------|--------|
| 200               | “OK”-The request has succeeded.<br>Header Notes: None<br>Body Notes: The requested resource will be returned in the body.                                                                                                    | √   | √   |      | √      |
| 201               | “Created”- The request has created a new resource.<br>Header Notes: The Location header contains the URI of the newly created resource.<br>Body Notes: The response returns an entity describing the newly created resource. |     | √   | √    |        |
| 204               | “No Content” – The request succeeded, but there is no data to                                                                                                                                                                |     | √   |      | √      |

| HTTP Status Codes | REST Meaning                                                                                                                                                                                                                                                                                                                                                                                  | GET | PUT | POST | DELETE |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|------|--------|
|                   | return.<br>Header Notes: None<br>Body Notes: No body is allowed.                                                                                                                                                                                                                                                                                                                              |     |     |      |        |
| 301               | “Moved Permanently” – The requested resource has moved permanently.<br>Header Notes: The Location Header contains the URI of the new location.<br>Body Notes: The body may contain the new resource location.                                                                                                                                                                                 | √   |     |      |        |
| 302               | “Found” – The requested resource should be accessed through this location, but the resource actually lives at another location. This is typically used to set up an alias.<br>Header Notes: The Location header contains the URI of the resource.<br>Body Notes: The body may contain the new resource location.                                                                              | √   |     |      |        |
| 400               | “Bad Request” – The request was badly formed. This is commonly used for creating or updating a resource, but the data was incomplete or incorrect.<br>Header Notes: The Reason-Phrase sent with the HTTP status header may contain information on the error.<br>Body Notes: The response may contain more information of the underlying error that occurred in addition to the Reason-Phrase. |     | √   | √    |        |
| 401               | “Unauthorized” – The request requires user authentication to access this resource. If the request contains invalid authentication data, this code is sent.<br>Header Notes: At least one authentication mechanism must be                                                                                                                                                                     | √   | √   | √    | √      |

| HTTP Status Codes | REST Meaning                                                                                                                                                                                                                                                                                                                                                                                                                      | GET | PUT | POST | DELETE |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|------|--------|
|                   | specified in the WWW-Authenticate header. The Reason-Phrase sent with the HTTP status header may contain information on the error.<br>Body Notes: The response may contain more information of the underlying error that occurred in addition to the Reason-Phrase.                                                                                                                                                               |     |     |      |        |
| 403               | “Forbidden” – The request is not allowed because the server is refusing to fill the request. A common reason for this is that the device does not support the requested functionality.<br>Header Notes: The Reason-Phrase sent with the HTTP status header may contain information on the error.<br>Body Notes: The response may contain more information of the underlying error that occurred in addition to the Reason-Phrase. | √   | √   | √    | √      |
| 404               | “Not Found” – The requested resource does not exist.<br>Header Notes: None<br>Body Notes: None                                                                                                                                                                                                                                                                                                                                    | √   | √   | √    | √      |
| 405               | “Method Not Allowed” – The request used an HTTP method that is not supported for the resource because the specification does not allow this method. If the device does support the functionality but it is a valid operation (that has been defined in this specification), then 403 is returned.<br>Header Notes: The Allow header lists the supported HTTP methods for this resource.<br>Body Notes: None                       | √   | √   | √    | √      |

| HTTP Status Codes | REST Meaning                                                                                                                                                                                                                                                         | GET | PUT | POST | DELETE |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|------|--------|
| 500               | “Internal Server Error” - An internal server error has occurred.<br>Header Notes: None<br>Body Notes: None                                                                                                                                                           | √   | √   | √    | √      |
| 503               | “Service Unavailable” – The HTTP Server is up, but the REST service is not available. Typically this is caused by too many client requests.<br>Header Notes: The Retry-After header suggests to the client when to try resubmitting the request.<br>Body Notes: None | √   | √   | √    | √      |

Responses to many resources calls contain data in XML format. XML Response Schema is defined in Annex. XML Response Schema consists of the following sections:

- requestURI - the URI of the corresponding HTTP request message
- statusCode - indicating the status of the REST operations.

**Table 4**

| statusCode | Description                                                                                                                                                                                      |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | “OK” - indicate a successful operation is done (remark: if the request contains some parameters that are not supported, the device will ignore those parameters and return OK as statusCode)     |
| 2          | “Device Busy” - for a command which cannot be processed at that time (i.e. if the device receives a reboot command during upgrading process)                                                     |
| 3          | “Device Error” - if the device can not perform the request for a hardware error. An error message in statusString format to indicate operation failure                                           |
| 4          | “Invalid Operation” - either if the operation is not supported by the device, or if the user has not passed the authentication, or if the user does not have enough privilege for this operation |
| 5          | “Invalid XML Format” - if the XML format is not recognized by the system. There will be statusString returned to represent different errors                                                      |
| 6          | “Invalid XML Content” - an incomplete message or a message containing an out-of-range parameter. Relative statusString will be return.                                                           |
| 7          | “Reboot Required” - If a reboot is required before the operation taking effect                                                                                                                   |

- statusString – error type for the not completed operation.
- id – Return the ID created by the device in POST operation
- subStatusCode – detail string indicating the reason the command was not completed. Table 5 contains general subStatusCode, In addition, Each resource may have some special subStatusCode, Each subStatusCode reference resource

description.

**Table 5**

| statusCode | subStatusCode       | Description                                                                                                                            |
|------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1          | ok                  | indicate a successful operation is done                                                                                                |
|            | riskPassword        | There is a risk of the password                                                                                                        |
| 2          | noMemory            | Device doesn't have enough memory                                                                                                      |
|            | serviceUnavailable  | service unavailable                                                                                                                    |
|            | upgrading           | upgrading                                                                                                                              |
|            | deviceBusy          | Device busy or no response                                                                                                             |
|            | reConnectIpc        | Reconnect the video server                                                                                                             |
| 3          | deviceError         | Device hardware error                                                                                                                  |
|            | badFlash            | Operate flash error                                                                                                                    |
|            | 28181Uninitialized  | 28181 configuration uninitialized                                                                                                      |
| 4          | notSupport          | The device doesn't support this resource                                                                                               |
|            | lowPrivilege        | Not have enough privilege for this operation                                                                                           |
|            | badAuthorization    | The user has not passed the authentication                                                                                             |
|            | methodNotAllowed    | http method is not allowed                                                                                                             |
|            | notSetHdiskRedund   | can't set redundancy attribute for hdd disk(system exists more than one non-operate hdd disk,and the attribution of a hdd disk is WR ) |
|            | invalidOperation    | Invalid operation                                                                                                                      |
|            | notActivated        | The device is not activated                                                                                                            |
| 5          | hasActivated        | The device has activated                                                                                                               |
|            | badXmlFormat        | Wrong XML format                                                                                                                       |
| 6          | badParameters       | Parameters error                                                                                                                       |
|            | badHostAddress      | Wrong Host Address                                                                                                                     |
|            | badXmlContent       | Wrong XMLcontent                                                                                                                       |
|            | badIPv4Address      | Wrong IPv4 address                                                                                                                     |
|            | badIPv6Address      | Wrong IPv6 address                                                                                                                     |
|            | conflictIPv4Address | IPV4 address conflict                                                                                                                  |
|            | conflictIPv6Address | IPV6 address conflict                                                                                                                  |
|            | badDomainName       | Wrong Domain                                                                                                                           |
|            | connectSreverFail   | Failed to connect with Server                                                                                                          |
|            | conflictDomainName  | Domain conflict                                                                                                                        |
|            | badPort             | Port conflict                                                                                                                          |
|            | portError           | Port error                                                                                                                             |
|            | importErrorData     | Failed to import data                                                                                                                  |
|            | badNetMask          | Wrong subnet mask                                                                                                                      |
|            | badVersion          | Version mismatching                                                                                                                    |
|            | badDevType          | Device type mismatching                                                                                                                |
|            | badLanguage         | Language mismatching                                                                                                                   |
|            | incorrentUserNameOr | The user name or the password is incorrect.                                                                                            |

| statusCode | subStatusCode                   | Description                                                                                                                                                                   |
|------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Password                        |                                                                                                                                                                               |
|            | invalidStoragePoolOfCloudServer | The storage pool of the cloud server is invalid, no configured storage pool or the storage pool ID is incorrect.                                                              |
|            | noFreeSpaceOfStoragePool        | No free space for the storage pool.                                                                                                                                           |
|            | riskPassword                    | There is a risk of the password                                                                                                                                               |
|            | fileFormatError                 | Incorrect file format                                                                                                                                                         |
|            | fileContentError                | Incorrect file Content                                                                                                                                                        |
|            | UnSupportCapture                | Note: When H.264+ is enabled, capture of 4096*2160 or 3072*2048 resolution is not supported. To use the capture function, you can turn off H.264+ or select other resolution. |
| 7          | rebootRequired                  | A reboot is required before the operation taking effect                                                                                                                       |

**Note:**

1. When live view at the resolution of 2560\*2048 or 3072\*1728, if capture is needed, please set the frame rate as lower than 30 fps.
2. When H.264+ is enabled, captures of 4096\*2160, 3072\*2048, 3072\*1728, and 2560\*2048 resolution are not supported. To use the capture function, you can turn off H.264+ or select other resolution.

## 4.6 Namespaces

The namespace xmlns="http://www.isapi.org/ver20/XMLSchema" is used in this specification.

The following namespaces are referenced by this specification:

- xmlns:xs="http://www.w3.org/2001/XMLSchema"
- xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
- xmlns:xlink="http://www.w3.org/1999/xlink"

## 4.7 Security

User-based access control is adopted in this specification. Security policy configuration in this specification based on three different user levels.

- Administrator – the privilege can access all supported resources on IP device.
- Operator – the privilege can access some general-level and higher-level resources. See the Resource Description of each resource for details.
- Viewer – the privilege can only access some general-level resources. See the Resource Description of each resource for details.

In order to access all supported resources, one account with Administrator privilege level must be

active at all times. A default user account “admin” is provided by all IP devices. It has an Administrator user level, and must not be deleted. Its default password is “12345”.

## 5 Device discovery

The IP devices support Universal Plug and Play (UPnP) technology to discovery/locate themselves. A UPnP compatible device will automatically announce its network address, supported devices and services types when connected to a network, and therefore becoming “plug-and-play” by allowing clients recognize those information and begin using this device immediately.

The UPnP architecture supports zero-configuration networking, and the device can dynamically join a network, obtain IP address, announce its name, convey its capabilities upon request, and gets the on-line status and capabilities of other devices. DHCP and DNS servers are optional and are only used if they are available on the network. Devices can leave the network automatically without leaving any unwanted status information behind. UPnP was published as a 73-part International Standard, ISO/IEC 29341, in December, 2008 [6][7][8].

The foundation for UPnP networking is IP addressing. When a device is connected to the network for the first time, its Dynamic Host Configuration Protocol (DHCP) client will search for a DHCP server. If the device successfully get its domain name via DNS server or DNS forwarding, then it should use this domain name for the following network operations; if the network is unmanaged and no DHCP server is found, the device must assign an address for itself, which is known as “AutoIP” of the UPnP Device Architecture [9][10], and use this IP address for the following network operations.

Once given an IP address, the Discovery process will be executed in UPnP networking. The UPnP discovery protocol is also known as Simple Service Discovery Protocol (SSDP). When a device is added to the network, SSDP allow that device to announce its services to the control points on the network. Similarly, when a control point is added to the network, SSDP allows that control point to search for relative devices on the network. During the above searching or announcing process, a discovery message which contains essential device specifics or one of its services will be transferred, for example, device type, identifier, and a pointer to more detailed information.

After a control point has discovered a device, the control point still needs more operations to request more information about the device or to interact with it. An HTTP GET request for mandatory index Standard Resource will return a list of the resources supported by the device. Remark: the index resource will only return the first level resources of a node, while the index Standard Resource will return a complete folder list in tree structure with the current resource as root folder.



## 6 Resource Description

### 6.1 Resource Description Outline

Each resource in this specification is defined using the following format.

| <i>Resource_URI</i>                                                    |                                                                             | <i>Type</i> | <i>Version</i> |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------|----------------|
| <i>Operation_Name</i>                                                  |                                                                             |             |                |
| Description                                                            | <i>Description of the operation.</i>                                        |             |                |
| Query                                                                  | <i>Indicates the name/value pairs (p1, p2, p3,...,pn) for the resource.</i> |             |                |
| Inbound Data                                                           | <i>Indicates inbound data for the resources.</i>                            |             |                |
| Success Return                                                         | <i>the Type (if present) and the name of XML Data Block</i>                 |             |                |
| Error Status Code                                                      | <i>Special fault code, optional</i>                                         |             |                |
| <i>Notes: describes any special processing rules for the resource.</i> |                                                                             |             |                |

**Type** refers to “Standard Resource”, “Service” and “General Resource”.

**Version** is used to determine the version of the protocol. The version number shall be set to “1.0” in this specification.

**Operation\_Name** refers to “GET”, “PUT”, “POST” and “DELETE”.

**Inbound Data** includes three types as follows:

- NONE –no input data
- DataBlock – the name of an XML Data Block. Datablocks used here must be defined according to the specification.
- Mime type – mime type for the input data in the HTTP payload. Remark: “application/xml” is not a valid mime type.

If a device does not support particular XML tags or blocks, then it may not be supported by the resource operations.

Generally, if a field is not provided in the inbound XML, then its current values shall not be modified in the device’s repository.

If a required field did not exist in the device’s repository, then it must be provided in the applicable resource operations.

**Success Return and Error Return** detailed description see Section 4.5.5.

### 6.2 Built-in Types

Table 6

| Type     | Description                                                                                              |
|----------|----------------------------------------------------------------------------------------------------------|
| BaudRate | A positive numerical value indicating the data transmission rate in symbols per second.<br>Value is >=0. |

|              |                                                                                                                                                                                               |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | Example: 9600                                                                                                                                                                                 |
| Color        | RGB triplet in hexadecimal format (3 bytes) without the preceding "0x". Example: "FF00FF"                                                                                                     |
| Coordinate   | A positive numerical value in pixels. A coordinate pair of 0,0 (x,y) indicates the bottom-left corner of the video image.<br>Value is >=0.<br>Maximum value is dependent on video resolution. |
| FPS          | Frame rate multiplied by 100.<br>Example: 2500 [PAL]                                                                                                                                          |
| IPv4 Address | Notation is ISAPI.ISAPI.ISAPI.ISAPI<br>Example: 3.137.217.220                                                                                                                                 |
| MAC          | MAC Address<br>Notation is aa:bb:cc:dd:ee:ff with 6 hex bytes.                                                                                                                                |

## 6.3 Annotation

The XML Data Blocks described in this document contains annotations for the field's properties. Please refer to the XML schema definitions for detail description.

The following annotation content is inserted into the comments to describe the data carried in the field:

**Table 6**

| Annotation | Description                                                                                                                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| req        | Required field.                                                                                                                                                                                                |
| Opt        | Optional field. For data uploaded to the device, if the field is present but the device does not support it, it should be ignored.                                                                             |
| Dep        | This field is required depending on the value of another field.                                                                                                                                                |
| Ro         | Read-only. For XML data that is both read and written to the device, this field is only present in XML returned from the device. If this field is present in XML uploaded to the device, it should be ignored. |
| Wo         | Write-only. This field is only present in XML that can be uploaded to the device. This field should never be present in data returned from the device. [This is used for uploading passwords].                 |
| Xs:<type>  | A type defined in XML Schema Part 2: Datatypes Second Edition, see <a href="http://www.w3.org/TR/xmlschema-2">http://www.w3.org/TR/xmlschema-2</a>                                                             |

Remark: optional XML structures may contain required fields for the operation, which mean that even if the entire XML block is optional, some of its contained fields may still be necessary if required.

## 7 Standard Resources

This section describes the standard resources.

Standard Resources do not contain themselves.

The requestURIs “/index”, “/description” are required.

### 7.1 index

| index                                                                   |                                          | Standard | Resource | v2.0 |
|-------------------------------------------------------------------------|------------------------------------------|----------|----------|------|
| GET                                                                     |                                          |          |          |      |
| Description                                                             | Enumerate child resources of a resource. |          |          |      |
| Query                                                                   | None                                     |          |          |      |
| Inbound Data                                                            | None                                     |          |          |      |
| Success Return                                                          | <ResourceList>                           |          |          |      |
| Notes: Returns a non-recursive resource listing of all child resources. |                                          |          |          |      |

### 7.2 indexr

| indexr                                                              |                                          | Standard | Resource | v2.0 |
|---------------------------------------------------------------------|------------------------------------------|----------|----------|------|
| GET                                                                 |                                          |          |          |      |
| Description                                                         | Enumerate child resources of a resource. |          |          |      |
| Query                                                               | None                                     |          |          |      |
| Inbound Data                                                        | None                                     |          |          |      |
| Success Return                                                      | <ResourceList>                           |          |          |      |
| Notes: Returns a recursive resource listing of all child resources. |                                          |          |          |      |

### 7.3 description

| description                                                                              |                                     | Standard | Resource | v2.0 |
|------------------------------------------------------------------------------------------|-------------------------------------|----------|----------|------|
| GET                                                                                      |                                     |          |          |      |
| Description                                                                              | Describe the corresponding resource |          |          |      |
| Query                                                                                    | None                                |          |          |      |
| Inbound Data                                                                             | None                                |          |          |      |
| Success Return                                                                           | <ResourceDescription>               |          |          |      |
| Notes: <version> set the version of resource. In this specification, its value is “2.0”. |                                     |          |          |      |

A version attribute is included in the description. This means resources with different versions

may exist within the same Services. In that case, the version of Services is the version of the contained resource with the lowest version, and all resources in the Services container must be backward compatible. If any resource of a Service container can not maintain backward compatibility with previous versions, a new Services version should be introduced.

## 7.4 capabilities

| capabilities   |                                                         | Standard | Resource | v2.0 |
|----------------|---------------------------------------------------------|----------|----------|------|
| GET            |                                                         |          |          |      |
| Description    | Describe the capabilities of the corresponding resource |          |          |      |
| Query          | None                                                    |          |          |      |
| Inbound Data   | None                                                    |          |          |      |
| Success Return | Resource-specified                                      |          |          |      |
| Notes:         |                                                         |          |          |      |

For the General Resource, which inbound data is specified as an XML payload, the Standard Resource (capabilities) is provided for video management systems or client applications to query an IP device and understand what XML tags are supported.

“Capabilities” is essentially an XML instance of the corresponding General Resource XML Data Block. “Capabilities” must contain the acceptable values for each attribute.

While XML Schema Document are also required of any XML data defined by this specification and xsd documents are capable of defining the acceptable range of values for any attribute, using a global xsd to define capacities would imply that all devices support the same options for any parameter. By allowing devices to respond to the capabilities request, each device can support different values for any attribute, within the constraints of the schema.

**Table 7**

| Capabilities Attribute | Description                                                                           | Syntax                                                                     | Applicable XML Data Types                 |
|------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------|
| min                    | The minimum character length for a string, or the minimum numerical value of a number | Examples:<br>min="0"<br>min="19"<br>min="-74"(numerical only)<br>min="1.6" | All except fixed data types <sup>1)</sup> |
| max                    | The maximum character length for a string, or the maximum numerical value of a number | Examples:<br>max="4"<br>max="37"<br>max="8192"<br>max="14.61"              | All except fixed data types <sup>1)</sup> |
| range                  | Indicates the possible range of numerical values within the                           | Ranges are listed in numerical order separated                             | All numerical data types                  |

| Capabilities Attribute | Description                                                                                                                                                                                          | Syntax                                                                                                                                                                                                                                                                       | Applicable XML Data Types   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|                        | “min” and “max” attributes of an element. This attribute should only be used if the possible value for an XML element does not include the entire numerical range between “min” and “max” attributes | by a “,” character. A range has the form “x~y” where x is the range floor and y is the range ceiling. Single numbers may also be used.<br><br>Example: if an XML element supports values 0, 456, 1674 to 2009 and 2012, the syntax would be: range=“0, 456, 1674~2009, 2012” |                             |
| opt                    | All except fixed data types                                                                                                                                                                          | If all options are supported, the syntax is “all”. Otherwise, supported options are listed separated by a “,” character.<br><br>Examples:<br>opt=“all”<br>opt=“1, 4, 6, 7”                                                                                                   | All except fixed data types |
| def                    | Indicates the default value of the XML element. If the element has not default value, this attribute should not be used                                                                              | Examples:<br>def=“7416”<br>def=“ace”                                                                                                                                                                                                                                         | All data types              |
| reqReboot              | Indicates if configuration of this XML element requires a device reboot before taking effect. If an element does not require a boot, this attribute should not be used                               | reqReboot=“true”                                                                                                                                                                                                                                                             | All data types              |
| dynamic                | Indicates if an XML element has dynamic capabilities dependent on other XML configuration. For example, if an element’s data range changes based on another element’s configured value,              | dynamic=“true”                                                                                                                                                                                                                                                               | All data types              |

| Capabilities Attribute | Description                                                                                                                                                                     | Syntax                                                                                                                                                                                    | Applicable XML Data Types        |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                        | this attribute must be used. In this case, the element's capability attributes must always reflect the current device configuration                                             |                                                                                                                                                                                           |                                  |
| Size                   | Indicates the maximum number of entries in an XML List. This attribute is only applicable to XML list elements. This attribute should not be used for any other type of element | Example: If a device supports 16 users the example would be<br><code>&lt;UserList size="16"&gt;</code><br><code>&lt;User&gt;</code><br><code>...</code><br><code>&lt;/UserList&gt;</code> | Only supported for list elements |

- 1) Fixed, pre-defined data types do not need certain capability attributes because their formats/data ranges are already defined.

## 8 Services and General Resources

### 8.1 /ISAPI/System

|               |              |
|---------------|--------------|
| /ISAPI/System | Service v2.0 |
| Notes:        |              |

#### 8.1.1 /ISAPI/System/activate

|                        |                               |                  |      |
|------------------------|-------------------------------|------------------|------|
| /ISAPI/System/activate |                               | General Resource | v2.0 |
| PUT                    |                               |                  |      |
| Description            | It is used to activate device |                  |      |
| Query                  | None                          |                  |      |
| Inbound Data           | <ActivateInfo>                |                  |      |
| Success Return         | <ResponseStatus>              |                  |      |
| Notes:                 |                               |                  |      |

ActivateInfo **XML Block**

```
<ActivateInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
```



```

<WlAlarmCap/> <!-- opt-->
<isSupportGIS> <!-- opt, xs:boolean --> </isSupportGIS>
<isSupportCompass> <!-- opt, xs:boolean --> </isSupportCompass>
<isSupportRoadInfoOverlays> <!-- opt, xs:boolean --> </isSupportRoadInfoOverlays>
<isSupportFaceCaptureStatistics> <!-- opt, xs:boolean --> </isSupportFaceCaptureStatistics>
<isSupportExternalDevice> <!-- opt, xs:boolean --> </isSupportExternalDevice>
<isSupportElectronicsEnlarge> <!-- opt, xs:boolean --> </isSupportElectronicsEnlarge>
<isSupportCloud> <!-- opt, xs:boolean --> </isSupportCloud>
<isSupportRecordHost/> <!-- opt, xs:boolean --> </isSupportRecordHost>
</DeviceCap>

```

## 8.1.2 /ISAPI/System/reboot

| /ISAPI/System/reboot                                               |                    |              | General Resource    | v2.0 |
|--------------------------------------------------------------------|--------------------|--------------|---------------------|------|
| PUT                                                                |                    |              |                     |      |
| Description                                                        | Reboot the device. |              |                     |      |
| Query                                                              | None               |              |                     |      |
| Inbound Data                                                       | None               |              |                     |      |
| Success Return                                                     | <ResponseStatus>   |              |                     |      |
| Error Status Code                                                  | statusCode         | subStausCode | description         |      |
|                                                                    | 2                  | upgrading    | Device is upgrading |      |
| Notes:                                                             |                    |              |                     |      |
| <ResponseStatus> is returned before the device proceeds to reboot. |                    |              |                     |      |

## 8.1.3 /ISAPI/System/updateFirmware

| /ISAPI/System/updateFirmware |                                   |               | General Resource  | v2.0 |
|------------------------------|-----------------------------------|---------------|-------------------|------|
| PUT                          |                                   |               |                   |      |
| Description                  | Updatethe firmware of the device. |               |                   |      |
| Query                        | None                              |               |                   |      |
| Inbound Data                 | Opaque Data                       |               |                   |      |
| Success Return               | <ResponseStatus>                  |               |                   |      |
| Error Status Code            | statusCode                        | subStatusCode | description       |      |
|                              | 2                                 | upgrading     | device upgrading  |      |
|                              | 3                                 | badFlash      | Flash error       |      |
|                              | 6                                 | badLanguage   | Language mismatch |      |







```

<deviceLocation>      <!--opt, xs:string -->      </deviceLocation>
<systemContact>      <!-- opt, req, xs:string -->      </systemContact>
<model>               <!-- ro, req, xs:string -->      </model>
<serialNumber>        <!-- ro, req, xs:string -->      </serialNumber>
<macAddress>          <!-- ro, req, xs:string;    -->    </macAddress>
<firmwareVersion>     <!-- ro, req, xs:string -->      </firmwareVersion>
<firmwareReleasedDate> <!-- ro, opt, xs:string -->      </firmwareReleasedDate>
<bootVersion>         <!-- ro, opt, xs:string -->      </bootVersion>
<bootReleasedDate>    <!-- ro, opt, xs:string -->      </bootReleasedDate>
<hardwareVersion>     <!-- ro, opt, xs:string -->      </hardwareVersion>
<encoderVersion>      <!-- ro, opt, xs:string -->      </encoderVersion>
<encoderReleasedDate> <!-- ro, opt, xs:string -->      </encoderReleasedDate>
<decoderVersion>      <!-- ro, opt, xs:string -->      </decoderVersion>
<decoderReleasedDate> <!-- ro, opt, xs:string -->      </decoderReleasedDate>
<deviceType>
    <!--ro, req, xs:string; "IPCamera, IPDome, DVR, HybirdNVR, NVR, DVS, IPZoom"-->
</deviceType>
<telecontrolID> <!-- opt, xs:integer; "1-255"> <telecontrolID>
<supportBeep> <!--opt, xs:boolean --> </supportBeep>
</DeviceInfo>

```

## 8.1.7 /ISAPI/System/status

| /ISAPI/System/status |                                                         | General Resource | v2.0 |
|----------------------|---------------------------------------------------------|------------------|------|
| GET                  |                                                         |                  |      |
| Description          | It is used to get the status information of the device. |                  |      |
| Query                | None                                                    |                  |      |
| Inbound Data         | None                                                    |                  |      |
| Success Return       | DeviceStatus                                            |                  |      |
| Notes:               |                                                         |                  |      |

### DeviceStatus XML Block

```

<DeviceStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <currentDeviceTime> <!-- opt, xs:datetime --> </currentDeviceTime>
    <deviceUpTime> <!-- opt, xs:integer, seconds --> </deviceUpTime>
    <TemperatureList>
        <!-- opt -->
        <Temperature>

```

```

    <tempSensorDescription> <!-- req, xs:string -->    </tempSensorDescription>
    <temperature> <!-- req, xs:float --> </temperature>
  </Temperature>
</TemperatureList>
<FanList>
  <!-- opt -->
  <Fan>
    <fanDescription><!-- req, xs:string -->    </fanDescription>
    <speed> <!-- req, xs:integer --> </speed>
  </Fan>
</FanList>
<PressureList>
  <!-- opt -->
  <Pressure>
    <pressureSensorDescription> <!-- req, xs:string --></pressureSensorDescription>
    <pressure> <!-- req, xs:integer --> </pressure>
  </Pressure>
</PressureList>
<TamperList>
  <!-- opt -->
  <Tamper>
    <tamperSensorDescription> <!-- req, xs:string -->    </tamperSensorDescription>
    <tamper> <!-- req, xs:boolean --> </tamper>
  </Tamper>
</TamperList>
<CPUList>
  <!-- opt -->
  <CPU>
    <cpuDescription> <!-- req, xs:string -->    </cpuDescription>
    <cpuUtilization> <!-- req, xs:integer, percentage 0..100 --> </cpuUtilization>
  </CPU>
</CPUList>
<MemoryList>
  <!-- opt -->
  <Memory>
    <memoryDescription> <!-- req, xs:string -->    </memoryDescription>
    <memoryUsage><!-- req, xs:float, in MB --> </memoryUsage>
    <memoryAvailable> <!-- req, xs:float, in MB--> </memoryAvailable>
  </Memory>
</MemoryList>

```

```

</Memory>
</MemoryList>
<openFileHandles> <!-- opt, xs:integer --> </openFileHandles>
</DeviceStatus>

```

## 8.1.8 /ISAPI/System/time

| /ISAPI/System/time                                                                                                                           |                                     | General Resource | v2.0 |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------|------|
| GET                                                                                                                                          |                                     |                  |      |
| Description                                                                                                                                  | Get the device time information.    |                  |      |
| Query                                                                                                                                        | None                                |                  |      |
| Inbound Data                                                                                                                                 | None                                |                  |      |
| Success Return                                                                                                                               | Time                                |                  |      |
| PUT                                                                                                                                          |                                     |                  |      |
| Description                                                                                                                                  | Udpate the device time information. |                  |      |
| Query                                                                                                                                        | None                                |                  |      |
| Inbound Data                                                                                                                                 | Time                                |                  |      |
| Success Return                                                                                                                               | ResponseStatus                      |                  |      |
| Notes:                                                                                                                                       |                                     |                  |      |
| If <timeMode> is present and set to “local”, the <localTime> and <timeZone> fields are required. The <localTime> block sets the device time. |                                     |                  |      |
| If <timeMode> is present and set to “NTP”, only the <timeZone> field is required. The device time is set by synchronizing with NTP.          |                                     |                  |      |

### Time XML Block

```

<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <timeMode> <!-- req, xs:string, "NTP, manual,timecorrect" --> </timeMode>
  <localTime> <!-- req, xs:datetime --> </localTime>
  <timeZone> <!-- req, xs:string, POSIX time zone string --> </timeZone>
</Time>

```

## 8.1.9 /ISAPI/System/time/localTime

| /ISAPI/System/time/localTime |                                                      | General Resource | v2.0 |
|------------------------------|------------------------------------------------------|------------------|------|
| <b>GET</b>                   |                                                      |                  |      |
| Description                  | It is used to get the device local time information. |                  |      |
| Query                        | None                                                 |                  |      |
| Inbound Data                 | None                                                 |                  |      |
| Success Return               | <b>ISO 8601 Date-Time String</b>                     |                  |      |

| PUT                                                                                                                                                                                                                                                   |                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Description                                                                                                                                                                                                                                           | It is used to update the device local time information. |
| Query                                                                                                                                                                                                                                                 | None                                                    |
| Inbound Data                                                                                                                                                                                                                                          | <b>ISO 8601 Date-Time String</b>                        |
| Success Return                                                                                                                                                                                                                                        | <b>ResponseStatus</b>                                   |
| <b>Notes:</b><br>An ISO 8601 Date/Time string is accepted and returned. If the date/time value has a time zone, the time is converted into the device's local time zone.<br>If the device time mode is set to "ntp" setting this value has no effect. |                                                         |

## 8.1.10 /ISAPI/System/time/timeZone

/ISAPI/System/time/timeZone

General Resource v2.0

GET

|                |                                                     |
|----------------|-----------------------------------------------------|
| Description    | It is used to get the device time zone information. |
| Query          | None                                                |
| Inbound Data   | None                                                |
| Success Return | Time zone string                                    |

PUT

|                |                                                        |
|----------------|--------------------------------------------------------|
| Description    | It is used to update the device time zone information. |
| Query          | None                                                   |
| Inbound Data   | Time zone string                                       |
| Success Return | ResponseStatus                                         |

Notes:

Time zones are defined by POSIX 1003.1 section 8.3 time zone notations. Note that the value following the +/- is the amount of time that must be added to the local time to result in UTC.

Example:

EST+5EDT01:00:00,M3.2.0/02:00:00,M11.1.0/02:00:00

Defines eastern standard time as “EST” with a GMT-5 offset. Daylight savings time is called “EDT”, is one hour later and begins on the second Sunday of March at 2am and ends on the first Sunday of November at 2am.

CET-1CEST01:00:00,M3.5.0/02:00:00,M10.5.0/03:00:00

Defines central European time as GMT+1 with a one-hour daylight savings time (“CEST”) that starts on the last Sunday in March at 2am and ends on the last Sunday in October at 3am.

Check whether the device supports DST capability from 8.1.6 device capabilities

## 8.1.11 /ISAPI/System/time/NtpServers

| /ISAPI/System/time/ntpServers                                                                                                                                |                                                                       | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                          |                                                                       |                  |      |
| Description                                                                                                                                                  | It is used to get the configuration of NTP servers for the device.    |                  |      |
| Query                                                                                                                                                        | None                                                                  |                  |      |
| Inbound Data                                                                                                                                                 | None                                                                  |                  |      |
| Success Return                                                                                                                                               | NTPServerList                                                         |                  |      |
| PUT                                                                                                                                                          |                                                                       |                  |      |
| Description                                                                                                                                                  | It is used to update the configuration of NTP servers for the device. |                  |      |
| Query                                                                                                                                                        | None                                                                  |                  |      |
| Inbound Data                                                                                                                                                 | NTPServerList                                                         |                  |      |
| Success Return                                                                                                                                               | ResponseStatus                                                        |                  |      |
| POST                                                                                                                                                         |                                                                       |                  |      |
| Description                                                                                                                                                  | It is used to add the configuration of a NTP server for the device.   |                  |      |
| Query                                                                                                                                                        | None                                                                  |                  |      |
| Inbound Data                                                                                                                                                 | NTPServer                                                             |                  |      |
| Success Return                                                                                                                                               | ResponseStatus                                                        |                  |      |
| DELETE                                                                                                                                                       |                                                                       |                  |      |
| Description                                                                                                                                                  | It is used to delete the configuration of NTP servers for the device. |                  |      |
| Query                                                                                                                                                        | None                                                                  |                  |      |
| Inbound Data                                                                                                                                                 | None                                                                  |                  |      |
| Success Return                                                                                                                                               | ResponseStatus                                                        |                  |      |
| Notes:                                                                                                                                                       |                                                                       |                  |      |
| When the <timeMode> is set to “NTP”, the servers in this list are used to synchronize the device’s system time.                                              |                                                                       |                  |      |
| To determine whether it is possible to dynamically create or delete ntp server, check the defined HTTP methods in /ISAPI/System/time/ntpServers/description. |                                                                       |                  |      |

### NTPServerList XML Block

```
<NTPServerList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <NTPServer/> <!-- opt -->
</ NTPServerList>
```

### 8.1.12 /ISAPI/System/time/ntpServers/<ID>

/ISAPI/System/time/ntpServers/ID

General Resource

v2.0

|                                                                                                                                                            |                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| GET                                                                                                                                                        |                                                                        |
| Description                                                                                                                                                | It is used to get the configuration of a NTP server for the device.    |
| Query                                                                                                                                                      | None                                                                   |
| Inbound Data                                                                                                                                               | None                                                                   |
| Success Return                                                                                                                                             | NTPServer                                                              |
| PUT                                                                                                                                                        |                                                                        |
| Description                                                                                                                                                | It is used to update the configuration of a NTP server for the device. |
| Query                                                                                                                                                      | None                                                                   |
| Inbound Data                                                                                                                                               | NTPServer                                                              |
| Success Return                                                                                                                                             | ResponseStatus                                                         |
| DELETE                                                                                                                                                     |                                                                        |
| Description                                                                                                                                                | It is used to delete the configuration of a NTP server for the device. |
| Query                                                                                                                                                      | None                                                                   |
| Inbound Data                                                                                                                                               | None                                                                   |
| Success Return                                                                                                                                             | ResponseStatus                                                         |
| Notes:                                                                                                                                                     |                                                                        |
| <p>Depending on the value of &lt;addressingFormatType&gt;, either the &lt;hostName&gt; or the IP address fields will be used to locate the NTP server.</p> |                                                                        |

#### NTPServer XML Block

```

<NTPServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string; id -->  </id>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname"-->
  </addressingFormatType>
  <hostName>    <!-- dep, xs:string -->    </hostName>
  <ipAddress><!-- dep, xs:string -->    </ipAddress>
  <ipv6Address>  <!-- dep, xs:string -->    </ipv6Address>
  <portNo>    <!-- opt, xs:integer -->    </portNo>
  <synchronizeInterval> <!--opt, xs:integer, minutes --> </synchronizeInterval>
</NTPServer>

```

### 8.1.13 /ISAPI/System/time/ntpServers/test

| /ISAPI/System/time/ntpServers/test |  | General Resource | v2.0 |
|------------------------------------|--|------------------|------|
| <b>GET</b>                         |  |                  |      |



|                       |                                                    |
|-----------------------|----------------------------------------------------|
| <b>Description</b>    | It is used to test the NTP server available or not |
| <b>Query</b>          | None                                               |
| <b>Inbound Data</b>   | <b>NTPTestDescription</b>                          |
| <b>Success Return</b> | <b>NTPTestResult</b>                               |
| <b>POST</b>           |                                                    |
| <b>Description</b>    | It is used to test the NTP server available or not |
| <b>Query</b>          | None                                               |
| <b>Inbound Data</b>   | <b>NTPTestDescription</b>                          |
| <b>Success Return</b> | <b>NTPTestResult</b>                               |
| <b>Notes:</b>         |                                                    |

#### NTPTestDescription XML Block

```
<NTPTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname"-->
  </addressingFormatType>
  <hostName>    <!-- dep, xs:string -->    </hostName>
  <ipAddress><!-- dep, xs:string -->    </ipAddress>
  <ipv6Address> <!-- dep, xs:string -->    </ipv6Address>
  <portNo>    <!-- req, xs:integer -->    </portNo>
</NTPTestDescription>
```

#### NTPTestResult XML Block

```
<NTPTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <errorDescription> <!-- req, xs:string -->.</errorDescription>
</NTPTestResult>
```

## 8.1.14 /ISAPI/System/Holidays

| URI      | /ISAPI/System/Holidays      |               | Type             | Resource |
|----------|-----------------------------|---------------|------------------|----------|
| Function | Access the list of holidays |               |                  |          |
| Methods  | Query String(s)             | Inbound Data  | Return Result    |          |
| GET      |                             |               | <holidayList >   |          |
| PUT      |                             | <holidayList> | <ResponseStatus> |          |
| Notes    |                             |               |                  |          |

### holidayList XML Block

```
<HolidayList version="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
  <holiday/> <!-- opt -->
</HolidayList>
```

## 8.1.15 /ISAPI/System/Holidays/<ID>

| URI      | /ISAPI/System/Holidays/ID/                                                                                                                                                                                                                                                                                                                                                                                            |              | Type             | Resource |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------|----------|
| Function | Access a holiday.                                                                                                                                                                                                                                                                                                                                                                                                     |              |                  |          |
| Methods  | Query String(s)                                                                                                                                                                                                                                                                                                                                                                                                       | Inbound Data | Return Result    |          |
| GET      |                                                                                                                                                                                                                                                                                                                                                                                                                       |              | <holiday >       |          |
| PUT      |                                                                                                                                                                                                                                                                                                                                                                                                                       | <holiday>    | <ResponseStatus> |          |
| Notes    | <p>&lt;holidayMode&gt; decides whether &lt;holidayDate&gt;,&lt;holidayWeek&gt;or &lt;holidayMonth&gt; is contained.</p> <p>&lt;holidayMode&gt;:date: example form May 5<sup>th</sup>,1900 to June 8<sup>th</sup>,1900.</p> <p>&lt;holidayMode&gt;:week: example form May 1<sup>st</sup> week to May 2<sup>nd</sup> week.</p> <p>&lt;holidayMode&gt;:month: example form May 1<sup>st</sup> to May 5<sup>th</sup>.</p> |              |                  |          |

### holiday XML Block

```
<holiday version="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <holidayMode/> <!-- req, xs:string, "date, weeeek, month" --> <holidayName> <!-- req,
  xs:string --> </holidayName>
  <holidayDate> <!-- dep -->
    <startDate> <!-- req, xs:date --> </startDate>
    <endDate> <!-- req, xs:date --> </endDate>
  </holidayDate>
  <holidayWeek> <!-- dep -->
    <startWeek> <!-- req -->
      <monthOfYear> <!-- req --> </monthOfYear>
      <sequence> <!-- req, xs:integer, 1...5 --> </sequence>
      <dayOfWeek>
        <!-- req, ISO8601 weekday number, 1=Monday" -->
      </dayOfWeek>
    </startWeek>
```

```

<endWeek>    <!-- req -->
    <monthOfYear> <!-- req --> </monthOfYear>
    <sequence> <!-- req, xs:integer, 1...5 --> </sequence>
    <dayOfWeek>
        <!-- req, ISO8601 weekday number, 1=Monday" -->
    </dayOfWeek>
</endWeek>
</holidayWeek>
<holidayMonth>    <!-- dep -->
    <startMonth>    <!-- req -->
        <monthOfYear> <!-- req, xs:integer, "1...12" --> </monthOfYear>
        <dayOfMonth> <!-- req, xs:integer, "1...31" --> </dayOfMonth>
    </startMonth>
    <endMonth>    <!-- req -->
        <monthOfYear> <!-- req, xs:integer, "1...12" --> </monthOfYear>
        <dayOfMonth> <!-- req, xs:integer, "1...31" -->    <dayOfMonth>
    </endMonth>
</holidayMonth>
</holiday>

```

## 8.1.16 /ISAPI/System/upgradeStatus

| /ISAPI/System/upgradeStatus |                                                 | General Resource | v2.0 |
|-----------------------------|-------------------------------------------------|------------------|------|
| GET                         |                                                 |                  |      |
| Description                 | It is used to get upgrade status of the device. |                  |      |
| Query                       | None                                            |                  |      |
| Inbound Data                | None                                            |                  |      |
| Success Return              | upgradeStatus                                   |                  |      |
| Notes:                      |                                                 |                  |      |

### upgradeStatus XML Block

```

<upgradeStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <upgrading>    <!-- ro, req, xs:boolean -->    </upgrading>
    <percent>    <!-- ro, req, xs:integer "0-100" --> </percent>
</upgradeStatus>

```

### 8.1.17 /ISAPI/System/externalDevice

| /ISAPI/System/externalDevice |                                                                                          | General Resource v2.0 |
|------------------------------|------------------------------------------------------------------------------------------|-----------------------|
| GET                          |                                                                                          |                       |
| Description                  | It is used to get the ExternalDevice's configuration of a specified image channel.       |                       |
| Query                        | None                                                                                     |                       |
| Inbound Data                 | None                                                                                     |                       |
| Success Return               | ExternalDevice                                                                           |                       |
| PUT                          |                                                                                          |                       |
| Description                  | It is used to configure the ExternalDevice's configuration of a specified image channel. |                       |
| Query                        | None                                                                                     |                       |
| Inbound Data                 | ExternalDevice                                                                           |                       |
| Success Return               | ResponseStatus                                                                           |                       |
| Notes:                       |                                                                                          |                       |

#### ExternalDevice XML Block

```
<ExternalDevice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SupplementLight/><!--opt, 补光灯配置-->
  <THScreen/><!--opt, 外接屏幕配置-->
</ExternalDevice>
```

### 8.1.18 /ISAPI/System/externalDevice/capabilities

| /ISAPI/System/externalDevice/capabilities |                                                                                    | General Resource v2.0 |
|-------------------------------------------|------------------------------------------------------------------------------------|-----------------------|
| <b>GET</b>                                |                                                                                    |                       |
| Description                               | It is used to get the ExternalDevice's configuration of a specified image channel. |                       |
| Query                                     | None                                                                               |                       |
| Inbound Data                              | None                                                                               |                       |
| Success Return                            | ExternalDevice                                                                     |                       |

#### ExternalDevice XML Block

```
<ExternalDevice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SupplementLight/><!--opt, -->
  <THScreen/><!--opt, 外接屏幕配置-->
</ExternalDevice>
```

```
</ExternalDevice>
```

## 8.1.19 /ISAPI/System/externalDevice/supplementLight

| /ISAPI/System/externalDevice/supplementLight |                                                                                                   | General Resource v2.0 |
|----------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------|
| GET                                          |                                                                                                   |                       |
| Description                                  | It is used to get the <b>SupplementLight</b> 's configuration of a specified image channel.       |                       |
| Query                                        | None                                                                                              |                       |
| Inbound Data                                 | None                                                                                              |                       |
| Success Return                               | <b>SupplementLight</b>                                                                            |                       |
| PUT                                          |                                                                                                   |                       |
| Description                                  | It is used to configure the <b>SupplementLight</b> 's configuration of a specified image channel. |                       |
| Query                                        | None                                                                                              |                       |
| Inbound Data                                 | <b>SupplementLight</b>                                                                            |                       |
| Success Return                               | <b>ResponseStatus</b>                                                                             |                       |
| Notes:                                       |                                                                                                   |                       |

### SupplementLight XML Block

```
<SupplementLight version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!--opt,xs:boolean--></enabled>
  <mode><!--opt,xs:string, "schedule,auto"--></mode>
  <Schedule> <!--dep, -->
    <TimeRange> <!-- req -->
      <beginTime> <!-- req, xs:time, ISO8601 time hh:mm:ss--> </beginTime>
      <endTime> <!-- req, xs:time, ISO8601 time hh:mm:ss --> </endTime>
    </TimeRange>
  </Schedule>
  <lowBeamBrightness><!--opt,xs:integer,"0~10" --></lowBeamBrightness>
  <highBeamBrightness><!--opt,xs:integer,"0~10" --></highBeamBrightness>
  <filteringTime><!--opt,xs:integer,"0~120",unit:s--></filteringTime>
</SupplementLight>
```

## 8.1.20 /ISAPI/System/externalDevice/supplementLight/capabilities

| /ISAPI/System/externalDevice/supplementLight/capabilities |                                                                                            | General Resource v2.0 |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------|
| GET                                                       |                                                                                            |                       |
| Description                                               | It is used to get the <b>externalDevice</b> 's configuration of a specified image channel. |                       |
| Query                                                     | None                                                                                       |                       |
| Inbound Data                                              | None                                                                                       |                       |
| Success Return                                            | SupplementLight                                                                            |                       |
| Notes:                                                    |                                                                                            |                       |

### SupplementLight XML Block

```
<SupplementLight version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!--opt,xs:boolean--></enabled>
  <mode opt="schedule,auto"><!--opt,xs:string, --></mode>
  <Schedule><!--dep, -->
    <TimeRange><!-- req -->
      <beginTime><!-- req, xs:time, ISO8601 time hh:mm:ss--> </beginTime>
      <endTime><!-- req, xs:time, ISO8601 time hh:mm:ss --> </endTime>
    </TimeRange>
  </Schedule>
  <lowBeamBrightness min="" max=""><!--opt,xs:integer,"0~10" --></lowBeamBrightness>
  <highBeamBrightness min="" max=""><!--opt,xs:integer,"0~10" --></highBeamBrightness>
  <filteringTime><!--opt,xs:integer,"0~120",unit:s--></filteringTime>
</SupplementLight>
```

## 8.1.21 /ISAPI/System/onlineUpgrade/server

| /ISAPI/System/onlineUpgrade/server |                                                | General Resource | v2.0 |
|------------------------------------|------------------------------------------------|------------------|------|
| GET                                |                                                |                  |      |
| Description                        | It is used to get online upgrade server status |                  |      |
| Query                              | None                                           |                  |      |
| Inbound Data                       | None                                           |                  |      |
| Success Return                     | OnlineUpgradeServer                            |                  |      |
| Notes:                             |                                                |                  |      |

### OnlineUpgradeServer XML Block

```
<OnlineUpgradeServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <connectStatus> <!--ro,req xs:boolean --></connectStatus>
</OnlineUpgradeServer>
```

## 8.1.22 /ISAPI/System/onlineUpgrade/version

| /ISAPI/System/onlineUpgrade/version                                                                                         |                                           | General Resource | v2.0 |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------|------|
| GET                                                                                                                         |                                           |                  |      |
| Description                                                                                                                 | It is used to get new version information |                  |      |
| Query                                                                                                                       | check                                     |                  |      |
| Inbound Data                                                                                                                | None                                      |                  |      |
| Success Return                                                                                                              | OnlineUpgradeVersion                      |                  |      |
| Notes:                                                                                                                      |                                           |                  |      |
| check:false—the device return the version directly;true—the device get the version from the server, then send to the client |                                           |                  |      |

### OnlineUpgradeVersion XML Block

```
<OnlineUpgradeVersion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <newVersionAvailable><!--ro,req,xs:boolean--></newVersionAvailable>
  <newVersion><!--ro,dep,xs:string--></newVersion>
  <changeLog><!--ro,dep,xs:string--></changeLog>
</OnlineUpgradeVersion>
```

## 8.1.23 /ISAPI/System/onlineUpgrade/upgrade

| /ISAPI/System/onlineUpgrade/upgrade |                                                   | General Resource | v2.0 |
|-------------------------------------|---------------------------------------------------|------------------|------|
| PUT                                 |                                                   |                  |      |
| Description                         | It is used to allow device upgrade automatically. |                  |      |
| Query                               | None                                              |                  |      |
| Inbound Data                        | None                                              |                  |      |
| Success Return                      | <ResponseStatus>                                  |                  |      |
| Notes:                              |                                                   |                  |      |

## 8.1.24 /ISAPI/System/onlineUpgrade/status

| /ISAPI/System/onlineUpgrade/status |  | General Resource | v2.0 |
|------------------------------------|--|------------------|------|
| <b>GET</b>                         |  |                  |      |

|                       |                                                        |
|-----------------------|--------------------------------------------------------|
| <b>Description</b>    | It is used to get online upgrade status of the device. |
| <b>Query</b>          | None                                                   |
| <b>Inbound Data</b>   | None                                                   |
| <b>Success Return</b> | <b>OnlineUpgradeStatus</b>                             |
| <b>Notes:</b>         |                                                        |

#### OnlineUpgradeStatus XML Block

```
<OnlineUpgradeStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <status>    <!-- ro, req, xs:string,"notUpgrade,upgrading,successful,languageMismatch,
  writeFlashError,packageTypeMismatch,packageVersionMismatch,netUnreachable,
  unknownError" -->    </status>
  <percent>    <!-- ro, req, xs:integer "0-100" -->    </percent>
</OnlineUpgradeStatus>
```

## 8.1.25 /ISAPI/System/firmwareCode

| /ISAPI/System/firmwareCode                               |                                  | General Resource | v2.0 |
|----------------------------------------------------------|----------------------------------|------------------|------|
| GET                                                      |                                  |                  |      |
| Description                                              | It is used to get firmware code. |                  |      |
| Query                                                    | startIndex<br>maxNumber          |                  |      |
| Inbound Data                                             | None                             |                  |      |
| Success Return                                           | <FirmwareCodeList>               |                  |      |
| Notes:                                                   |                                  |                  |      |
| Examples:                                                |                                  |                  |      |
| GET /ISAPI/System/firmwareCode?startIndex=1&maxNumber=32 |                                  |                  |      |

#### FirmwareCodeList XML Block

```
<FirmwareCodeList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FirmwareCode>
    <index><!--req, xs:integer--></index>//start from 1
    <code><!-- req, xs:string --></code>
    <version><!--req,xs:string--></version>
  </FirmwareCode>
</FirmwareCodeList>
```

## 8.1.26 /ISAPI/System/onlineUpgrade/judgeVersion

| /ISAPI/System/onlineUpgrade/judgeVersion |  | General Resource | v2.0 |
|------------------------------------------|--|------------------|------|
| <b>GET</b>                               |  |                  |      |



|                                                                                                                                                                       |                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Description</b>                                                                                                                                                    | It is used to check the version is new than the device current is. |
| <b>Query</b>                                                                                                                                                          | firmwareCode<br>version                                            |
| <b>Inbound Data</b>                                                                                                                                                   | None                                                               |
| <b>Success Return</b>                                                                                                                                                 | <JudgeVersionResult>                                               |
| <b>Notes:</b><br>Examples:<br>GET<br>/ISAPI/System/onlineUpgrade/judgeVersion?firmwareCode=00001XXXXX&...version=00000001XX<br>XXXX.....//space need convert to "%20" |                                                                    |

#### JudgeVersionResult XML Block

```
<JudgeVersionResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <recommenUpgrade><!--req,xs:boolean--></recommenUpgrade >
</JudgeVersionResult>
```

## 8.1.27 /ISAPI/System/onlineUpgrade/capabilities

| /ISAPI/System/onlineUpgrade/capabilities |                                                | General Resource | v2.0 |
|------------------------------------------|------------------------------------------------|------------------|------|
| GET                                      |                                                |                  |      |
| Description                              | It is used to get online Upgrade capabilities. |                  |      |
| Query                                    | None                                           |                  |      |
| Inbound Data                             | None                                           |                  |      |
| Success Return                           | <OnlineUpgradeCap>                             |                  |      |
| Notes:                                   |                                                |                  |      |

#### OnlineUpgradeCap XML Block

```
<OnlineUpgradeCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <firmwareNum max=""/><!--req-->
  <firmwareCode max=""/> <!-- req -->
  <firmwareVersion max=""/> <!-- req -->
  <firmwareCodeNumOnce max=""/> <!--req--> //max number once
  <upgradePercent min="" max=""/> <!-- req -->
  <Version>
    <newVersion max=""/><!--req-->
    <changeLog max=""/><!--req-->
  </Version>
  <rebootAfterUpgrade><!-- opt, ro, string "auto,manual"></rebootAfterUpgrade>
</OnlineUpgradeCap>
```

## 8.1.28 /ISAPI/System/Network/ANRArmingHostIP

| /ISAPI/System/Network/ANRArming |                  | General Resource | v2.0 |
|---------------------------------|------------------|------------------|------|
| GET                             |                  |                  |      |
| Description                     | 获取断网续传的主机 IP 地址. |                  |      |
| Query                           | None             |                  |      |
| Inbound Data                    | None             |                  |      |
| Success Return                  | ANRArmingHostIP  |                  |      |
| Notes:                          |                  |                  |      |

### ANRArmingHostIP XML Block

```
<ANRArmingHostIP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  <portNo><!-- opt, xs:integer --> </portNo>
</ANRArmingHostIP>
```

## 8.1.29 /ISAPI/System/externalDevice/THScreen

| /ISAPI/System/externalDevice/THScreen |                                                                                     | General Resource v2.0 |
|---------------------------------------|-------------------------------------------------------------------------------------|-----------------------|
| GET                                   |                                                                                     |                       |
| Description                           | It is used to get the THScreen 's configuration of a specified image channel.       |                       |
| Query                                 | None                                                                                |                       |
| Inbound Data                          | None                                                                                |                       |
| Success Return                        | THScreen                                                                            |                       |
| PUT                                   |                                                                                     |                       |
| Description                           | It is used to configure the THScreen 's configuration of a specified image channel. |                       |
| Query                                 | None                                                                                |                       |
| Inbound Data                          | THScreen                                                                            |                       |
| Success Return                        | ResponseStatus                                                                      |                       |
| Notes:                                |                                                                                     |                       |

### THScreen XML Block

```
<THScreen version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!--req,xs:boolean--></enabled>
  <normalizedScreenSize> <!--opt-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <THOSDDisplay><!--dep,-->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <CalibratingCoordinates><!--dep,-->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </CalibratingCoordinates>
  </THOSDDisplay>
  <Timing> <!--dep,-->
    <timing opt="manual,auto"><!--dep,xs:string 依赖于<enabled>节点打开--></timing>
    <interval min="1" max="10080"><!--dep,xs:interge 依赖于 <timing> 节点为
auto--></interval>
  </Timing>
</THScreen>
```

## 8.1.30 /ISAPI/System/externalDevice/THScreen/capabilities

| /ISAPI/System/externalDevice/THScreen/capabilities |                                                | General       |
|----------------------------------------------------|------------------------------------------------|---------------|
|                                                    |                                                | Resource v2.0 |
| GET                                                |                                                |               |
| Description                                        | It is used to get the THScreen’s configuration |               |
| Query                                              | None                                           |               |
| Inbound Data                                       | None                                           |               |
| Success Return                                     | THScreen                                       |               |
| Notes:                                             |                                                |               |
| <Timing> 表示 自动校时 && 手动校时                           |                                                |               |

### THScreen XML Block

```
<THScreen version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!--req,xs:boolean--></enabled>
  <normalizedScreenSize> <!--opt-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
```

```

    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<THOSDDisplay><!--dep,-->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <CalibratingCoordinates><!--dep,-->
        <positionX> <!-- req, xs:integer;coordinate --> </positionX>
        <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </CalibratingCoordinates>
</THOSDDisplay>
<Timing> <!--dep,-->
    <timing opt="manual,auto"><!--dep,xs:string 依赖于<enabled>节点打开--></timing>
    <interval min="1" max="10080"><!--dep,xs:interge 依赖于 <timing> 节点为
auto--></interval>
</Timing>
</THScreen>

```

### 8.1.31 /ISAPI/System/externalDevice/THScreen/timing

| /ISAPI/System/externalDevice/THScreen/timing |                                               | General Resource v2.0 |
|----------------------------------------------|-----------------------------------------------|-----------------------|
| PUT                                          |                                               |                       |
| Description                                  | It is used to configure the THScreen's timing |                       |
| Query                                        | None                                          |                       |
| Inbound Data                                 | None                                          |                       |
| Success Return                               | ResponseStatus                                |                       |
| Notes:                                       |                                               |                       |

## 8.2 /ISAPI/System/Network

| /ISAPI/System/Network         | Service v2.0 |
|-------------------------------|--------------|
| Notes: Network configuration. |              |

### 8.2.1 /ISAPI/System/Network/capabilities

| /ISAPI/System/Network/capabilities |                                       | General Resource v2.0 |
|------------------------------------|---------------------------------------|-----------------------|
| <b>GET</b>                         |                                       |                       |
| Description                        | It is used to get network capability. |                       |

|                |              |
|----------------|--------------|
| Query          | None         |
| Inbound Data   | None         |
| Success Return | <NetworkCap> |
| Notes:         |              |

### NetworkCap XML Block

```
<NetworkCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportWireless> <!-- req, xs:boolean --> <isSupportWireless>
  <isSupportPPPoE> <!-- req, xs:boolean --> <isSupportPPPoE>
  <isSupportBond> <!-- req, xs:boolean --> <isSupportBond>
  <isSupport802_1x> <!-- req, xs:boolean --> </isSupport802_1x>
  <isSupportNtp> <!-- opt, xs:boolean --> </isSupportNtp>
  <isSupportFtp> <!-- opt, xs:boolen --> </isSupportFtp>
  <isSupportUpnp> <!-- opt, xs:boolean --> </isSupportUpnp>
  <isSupportPNP> <!-- opt, xs:boolean --> </isSupportPNP>
  <isSupportDdns> <!-- opt, xs:boolean --> </isSupportDdns>
  <isSupportHttps> <!-- opt, xs:boolean --> </isSupportHttps>
  <SnmpCap><!-- opt -->
    <isSupport> <!-- req, xs:boolean --> </isSupport>
  </SnmpCap>
  <isSupportExtNetCfg> <!-- opt, xs:boolean --> </isSupportExtNetCfg>
  <isSupportIPFilter> <!-- opt, xs:boolean --> </isSupportIPFilter>
  <isSupportEZVIZ> <!-- opt, xs:boolean --> </isSupportEZVIZ>
  <isSupportEhome> <!-- opt, xs:boolean --> </isSupportEhome>
  <isSupportWirelessServer> <!-- opt, xs:boolean --> </isSupportWirelessServer>
  <isSupportWirelessDial><!--opt, xs:boolean --> </isSupportWirelessDial>
  <GB28181Cap> <!--opt -->
    <isSupportGB28181Service> <!-- opt, xs:boolean --> </isSupportGB28181Service>
  </GB28181Cap>
  <WPS>
    <NetworkInterfaceList size="2">
      <NetworkInterface>
        <id> <!-- req, xs:string, --> </id>
        <enabled> <!-- req, xs:boolean--> </enabled>
        <isSupportAutoConnect><!-- opt, xs:boolean --></isSupportAutoConnect>
        <isSupportDevicePinCode><!-- opt, xs:boolean --></isSupportDevicePinCode>
        <isSupportDevicePinCodeUpdate><!-- opt, xs:boolean
--></isSupportDevicePinCodeUpdate>
```

```

        <ApPinCode>
            <ssid min="" max=""><!-- opt, xs:string --> </ssid>
            <pinCode min="" max=""><!-- opt, xs:string --> </pinCode>
        </ApPinCode>
    </NetworkInterface>
</NetworkInterfaceList>
</WPS>
</NetworkCap>

```

## 8.2.2 /ISAPI/System/Network/interfaces

| /ISAPI/System/Network/interfaces                                                  |                                                  | General Resource | v2.0 |
|-----------------------------------------------------------------------------------|--------------------------------------------------|------------------|------|
| GET                                                                               |                                                  |                  |      |
| Description                                                                       | It is used to get the device network interfaces. |                  |      |
| Query                                                                             | None                                             |                  |      |
| Inbound Data                                                                      | None                                             |                  |      |
| Success Return                                                                    | NetworkInterfaceList                             |                  |      |
| Notes:                                                                            |                                                  |                  |      |
| As hardwired system resources, network interfaces cannot be created or destroyed. |                                                  |                  |      |

### NetworkInterfaceList XML Block

```

<NetworkInterfaceList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
    <NetworkInterface/> <!-- opt -->
</NetworkInterfaceList>

```

## 8.2.3 /ISAPI/System/Network/interfaces/<ID>/capabilities

| /ISAPI/System/Network/interfaces/<ID>/capabilities |                                            | General Resource | v2.0 |
|----------------------------------------------------|--------------------------------------------|------------------|------|
| GET                                                |                                            |                  |      |
| Description                                        | It is used to get interfaces capabilities. |                  |      |
| Query                                              | None                                       |                  |      |
| Inbound Data                                       | None                                       |                  |      |
| Success Return                                     | NetworkInterface                           |                  |      |
| Notes:                                             |                                            |                  |      |

### NetworkInterface XML Block

```
<NetworkInterface version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>      <!-- req, xs:string -->    </id>
  <IPAddress/>  <!-- req -->
  <Wireless/> <!-- opt -->
  <Discovery/> <!-- opt -->
  <Link /> <!-- opt -->
  <defaultConnection> <!-- opt, xs:boolean--> </defaultConnection>
  <macAddress min="" max=""> <!--opt, xs:string; --> </macAddress>
</NetworkInterface>
```

## 8.2.4 /ISAPI/System/Network/interfaces/<ID>

/ISAPI/System/Network/interfaces/ID

General Resource v2.0

GET

|                |                                                   |  |  |
|----------------|---------------------------------------------------|--|--|
| Description    | It is used to get a particular network interface. |  |  |
| Query          | None                                              |  |  |
| Inbound Data   | None                                              |  |  |
| Success Return | NetworkInterface                                  |  |  |

PUT

|                   |                                                      |                     |                     |
|-------------------|------------------------------------------------------|---------------------|---------------------|
| Description       | It is used to update a particular network interface. |                     |                     |
| Query             | None                                                 |                     |                     |
| Inbound Data      | NetworkInterface                                     |                     |                     |
| Success Return    | ResponseStatus                                       |                     |                     |
| Error Status Code | statusCode                                           | subStatusCode       | Description         |
|                   | 6                                                    | badIPv6Address      | error IPv6 address  |
|                   | 6                                                    | conflictIPv6Address | conflictIPv6Address |
|                   | 6                                                    | badNetMask          | error subnet mask   |
|                   | 6                                                    | conflictIPv4Address | conflictIPv4Address |
|                   | 6                                                    | badIPv4Address      | error IPv4 address  |

Notes:

defaultConnection: default network connection, required when device has more than one interface.

### NetworkInterface XML Block

```
<NetworkInterface version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>      <!-- req, xs:string -->    </id>
  <IPAddress/>  <!-- req -->
```

```

<Wireless/><!-- opt -->
<Discovery/> <!-- opt -->
<Link /> <!-- opt -->
<defaultConnection> <!-- opt, xs:boolean--> </defaultConnection>
<ActiveMulticast/><!--opt-->
<macAddress> <!--opt, xs:string; --> </macAddress>
</NetworkInterface>

```

#### ActiveMulticast XML Block

```

<ActiveMulticast>
  <enabled><!--req,xs:boolean--></enabled>
  <streamID opt="main"><!--req,xs:string--></streamID>
  <ipV4Address><!--opt,xs:string--></ipV4Address>
  <ipV6Address><!--opt,xs:string--></ipV6Address>
  <port min="" max=""><!--opt,xs:interger--></port>
</ActiveMulticast>

```

## 8.2.5 /ISAPI/System/Network/interfaces/<ID>/ipAddress

/ISAPI/System/Network/interfaces/ID/ipAddress

General Resource v2.0

| GET               |                                                                        |                     |                     |
|-------------------|------------------------------------------------------------------------|---------------------|---------------------|
| Description       | It is used to get the ip address of a particular network interface.    |                     |                     |
| Query             | None                                                                   |                     |                     |
| Inbound Data      | None                                                                   |                     |                     |
| Success Return    | IPAddress                                                              |                     |                     |
| PUT               |                                                                        |                     |                     |
| Description       | It is used to update the ip address of a particular network interface. |                     |                     |
| Query             | None                                                                   |                     |                     |
| Inbound Data      | IPAddress                                                              |                     |                     |
| Success Return    | ResponseStatus                                                         |                     |                     |
| Error Status Code | statusCode                                                             | subStatusCode       | Description         |
|                   | 6                                                                      | badIPv6Address      | error IPv6 address  |
|                   | 6                                                                      | conflictIPv6Address | conflictIPv6Address |
|                   | 6                                                                      | badNetMask          | error subnet mask   |
|                   | 6                                                                      | conflictIPv4Address | conflictIPv4Address |
|                   | 6                                                                      | badIPv4Address      | error IPv4 address  |

Notes:

If <addressingType> is dynamic, fields below it need not be provided.

If <addressingType> is dynamic, a DHCP client is used for the device.



If <addressingType> is static the device IP address is configured manually and the gateway and DNS fields are optional.

If <addressingType> refers to APIPA, the device IP address is automatically configured without DHCP. In this case the gateway and DNS fields are optional.

Use of <ipAddress> or <ipv6Address> in fields is dictated by the <ipVersion> field. If <ipVersion> is "v4" the <ipAddress> fields are used; if <ipVersion> is "v6" the <ipv6Address> fields are used. If <ipVersion> is "dual", both <ipAddress> and <ipv6Address> fields may be used.

<subnetMask> notation is "ISAPI.ISAPI.ISAPI.ISAPI".

<IPv6Address> is "ISAPIx:ISAPIx:ISAPIx:ISAPIx:ISAPIx:ISAPIx:ISAPIx:ISAPIx" using CIDR notation.

### IPAddress XML Block

```
<IPAddress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipVersion> <!-- req, xs:string, "v4,v6,dual" --> </ipVersion>
  <addressingType> <!-- req, xs:string, "static,dynamic,apipa" --> </addressingType>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <subnetMask> <!-- dep, xs:string, subnet mask for IPv4 address --> </subnetMask>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <bitMask> <!-- dep, xs:integer, bitmask IPv6 address --> </bitMask>
  <DefaultGateway> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </DefaultGateway>
  <PrimaryDNS> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </PrimaryDNS>
  <SecondaryDNS> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </SecondaryDNS>
  <Ipv6Mode> <!-- opt -->
    <ipV6AddressingType>
      <!-- dep, xs:string, "ra,manual,dhcp" -->
    </ipV6AddressingType>
    <ipv6AddressList>
      <v6Address>
        <id> <!-- dep, xs:string;id --> </id>
        <type> <!-- dep, xs:string, "ra,manual,dhcp" --> </type>
        <address> <!-- dep, xs:string --> </address>
        <bitMask> <!-- dep, xs:integer --> </bitMask>
      </v6Address>
    </ipv6AddressList>
  </Ipv6Mode>
```

</IPAddress>

## 8.2.6 /ISAPI/System/Network/interfaces/<ID>/wireless/capabilities

| /ISAPI/System/Network/interfaces/ID/wireless/capabilities |                                                                               | General Resource | v2.0 |
|-----------------------------------------------------------|-------------------------------------------------------------------------------|------------------|------|
| es                                                        |                                                                               |                  |      |
| GET                                                       |                                                                               |                  |      |
| Description                                               | It is used to get the wireless settings of a particular network interface.    |                  |      |
| Query                                                     | None                                                                          |                  |      |
| Inbound Data                                              | None                                                                          |                  |      |
| Success Return                                            | Wireless                                                                      |                  |      |
| PUT                                                       |                                                                               |                  |      |
| Description                                               | It is used to update the wireless settings of a particular network interface. |                  |      |
| Query                                                     | None                                                                          |                  |      |
| Inbound Data                                              | Wireless                                                                      |                  |      |
| Success Return                                            | ResponseStatus                                                                |                  |      |
| Notes:                                                    |                                                                               |                  |      |

### Wireless XML Block

```
<Wireless version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>    <!-- req, xs:boolean -->  </enabled>
  <wirelessNetworkMode    opt="infrastructure,adhoc"><!--    opt,    xs:string
--></wirelessNetworkMode>
  <channel opt="1,2,3,4,5,6,7,8,9,10,11,12,13,14,auto">    <!--    opt,    xs:string-->
  </channel>
  <ssid min="" max="">    <!-- opt, xs:string -->    </ssid>
  <wmmEnabled>    <!-- opt, xs:boolean -->  </wmmEnabled>
  <WirelessSecurity> <!-- opt -->
  <securityMode opt=" disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,
WPA-enterprise,WPA2-enterprise"><!-- opt, xs:string, --></securityMode>
  <WEP>
    <!-- dep, depends on <securityMode> -->
    <authenticationType    opt    =    "open,sharedkey,auto"><!--    req,
xs:string--></authenticationType>
    <defaultTransmitKeyIndex    min=""    max=""><!--    req,    xs:integer    -->
  </defaultTransmitKeyIndex>
    <wepKeyLength opt=" 64,128"><!-- opt, xs:integer --> </wepKeyLength>
    <EncryptionKeyList>
      <encryptionKey>
        <!-- req, xs:hexBinary, WEP encryption key in hexadecimal format -->
```

```

        </encryptionKey>
    </EncryptionKeyList>
</WEP>
<WPA>
    <!-- dep, depends on <securityMode> -->
    <algorithmType opt="TKIP,AES,TKIP/AES"> <!-- req, xs:string,--> </algorithmType>
    <sharedKey> <!-- req, xs:string, pre-shared key used in WPA --> </sharedKey>
    <wpaKeyLength min="8" max="64"> <!-- req, xs: integer"--> </wpaKeyLength>
</WPA>
    <support64bitKey          opt="WPA-personal,          WPA2-personal"/><!--opt,
xs:string,--></support64bitKey>
    </WirelessSecurity>
</Wireless>

```

## 8.2.7 /ISAPI/System/Network/interfaces/<ID>/wireless

| /ISAPI/System/Network/interfaces/ID/wireless |                                                                               | General Resource | v2.0 |
|----------------------------------------------|-------------------------------------------------------------------------------|------------------|------|
| GET                                          |                                                                               |                  |      |
| Description                                  | It is used to get the wireless settings of a particular network interface.    |                  |      |
| Query                                        | None                                                                          |                  |      |
| Inbound Data                                 | None                                                                          |                  |      |
| Success Return                               | Wireless                                                                      |                  |      |
| PUT                                          |                                                                               |                  |      |
| Description                                  | It is used to update the wireless settings of a particular network interface. |                  |      |
| Query                                        | None                                                                          |                  |      |
| Inbound Data                                 | Wireless                                                                      |                  |      |
| Success Return                               | ResponseStatus                                                                |                  |      |
| Notes:                                       |                                                                               |                  |      |

### Wireless XML Block

```

<Wireless version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <enabled> <!-- req, xs:boolean --> </enabled>
    <wirelessNetworkMode>
        <!-- opt, xs:string, "infrastructure,adhoc" -->
    </wirelessNetworkMode>
    <channel> <!-- opt, xs:string, "1-14,auto" --> </channel>
    <ssid> <!-- opt, xs:string --> </ssid>
    <wmmEnabled> <!-- opt, xs:boolean --> </wmmEnabled>
    <WirelessSecurity> <!-- opt -->
        <securityMode>

```

```

<!-- opt, xs:string,
    "disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,
    WPA-enterprise,WPA2-enterprise"-->
</securityMode>
<WEP>
    <!-- dep, depends on <securityMode> -->
    <authenticationType>
        <!-- req, xs:string, "open,sharedkey,auto" -->
    </authenticationType>
    <defaultTransmitKeyIndex>
        <!-- req, xs:integer -->
    </defaultTransmitKeyIndex>
    <wepKeyLength> <!-- opt, xs:integer "64,128" --> </wepKeyLength>
    <EncryptionKeyList>
        <encryptionKey>
            <!-- req, xs:hexBinary, WEP encryption key in hexadecimal format -->
        </encryptionKey>
    </EncryptionKeyList>
</WEP>
<WPA>
    <!-- dep, depends on <securityMode> -->
    <algorithmType> <!-- req, xs:string, "TKIP,AES,TKIP/AES"--> </algorithmType>
    <sharedKey> <!-- req, xs:string, pre-shared key used in WPA --> </sharedKey>
    <wpaKeyLength> <!-- req, xs: integer, "8-63"--> </wpaKeyLength>
</WPA>
</WirelessSecurity>
</Wireless>

```

## 8.2.8 /ISAPI/System/Network/interfaces/<ID>/wireless/ accessPointList

| /ISAPI/System/Network/interfaces/ID/wireless/accessPointList |                                                                      | General Resource<br>v2.0 |
|--------------------------------------------------------------|----------------------------------------------------------------------|--------------------------|
| GET                                                          |                                                                      |                          |
| Description                                                  | It is used to get the valid access points on the wireless interface. |                          |
| Query                                                        | None                                                                 |                          |
| Inbound Data                                                 | None                                                                 |                          |
| Success Return                                               | accessPointList                                                      |                          |
| Notes:                                                       |                                                                      |                          |

#### accessPointList XML Block

```
<accessPointList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessPoint/>
</accessPointList>
```

## 8.2.9 /ISAPI/System/Network/interfaces/<ID>/wireless/ accessPointList/<ID>

| /ISAPI/System/Network/interfaces/ID/wireless/accessPointList/ID |                                              | General Resource<br>v2.0 |
|-----------------------------------------------------------------|----------------------------------------------|--------------------------|
| GET                                                             |                                              |                          |
| Description                                                     | It is used to get a particular access point. |                          |
| Query                                                           | None                                         |                          |
| Inbound Data                                                    | None                                         |                          |
| Success Return                                                  | accessPoint                                  |                          |
| Notes:                                                          |                                              |                          |

#### accessPoint XML Block

```
<accessPoint version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer--> </id>
  <networkMode>
    <!-- opt, xs:string, "infrastructure,adhoc" -->
  </networkMode>
  <channel> <!-- opt, xs:string, "1-14,auto" --> </channel>
  <ssid> <!-- req, xs:string --> </ssid>
  <speed> <!-- opt, xs:Integer, in Mbps--> </speed>
  <signalStrength><!-- opt, xs:Integer,"0-100"> </signalStrength>
  <securityMode>
    <!-- req, xs:string, "disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,
      WPA-enterprise,WPA2-enterprise" -->
  </securityMode>
  <connected><!--opt,xs:boolean, --></connected>
</accessPoint>
```

## 8.2.10 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList

|                                                                     |                        |                          |
|---------------------------------------------------------------------|------------------------|--------------------------|
| /ISAPI/System/Network/interfaces/ID/wirelessServer/accessDeviceList |                        | General Resource<br>v2.0 |
| GET                                                                 |                        |                          |
| Description                                                         | Get access device list |                          |
| Query                                                               | none                   |                          |
| Inbound Data                                                        | none                   |                          |
| Success Return                                                      | accessDeviceList       |                          |
| 注:                                                                  |                        |                          |

### accessDeviceList XML Block

```
<accessDeviceList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessDevice/>
</accessDeviceList>
```

## 8.2.11 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList/<ID>

|                                                                  |                              |                          |
|------------------------------------------------------------------|------------------------------|--------------------------|
| /ISAPI/System/Network/interfaces/ID/wireless/accessDeviceList/ID |                              | General Resource<br>v2.0 |
| GET                                                              |                              |                          |
| Description                                                      | Get access device list by ID |                          |
| Query                                                            | none                         |                          |
| Inbound Data                                                     | none                         |                          |
| Success Return                                                   | accessDevice                 |                          |
| 注:                                                               |                              |                          |

### accessDevice XML Block

```
<accessDevice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer--> </id>
  <MACAddress> <!--opt, xs:string--> </MACAddress>
  <ipV4Address> <!-- dep, xs:string --> </ipV4Address>
  <accessTime> <!-- req, xs:time, ISO8601 data --> </accessTime>
</accessDevice>
```

## 8.2.12 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList/capabilities

|                                                                              |                                                              |                  |      |
|------------------------------------------------------------------------------|--------------------------------------------------------------|------------------|------|
| /ISAPI/System/Network/interfaces/<ID>/wireless/accessDeviceList/capabilities |                                                              | General Resource | v2.0 |
| GET                                                                          |                                                              |                  |      |
| Description                                                                  | It is used to get accessDeviceList configuration capability. |                  |      |
| Query                                                                        | None                                                         |                  |      |
| Inbound Data                                                                 | None                                                         |                  |      |
| Success Return                                                               | accessDeviceList                                             |                  |      |
| Notes:                                                                       |                                                              |                  |      |

### accessDeviceList XML Block

```
<accessDeviceList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessDevice size="4">
    <id> <!-- req, xs:integer--> </id>
    <MACAddress> <!--opt, xs:string--> </MACAddress>
    <ipV4Address> <!-- opt, xs:string --> </ipV4Address>
    <accessTime> <!-- req, xs:time, ISO8601 data --> </accessTime>
  </accessDevice>
</accessDeviceList>
```

## 8.2.13 /ISAPI/System/Network/interfaces/<ID>/discovery

|                                               |                                                                                |                  |      |
|-----------------------------------------------|--------------------------------------------------------------------------------|------------------|------|
| /ISAPI/System/Network/interfaces/ID/discovery |                                                                                | General Resource | v2.0 |
| GET                                           |                                                                                |                  |      |
| Description                                   | It is used to get the discovery settings of a particular network interface.    |                  |      |
| Query                                         | None                                                                           |                  |      |
| Inbound Data                                  | None                                                                           |                  |      |
| Success Return                                | Discovery                                                                      |                  |      |
| PUT                                           |                                                                                |                  |      |
| Description                                   | It is used to update the discovery settings of a particular network interface. |                  |      |
| Query                                         | None                                                                           |                  |      |
| Inbound Data                                  | Discovery                                                                      |                  |      |
| Success Return                                | ResponseStatus                                                                 |                  |      |
| Notes:                                        |                                                                                |                  |      |

### Discovery XML Block

```
<Discovery version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <UPnP>      <!-- req -->
    <enabled>   <!-- req, xs:boolean --> </enabled>
  </UPnP>
  <Zeroconf>   <!-- opt -->
    <enabled>   <!-- req, xs:boolean --> </enabled>
  </Zeroconf>
</Discovery>
```

## 8.2.14 /ISAPI/System/Network/interfaces/<ID>/Link

| /ISAPI/System/Network/interfaces/ID/link |                                                                                 | General Resource | v2.0 |
|------------------------------------------|---------------------------------------------------------------------------------|------------------|------|
| GET                                      |                                                                                 |                  |      |
| Description                              | It is used to get the link layer settings of a particular network interface.    |                  |      |
| Query                                    | None                                                                            |                  |      |
| Inbound Data                             | None                                                                            |                  |      |
| Success Return                           | Link                                                                            |                  |      |
| PUT                                      |                                                                                 |                  |      |
| Description                              | It is used to update the link layer settings of a particular network interface. |                  |      |
| Query                                    | None                                                                            |                  |      |
| Inbound Data                             | Link                                                                            |                  |      |
| Success Return                           | ResponseStatus                                                                  |                  |      |
| Notes:                                   |                                                                                 |                  |      |

### Link XML Block

```
<Link xmlns="http://www.isapi.org/ver20/XMLSchema">
  <MACAddress> <!-- req, xs:string --> </MACAddress>
  <autoNegotiation> <!-- req, xs:boolean --> </autoNegotiation>
  <speed> <!-- req, xs:integer, "10, 100, 1000" --> </speed>
  <duplex> <!-- req, xs:string, "half, full" --> </duplex>
  <MTU> <!-- req, xs:integer --> </MTU>
</Link>
```

## 8.2.15 /ISAPI/System/Network/ANRArmingHost

| /ISAPI/System/Network/ANRArmingHost |                              | General Resource | v2.0 |
|-------------------------------------|------------------------------|------------------|------|
| <b>GET</b>                          |                              |                  |      |
| Description                         | Get the ANR arming host info |                  |      |



|                |                   |
|----------------|-------------------|
| Query          | None              |
| Inbound Data   | None              |
| Success Return | ANRArmingHostList |
| Notes:         |                   |

#### ANRArmingHost XML Block

```
<ANRArmingHostList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ANRArmingHost>
    <ipAddress><!-- opt, xs:string --></ipAddress>
    <ipv6Address><!-- opt, xs:string --></ipv6Address>
    <portNo><!-- sopt, xs:integer --></portNo>
    <ANRAAlarmType><!-- opt, xs: string: "SDK, Ehome"---></ANRAAlarmType>
  </ANRArmingHost>
</ANRArmingHostList>
```

## 8.2.16 Examples

#### Example: Getting the Network Settings

```
GET /ISAPI/System/Network/interfaces HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<NetworkInterfaceList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <NetworkInterface>
    <id>1</id>
    <IPAddress>
      <ipVersion>v4</ipVersion>
      <addressingType>static</addressingType>
      <ipAddress>172.6.64.7</ipAddress>
      <subnetMask>255.255.255.0</subnetMask>
      <DefaultGateway>
        <ipAddress>172.6.64.1</ipAddress>
      </DefaultGateway>
      <PrimaryDNS>
        <ipAddress>192.0.0.200</ipAddress>
      </PrimaryDNS>
    </IPAddress>
```

```
<Discovery>
  <UPnP>
    <enabled>true</enabled>
  </UPnP>
  <Zeroconf>
    <enabled>true</enabled>
  </Zeroconf>
</Discovery>
<Link>
  <MACAddress> 00:40:48:4C:7F:F2</MACAddress>
  <autoNegotiation>true</autoNegotiation>
  <speed>1000</speed>
  <duplex>full</duplex>
  <MTU>1500</MTU>
</Link>
<NetworkInterface>
</NetworkInterfaceList>
```

**Example: Setting the IP Address**

```
PUT /ISAPI/System/Network/interfaces/1/ipAddress HTTP/1.1
...
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<IPAddress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipVersion>v4</ipVersion>
  <addressingType>static</addressingType>
  <ipAddress>172.6.64.16</ipAddress>
  <subnetMask>255.255.255.0</subnetMask>
  <DefaultGateway>
    <ipAddress>172.6.64.1</ipAddress>
  </DefaultGateway>
  <PrimaryDNS>
    <ipAddress>192.0.0.200</ipAddress>
  </PrimaryDNS>
</IPAddress>

HTTP/1.1 200 OK
...
Content-Type: application/xml; charset="UTF-8"
Content-Length:xxx
```

```
<?xml version="1.0" encoding="UTF-8"?>
<ResponseStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <requestURL>/Network/interfaces/1/ipAddress</requestURL>
  <statusCode>1</statusCode>
  <statusString>OK</statusString>
</ResponseStatus>
```

## 8.2.17 /ISAPI/System/Network/interfaces/<ID>/WPS

| /ISAPI/System/Network/interfaces/ID/WPS |                                         | General Resource | v2.0 |
|-----------------------------------------|-----------------------------------------|------------------|------|
| GET                                     |                                         |                  |      |
| Description                             | It is used to access WPS configuratioin |                  |      |
| Query                                   | None                                    |                  |      |
| Inbound Data                            | None                                    |                  |      |
| Success Return                          | WPS                                     |                  |      |
| PUT                                     |                                         |                  |      |
| Description                             | It is used to access WPS configuratioin |                  |      |
| Query                                   | None                                    |                  |      |
| Inbound Data                            | WPS                                     |                  |      |
| Success Return                          | ResponseStatus                          |                  |      |
| Notes:                                  |                                         |                  |      |

### WPSXML Block

```
<WPS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enable> <!-- req, xs:boolean--> </enable>
</WPS>
```

## 8.2.18 /ISAPI/System/Network/interfaces/ID/WPS/Auto Connect

| /ISAPI/System/Network/interfaces/ID/WPS/AutoConnect |                                        | General Resource | v2.0 |
|-----------------------------------------------------|----------------------------------------|------------------|------|
| <b>PUT</b>                                          |                                        |                  |      |
| Description                                         | It is used to WPS auto connection mode |                  |      |
| Query                                               | None                                   |                  |      |
| Inbound Data                                        | <b>WPS</b>                             |                  |      |

|                |                |
|----------------|----------------|
| Success Return | ResponseStatus |
| Notes:         |                |

## 8.2.19 /ISAPI/System/Network/interfaces/ID/WPS/devicePinCode

|                                                       |                                       |                  |      |
|-------------------------------------------------------|---------------------------------------|------------------|------|
| /ISAPI/System/Network/interfaces/ID/WPS/devicePinCode |                                       | General Resource | v2.0 |
| e                                                     |                                       |                  |      |
| GET                                                   |                                       |                  |      |
| Description                                           | It is used to get WPS device PIN code |                  |      |
| Query                                                 | None                                  |                  |      |
| Inbound Data                                          | None                                  |                  |      |
| Success Return                                        | PIN code string                       |                  |      |
| Notes:                                                |                                       |                  |      |

## 8.2.20 /ISAPI/System/Network/interfaces/ID/WPS/devicePinCodeUpdate

|                                                       |                                              |                  |      |
|-------------------------------------------------------|----------------------------------------------|------------------|------|
| /ISAPI/System/Network/interfaces/ID/WPS/devicePinCode |                                              | General Resource | v2.0 |
| eUpdate                                               |                                              |                  |      |
| GET                                                   |                                              |                  |      |
| Description                                           | It is used to generate a new device PIN code |                  |      |
| Query                                                 | None                                         |                  |      |
| Inbound Data                                          | None                                         |                  |      |
| Success Return                                        | PIN code string                              |                  |      |
| Notes:                                                |                                              |                  |      |

## 8.2.21 /ISAPI/System/Network/interfaces/ID/WPS/AppPinCode

|                                                    |                                        |                  |      |
|----------------------------------------------------|----------------------------------------|------------------|------|
| /ISAPI/System/Network/interfaces/ID/WPS/AppPinCode |                                        | General Resource | v2.0 |
| GET                                                |                                        |                  |      |
| Description                                        | It is used to access WPS configuration |                  |      |
| Query                                              | None                                   |                  |      |



### IEEE802\_1x XML Block

```
<IEEE802_1x version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <authenticationProtocolType>
    <!-- req, xs:string, "EAP-TLS,EAP-TTLS,EAP-PEAP,EAP-LEAP,EAP-FAST,EAP-MD5" -->
  </authenticationProtocolType>
  <innerTTLSAuthenticationMethod>
    <!-- dep, xs:string, "MS-CHAP,MS-CHAPv2,PAP,EAP-MD5" -->
  </innerTTLSAuthenticationMethod>
  <innerEAPProtocolType>
    <!-- dep, xs:string, "EAP-POTP,MS-CHAPv2" -->
  </innerEAPProtocolType>
  <validateServerEnabled> <!-- dep, xs:boolean --> </validateServerEnabled>
  <userName> <!-- dep, xs:string --> </userName>
  <password><!-- dep, xs:string --> </password>
  <anonymousID> <!-- opt, xs:string --> </anonymousID>
  <autoPACProvisioningEnabled> <!-- dep, xs:boolean --> </autoPACProvisioningEnabled>
  <Extensions> <!-- opt -->
    <EAPOLVersion xmlns="http://www.isapi.org/ver20/XMLSchema">
      <!--opt, xs:string, "1, 2"-->
    </EAPOLVersion>
  </Extensions>
</IEEE802_1x>
```

## 8.2.23 /ISAPI/System/Network/PPPoE

| /ISAPI/System/Network/PPPoE |                                                | General Resource | v2.0 |
|-----------------------------|------------------------------------------------|------------------|------|
| GET                         |                                                |                  |      |
| Description                 | It is used to get the configurations of pppoe. |                  |      |
| Query                       | None                                           |                  |      |
| Inbound Data                | None                                           |                  |      |
| Success Return              | PPPoEList                                      |                  |      |
| PUT                         |                                                |                  |      |
| Description                 | It is used to set the configurations of pppoe. |                  |      |
| Query                       | None                                           |                  |      |
| Inbound Data                | PPPoEList                                      |                  |      |
| Success Return              | ResponseStatus                                 |                  |      |
| Notes:                      |                                                |                  |      |

### PPPoEList XML Block

```
<PPPoEList xmlns="http://www.isapi.org/ver20/XMLSchema">
```

```
<PPPoE/> <!--req-->
</PPPoEList>
```

## 8.2.24 /ISAPI/System/Network/PPPoE/status

| /ISAPI/System/Network/PPPoE/status |                                        | General Resource | v2.0 |
|------------------------------------|----------------------------------------|------------------|------|
| GET                                |                                        |                  |      |
| Description                        | It is used to get the status of pppoe. |                  |      |
| Query                              | None                                   |                  |      |
| Inbound Data                       | None                                   |                  |      |
| Success Return                     | PPPoEStatusList                        |                  |      |
| Notes:                             |                                        |                  |      |

### PPPoEStatusList XML Block

```
<PPPoEStatusList xmlns="http://www.isapi.org/ver20/XMLSchema">
  <PPPoEStatus/> <!--req-->
</PPPoEStatusList>
```

## 8.2.25 /ISAPI/System/Network/PPPoE/<ID>

| /ISAPI/System/Network/PPPoE/ID                                                                                                |                                                             | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------|------|
| GET                                                                                                                           |                                                             |                  |      |
| Description                                                                                                                   | It is used to get the configuration of a particular pppoe.  |                  |      |
| Query                                                                                                                         | None                                                        |                  |      |
| Inbound Data                                                                                                                  | None                                                        |                  |      |
| Success Return                                                                                                                | PPPoE                                                       |                  |      |
| PUT                                                                                                                           |                                                             |                  |      |
| Description                                                                                                                   | It is used to set the configurations of a particular pppoe. |                  |      |
| Query                                                                                                                         | None                                                        |                  |      |
| Inbound Data                                                                                                                  | PPPoE                                                       |                  |      |
| Success Return                                                                                                                | ResponseStatus                                              |                  |      |
| Notes:                                                                                                                        |                                                             |                  |      |
| <ethernetIfId> links the PPPoE to a network interface that the PPPoE dial up used, see /ISAPI/System/Network/interfaces/<ID>. |                                                             |                  |      |

### PPPoE XML Block

```
<PPPoE xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
```

```
<enabled>      <!-- req, xs:boolean --> </enabled>
<ethernetIfId> <!-- opt, xs:string; id --> </ethernetIfId>
<userName>     <!-- req, xs:string --> </userName>
<password>     <!-- wo, req, xs:string --> </password>
</PPPoE>
```

## 8.2.26 /ISAPI/System/Network/PPPoE/<ID>/status

| /ISAPI/System/Network/PPPoE/ID/status |                                                     | General Resource | v2.0 |
|---------------------------------------|-----------------------------------------------------|------------------|------|
| GET                                   |                                                     |                  |      |
| Description                           | It is used to get the status of a particular pppoe. |                  |      |
| Query                                 | None                                                |                  |      |
| Inbound Data                          | None                                                |                  |      |
| Success Return                        | PPPoEStatus                                         |                  |      |
| Notes:                                |                                                     |                  |      |

### PPPoEStatus XML Block

```
<PPPoEStatus xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <ethernetIfId> <!-- opt, xs:string; id --> </ethernetIfId>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <subnetMask> <!-- dep, xs:string, subnet mask for IPv4 address --> </subnetMask>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <bitMask> <!-- dep, xs:integer, bitmask IPv6 address --> </bitMask>
  <DefaultGateway> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </DefaultGateway>
  <PrimaryDNS> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </PrimaryDNS>
  <SecondaryDNS> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </SecondaryDNS>
</PPPoEStatus>
```



## 8.2.27 /ISAPI/System/Network/Bond

| URI      | /ISAPI/System/Network/Bond                                       |              |               | Type | Service |
|----------|------------------------------------------------------------------|--------------|---------------|------|---------|
| Function | Get or set the configuration information of Bond net interfaces. |              |               |      |         |
| Methods  | Query String(s)                                                  | Inbound Data | Return Result |      |         |
| GET      |                                                                  |              | <BondList>    |      |         |
| Notes    | Bond NIC configuration                                           |              |               |      |         |

### BondList XML Block

```
<BondList version="2.0" xmlns="urn:selfextension:ISAPIext-ver10-xsd">
  <Bond>
</BondList>
```

## 8.2.28 /ISAPI/System/Network/Bond/<ID>

| URI      | /ISAPI/System/Network/Bond/ID                                  |              | Type             | Resource |
|----------|----------------------------------------------------------------|--------------|------------------|----------|
| Function | Get or set the configuration information of Bond net interface |              |                  |          |
| Methods  | Query String(s)                                                | Inbound Data | Return Result    |          |
| GET      |                                                                |              | <Bond>           |          |
| PUT      |                                                                | <Bond>       | <ResponseStatus> |          |
| Notes    |                                                                |              |                  |          |

### Bond XML Block

```
<Bond version="2.0" xmlns="urn:selfextension:ISAPIext-ver10-xsd">
  <id>      <!-- req, xs:string -->    </id>
  <enabled>  <!-- req, xs:boolean -->   </enabled>
  <workMode> <!-- req, xs:string,"balance-rr, active-backup" --> </workMode>
  <primaryIf> <!-- req, xs:string;id --></primaryIf>
  <slaveIfList> <!-- req -->
    <ethernetIfId>    <!-- req, xs:string; id -->      </ethernetIfId>
  </slaveIfList>
  <IPAddress>
    <ipVersion>      <!-- req, xs:string, "v4,v6,dual" --></ipVersion>
    <addressingType>  <!-- req, xs:string, "static,dynamic,apipa" --> </addressingType>
    <ipAddress>      <!-- dep, xs:string -->          </ipAddress>
```

```

<subnetMask>    <!-- dep, xs:string, subnet mask for IPv4 address -->    </subnetMask>
<ipv6Address>    <!-- dep, xs:string -->    </ipv6Address>
<bitMask>        <!-- dep, xs:integer, bitmask IPv6 address -->    </bitMask>
<DefaultGateway> <!-- dep -->
    <ipAddress>    <!-- dep, xs:string -->    </ipAddress>
    <ipv6Address>  <!-- dep, xs:string -->    </ipv6Address>
</DefaultGateway>
<PrimaryDNS>     <!-- dep -->
    <ipAddress>    <!-- dep, xs:string -->    </ipAddress>
    <ipv6Address>  <!-- dep, xs:string -->    </ipv6Address>
</PrimaryDNS>
<SecondaryDNS>   <!-- dep -->
    <ipAddress>    <!-- dep, xs:string -->    </ipAddress>
    <ipv6Address>  <!-- dep, xs:string -->    </ipv6Address>
</SecondaryDNS>
</IPAddress>
<Link xmlns="urn:selfextension:ISAPIext-ver10-xsd">    <!-- opt -->
    <MACAddress> <!-- req, xs:string --> </MACAddress>
    <autoNegotiation> <!-- req, xs:boolean --> </autoNegotiation>
    <speed> <!-- req, xs:integer, "10, 100, 1000" --> <speed>
    <duplex> <!-- req, xs:string, "half, full" --> </duplex>
    <MTU> <!-- req, xs:integer --> </MTU>
</Link>
</Bond>

```

## 8.2.29 /ISAPI/System/Network/extension

| URI      | /ISAPI/System/Network/extension                                |                    | Type               | Resource |
|----------|----------------------------------------------------------------|--------------------|--------------------|----------|
| Function | Get or set the configuration information of network externsion |                    |                    |          |
| Methods  | Query String(s)                                                | Inbound Data       | Return Result      |          |
| GET      |                                                                |                    | <networkExtension> |          |
| PUT      |                                                                | <networkExtension> | <ResponseStatus>   |          |
| Notes    |                                                                |                    |                    |          |

### networkExtension XML Block

```
<networkExtension version="2.0" xmlns="urn:selfextension:ISAPIext-ver10-xsd">
  <multicastAddress> <!-- opt -->
    <ipVersion>          <!-- req, xs:string, "v4,v6,dual" --></ipVersion>
    <ipAddress>          <!-- dep, xs:string --> </ipAddress>
    <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  </multicastAddress>
  <enVirtualHost> <!--opt, xs:Boolean --> <enVirtualHost>
</networkExtension>
```

### 8.2.30 /ISAPI/System/Network/DDNS

| /ISAPI/System/Network/DDNS |                                                | General Resource | v2.0 |
|----------------------------|------------------------------------------------|------------------|------|
| GET                        |                                                |                  |      |
| Description                | It is used to get the configurations of DDNS.  |                  |      |
| Query                      | None                                           |                  |      |
| Inbound Data               | None                                           |                  |      |
| Success Return             | DDNSList                                       |                  |      |
| PUT                        |                                                |                  |      |
| Description                | It is used to set the configurations of pppoe. |                  |      |
| Query                      | None                                           |                  |      |
| Inbound Data               | DDNSList                                       |                  |      |
| Success Return             | ResponseStatus                                 |                  |      |
| Notes:                     |                                                |                  |      |

#### DDNSList XML Block

```
<DDNSList xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DDNS/> <!--req-->
</DDNSList>
```

### 8.2.31 /ISAPI/System/Network/DDNS/<ID>

| /ISAPI/System/Network/DDNS/ID |                                                             | General Resource | v2.0 |
|-------------------------------|-------------------------------------------------------------|------------------|------|
| GET                           |                                                             |                  |      |
| Description                   | It is used to get the configuration of a particular DDNS.   |                  |      |
| Query                         | None                                                        |                  |      |
| Inbound Data                  | None                                                        |                  |      |
| Success Return                | DDNS                                                        |                  |      |
| PUT                           |                                                             |                  |      |
| Description                   | It is used to set the configurations of a particular pppoe. |                  |      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | None           |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DDNS           |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ResponseStatus |
| <b>Notes:</b><br><br><serverAddress> DDNS server's address.<br>Depending on the value of <addressingFormatType>, either the <hostName> or the IP address fields will be used to locate the NTP server.<br>Use of IPv4 or IPv6 addresses depends on the value of the <ipVersion> field in /ISAPI/System/Network/interfaces/ID/ipAddress.<br>When <provider> is "IPServer", <serverIPAddress> is required.<br>When <provider> is "DysDNS", all fields are required except the <portNo>.<br>When <provider> is "PeanutHall", all fields are required except the <serverIPAddress> and <portNo>.<br><deviceDomainName> the device's domain name.<br><password> is a write-only field.<br><countryID> see the Country List. |                |

#### DDNS XML Block

```
<DDNS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string -->
  <enabled>    <!-- req, xs:boolean --> </enabled>
  <provider>
    <!-- req, xs:string, "IPServer, DynDNS, PeanutHall, HiDDNS ..." -->
  </provider>
  <serverAddress>
    <addressingFormatType>
      <!-- req, xs:string, "ipaddress,hostname" -->
    </addressingFormatType>
    <hostName>    <!-- dep, xs:string --> </hostName> //不能是中文
    <ipAddress>    <!-- dep, xs:string --> </ipAddress>
    <ipv6Address><!-- dep, xs:string -->    </ipv6Address>
  </serverAddress>
  <portNo> <!-- opt, xs:integer --> </portNo>
  <deviceDomainName> <!-- dep, xs:string --> </deviceDomainName>
  <userName> <!-- dep, xs:string --> </userName> //不能是中文
  <password> <!-- wo, dep, xs:string --> </password>
  <countryID> <!-- dep, xs:string --> </countryID>
  <status> <!-- ro, opt, xs:string, DDNS 运行状态: 连接服务器失败(connServerfail)、
    解析服务器消息失败(solveServerMesFail)、连接心跳服务器失败(connHeartSrvfail)、解析心跳
    服务器消息失败(solveHeartSrvMesFail)、连接域名服务器失败(connHostSrvfail)、解析域名
    服务器消息失败(solveHostSrvMesFail)、DDNS 状态正常(updateSuccess)、未启用(disable)、注
    册域名成功(registHostSuccess)、DNS 服务器配置错误(DNSSrvError)、
```

域名被占用(DomainConflict)、别名(域名)不合法(InvalidAlias)、鉴权失败(authenticationFail)、注册服务器错误(registServerError)、注册失败(registFail)--></status>  
</DDNS>

## 8.2.32 /ISAPI/System/Network/DDNS/CountryID/capabilities

| /ISAPI/System/Network/DDNS/CountryID/capabilities             |                                               | General Resource | v2.0 |
|---------------------------------------------------------------|-----------------------------------------------|------------------|------|
| GET                                                           |                                               |                  |      |
| Description                                                   | It is used to get DDNS country id capability. |                  |      |
| Query                                                         | None                                          |                  |      |
| Inbound Data                                                  | None                                          |                  |      |
| Success Return                                                | <DDNSCountry>                                 |                  |      |
| Notes: the value of <id> and <name> is in Country List below. |                                               |                  |      |

### DDNS Country List XML Block

```
<DDNSCountry version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ContinentList>
    <Continent>
      <id><!--req, xs:integer--></id>
      <name><!-- req, xs:string --></name>
      <CountryList>
        <Country>
          <id><!--req, xs:integer--></id>
          <name><!-- req, xs:string --></name>
        </Country>
      </CountryList>
    </Continent>
  </ContinentList>
</DDNSCountry>
```

### Country List:

| Continent | Country | ID  |
|-----------|---------|-----|
| Europe    | Europe  | 100 |
|           | Andorra | 101 |
|           | Austria | 102 |
|           | Albania | 103 |
|           | Ireland | 104 |
|           | Estonia | 105 |
|           | Iceland | 106 |

|             |                      |     |
|-------------|----------------------|-----|
|             | Belarus              | 107 |
|             | Bulgaria             | 108 |
|             | Poland               | 109 |
|             | Bosnia               | 110 |
|             | Belgium              | 111 |
|             | Germany              | 112 |
|             | Denmark              | 113 |
|             | Russia               | 114 |
|             | France               | 115 |
|             | Finland              | 116 |
|             | Holland              | 117 |
|             | Czech                | 118 |
|             | Croatia              | 119 |
|             | Latvia               | 120 |
|             | Lithuania            | 121 |
|             | Liechtenstein        | 122 |
|             | Romania              | 123 |
|             | Macedonia            | 124 |
|             | Malta                | 125 |
|             | Luxembourg           | 126 |
|             | Monaco               | 127 |
|             | Moldova              | 128 |
|             | Norway               | 129 |
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|             | Portugal             | 131 |
|             | Sweden               | 132 |
|             | Switzerland          | 133 |
|             | Slovak               | 134 |
|             | Slovenia             | 135 |
|             | San marino           | 136 |
|             | Ukraine              | 137 |
|             | Spain                | 138 |
|             | Greece               | 139 |
|             | Hungary              | 140 |
|             | Italy                | 141 |
|             | United Kingdom       | 142 |
|             | Europe Other         | 143 |
| <b>Asia</b> | Asia                 | 200 |
|             | Afghanistan          | 201 |
|             | United Arab Emirates | 202 |
|             | Oman                 | 203 |
|             | Azerbaijan           | 204 |

|  |              |     |
|--|--------------|-----|
|  | Pakistan     | 205 |
|  | Palestine    | 206 |
|  | Bahrain      | 207 |
|  | Bhutan       | 208 |
|  | North Korea  | 209 |
|  | Timor        | 210 |
|  | Philippines  | 211 |
|  | Georgia      | 212 |
|  | Kazakhstan   | 213 |
|  | Korea        | 214 |
|  | Kirgizstan   | 215 |
|  | Cambodia     | 216 |
|  | Qatar        | 217 |
|  | Kuwait       | 218 |
|  | Laos         | 219 |
|  | Lebanon      | 220 |
|  | Maldives     | 221 |
|  | Malaysia     | 222 |
|  | Mongolia     | 223 |
|  | Bangladesh   | 224 |
|  | Myanmar      | 225 |
|  | Nepal        | 226 |
|  | Japan        | 227 |
|  | Cyprus       | 228 |
|  | Saudi Arabia | 229 |
|  | Srilanka     | 230 |
|  | Tajikistan   | 231 |
|  | Thailand     | 232 |
|  | Turkey       | 233 |
|  | Turkmenistan | 234 |
|  | Brunei       | 235 |
|  | Uzbekistan   | 236 |
|  | Singapore    | 237 |
|  | Syria        | 238 |
|  | Armenia      | 239 |
|  | Yemen        | 240 |
|  | Iran         | 241 |
|  | Iraq         | 242 |
|  | Israel       | 243 |
|  | India        | 244 |
|  | Indonesia    | 245 |
|  | Jordan       | 246 |

|                |                      |     |
|----------------|----------------------|-----|
|                | Vietnam              | 247 |
|                | China                | 248 |
|                | Asia Other           | 249 |
| <b>America</b> | America              | 300 |
|                | Argentina            | 301 |
|                | Antigua and Barbuda  | 302 |
|                | Barbados             | 303 |
|                | Bolivia              | 304 |
|                | Brazil               | 305 |
|                | Dominica             | 306 |
|                | Ecuador              | 307 |
|                | Cuba                 | 308 |
|                | Colombia             | 309 |
|                | Grenada              | 310 |
|                | Guyana               | 311 |
|                | Canada               | 312 |
|                | Peru                 | 313 |
|                | United States        | 314 |
|                | Mexico               | 315 |
|                | Surinam              | 316 |
|                | Saint-Lucia          | 317 |
|                | Trinidad and Tobago  | 318 |
|                | Uruguay              | 319 |
|                | Venezuela            | 320 |
|                | Jamaica              | 321 |
|                | Chile                | 322 |
|                | Bahamas              | 323 |
|                | America Other        | 324 |
|                | Paraguay             | 325 |
|                | Haiti                | 326 |
|                | Netherlands Antilles | 327 |
|                | El Salvador          | 328 |
|                | Panama               | 329 |
|                | Guatemala            | 330 |
|                | Nicaragua            | 331 |
|                | Honduras             | 332 |
|                | Costa Rica           | 333 |
|                | Aruba                | 334 |
|                | Belize               | 335 |
|                | Cayman Islands       | 336 |
|                | Curaçao              | 337 |
|                | Dominican Republic   | 338 |



|               |                   |     |
|---------------|-------------------|-----|
|               | Martinique        | 339 |
|               | Puerto Rico       | 340 |
| <b>Africa</b> | Africa            | 400 |
|               | Algeria           | 401 |
|               | Egypt             | 402 |
|               | Ethiopia          | 403 |
|               | Angola            | 404 |
|               | Benin             | 405 |
|               | Botswana          | 406 |
|               | Burkina Faso      | 407 |
|               | Burundi           | 408 |
|               | Equatorial Guinea | 409 |
|               | Togo              | 410 |
|               | Eritrea           | 411 |
|               | Verde             | 412 |
|               | Gambia            | 413 |
|               | Congo             | 414 |
|               | Congo-Kinshasa    | 415 |
|               | Djibouti          | 416 |
|               | Guinea            | 417 |
|               | Guinea-Bissau     | 418 |
|               | Gabon             | 419 |
|               | Ghana             | 420 |
|               | Zimbabwe          | 421 |
|               | Cameroon          | 422 |
|               | Comoros           | 423 |
|               | Cote d'Ivoire     | 424 |
|               | Kenya             | 425 |
|               | Lesotho           | 426 |
|               | Liberia           | 427 |
|               | Libya             | 428 |
|               | Rwanda            | 429 |
|               | Madagascar        | 430 |
|               | Mali              | 431 |
|               | Mauritius         | 432 |
|               | Mauritania        | 433 |
|               | Morocco           | 434 |
|               | Mozambique        | 435 |
|               | Namibia           | 436 |
|               | South Africa      | 437 |
|               | Niger             | 438 |
|               | Nigeria           | 439 |

|         |                          |     |
|---------|--------------------------|-----|
|         | Sierra Leone             | 440 |
|         | Senegal                  | 441 |
|         | Seychelles               | 442 |
|         | Sao Tome and Principe    | 443 |
|         | Sudan                    | 444 |
|         | Somali                   | 445 |
|         | Tanzania                 | 446 |
|         | Tunisia                  | 447 |
|         | Uganda                   | 448 |
|         | Zambia                   | 449 |
|         | Chad                     | 450 |
|         | Central African Republic | 451 |
| Oceania | Africa Other             | 452 |
|         | Oceania                  | 500 |
|         | Australia                | 501 |
|         | Papua New Guinea         | 502 |
|         | Fiji                     | 503 |
|         | Cook Islands             | 504 |
|         | Samoa                    | 505 |
|         | Micronesia               | 506 |
|         | Nauru                    | 507 |
|         | Tonga                    | 508 |
|         | Vanuatu                  | 509 |
|         | New Zealand              | 510 |
|         | Oceania Other            | 511 |

### 8.2.33 /ISAPI/System/Network/SNMP

| /ISAPI/System/Network/SNMP |                    | General Resource | v2.0 |
|----------------------------|--------------------|------------------|------|
| GET                        |                    |                  |      |
| Description                | Get SNMP Settings. |                  |      |
| Query                      | None               |                  |      |
| Inbound Data               | None               |                  |      |
| Success Return             | SNMP               |                  |      |
| PUT                        |                    |                  |      |
| Description                | Set SNMP Settings  |                  |      |
| Query                      | None               |                  |      |
| Inbound Data               | SNMP               |                  |      |
| Success Return             | ResponseStatus     |                  |      |
| Notes:                     |                    |                  |      |

At least one of the <SNMPv2c> block or <SNMPAdvanced> block must be provided.  
 <snmpPort> snmp agent listen port

### SNMP XML Block

```
<SNMP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SNMPv1c/>
  <!-- dep, choose one mode in <SNMPv1c> <SNMPv2c> <SNMPAdvanced> is required -->
  <SNMPv2c/>          <!-- dep -->
  <SNMPAdvanced/>      <!-- dep -->
  <listenPort> <!--opt, xs:integer ,snmp port--><listenPort>
</SNMP>
```

## 8.2.34 /ISAPI/System/Network/SNMP/v1c

/ISAPI/System/Network/SNMP/v1c

General Resourcev2.0

|                |                          |
|----------------|--------------------------|
| GET            |                          |
| Description    | Get SNMP v1c parameters. |
| Query          | None                     |
| Inbound Data   | None                     |
| Success Return | SNMPv1c                  |

|                |                         |
|----------------|-------------------------|
| PUT            |                         |
| Description    | Set SNMP v1c parameters |
| Query          | None                    |
| Inbound Data   | SNMPv1c                 |
| Success Return | ResponseStatus          |

Notes:

SNMP v1c configuration includes SNMP notification parameters and a set of SNMP trap receivers. SNMP v1c comprises SNMP v1 without the controversial new SNMP v1 security model, using instead the simple community-based security scheme of SNMP v1

### SNMPv1c XML Block

```
<SNMPv1c version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <notificationEnabled>          <!-- req, xs:boolean --> </notificationEnabled>
  <SNMPTrapReceiverList/>        <!-- opt -->
  <enabled> <!--req, xs:boolean; is enabled snmpv2c--> </enabled>
  <writeCommunity> <!--req, xs:string --> </writeCommunity>
  <readCommunity> <!-- req, xs:string --> </readCommunity>
```

</SNMPv1c>

## 8.2.35 /ISAPI/System/Network/SNMP/v1c/trapReceiver

S

| /ISAPI/System/Network/SNMP/v1c/trapReceivers |                                 | General Resource | v2.0 |
|----------------------------------------------|---------------------------------|------------------|------|
| GET                                          |                                 |                  |      |
| Description                                  | Get SNMP trap receiver list.    |                  |      |
| Query                                        | None                            |                  |      |
| Inbound Data                                 | None                            |                  |      |
| Success Return                               | SNMPTrapReceiverList            |                  |      |
| PUT                                          |                                 |                  |      |
| Description                                  | Set SNMP trap receiver list     |                  |      |
| Query                                        | None                            |                  |      |
| Inbound Data                                 | SNMPTrapReceiverList            |                  |      |
| Success Return                               | ResponseStatus                  |                  |      |
| POST                                         |                                 |                  |      |
| Description                                  | create a new SNMP trap receiver |                  |      |
| Query                                        | None                            |                  |      |
| Inbound Data                                 | SNMPTrapReceiver                |                  |      |
| Success Return                               | ResponseStatus                  |                  |      |
| DELETE                                       |                                 |                  |      |
| Description                                  | Delete SNMP trap receiver list  |                  |      |
| Query                                        | None                            |                  |      |
| Inbound Data                                 | None                            |                  |      |
| Success Return                               | ResponseStatus                  |                  |      |
| Notes:                                       |                                 |                  |      |

## 8.2.36 /ISAPI/System/Network/SNMP/v1c/trapReceiver

/<ID>

| /ISAPI/System/Network/SNMP/v2c/trapReceivers/<ID> |                                     | General Resource | v2.0 |
|---------------------------------------------------|-------------------------------------|------------------|------|
| <b>GET</b>                                        |                                     |                  |      |
| Description                                       | Get SNMP trap receiver information. |                  |      |
| Query                                             | None                                |                  |      |
| Inbound Data                                      | None                                |                  |      |

|                |                                    |
|----------------|------------------------------------|
| Success Return | <b>SNMPTrapReceiver</b>            |
| <b>PUT</b>     |                                    |
| Description    | Set SNMP trap receiver information |
| Query          | None                               |
| Inbound Data   | <b>SNMPTrapReceiver</b>            |
| Success Return | <b>ResponseStatus</b>              |
| <b>DELETE</b>  |                                    |
| Description    | Delete SNMP trap receiver          |
| Query          | None                               |
| Inbound Data   | <b>None</b>                        |
| Success Return | <b>ResponseStatus</b>              |
| Notes:         |                                    |

### 8.2.37 /ISAPI/System/Network/SNMP/v2c

/ISAPI/System/Network/SNMP/v2c

General Resourcev2.0

|                |                          |
|----------------|--------------------------|
| GET            |                          |
| Description    | Get SNMP v2c parameters. |
| Query          | None                     |
| Inbound Data   | None                     |
| Success Return | SNMPv2c                  |
| PUT            |                          |
| Description    | Set SNMP v2c parameters  |
| Query          | None                     |
| Inbound Data   | SNMPv2c                  |
| Success Return | ResponseStatus           |

Notes:

SNMP v2c configuration includes SNMP notification parameters and a set of SNMP trap receivers. SNMP v2c comprises SNMP v2 without the controversial new SNMP v2 security model, using instead the simple community-based security scheme of SNMP v1

#### SNMPv2c XML Block

```
<SNMPv2c version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <notificationEnabled>    <!-- req, xs:boolean -->    </notificationEnabled>
  <SNMPTrapReceiverList/>    <!-- opt -->
  <enabled> <!--req, xs:boolean; is enabled snmpv2c--> </enabled>
  <writeCommunity> <!--req, xs:string --> </writeCommunity>
  <readCommunity> <!-- req, xs:string --> </readCommunity>
</SNMPv2c>
```

## 8.2.38 /ISAPI/System/Network/SNMP/v2c/trapReceiver

s

| /ISAPI/System/Network/SNMP/v2c/trapReceivers |                                 | General Resource | v2.0 |
|----------------------------------------------|---------------------------------|------------------|------|
| GET                                          |                                 |                  |      |
| Description                                  | Get SNMP trap receiver list.    |                  |      |
| Query                                        | None                            |                  |      |
| Inbound Data                                 | None                            |                  |      |
| Success Return                               | SNMPTrapReceiverList            |                  |      |
| PUT                                          |                                 |                  |      |
| Description                                  | Set SNMP trap receiver list     |                  |      |
| Query                                        | None                            |                  |      |
| Inbound Data                                 | SNMPTrapReceiverList            |                  |      |
| Success Return                               | ResponseStatus                  |                  |      |
| POST                                         |                                 |                  |      |
| Description                                  | create a new SNMP trap receiver |                  |      |
| Query                                        | None                            |                  |      |
| Inbound Data                                 | SNMPTrapReceiver                |                  |      |
| Success Return                               | ResponseStatus                  |                  |      |
| DELETE                                       |                                 |                  |      |
| Description                                  | Delete SNMP trap receiver list  |                  |      |
| Query                                        | None                            |                  |      |
| Inbound Data                                 | None                            |                  |      |
| Success Return                               | ResponseStatus                  |                  |      |
| Notes:                                       |                                 |                  |      |

### SNMPTrapReceiverList XML Block

```
<SNMPTrapReceiverList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SNMPTrapReceiver/>    <!-- opt -->
</SNMPTrapReceiverList>
```

## 8.2.39 /ISAPI/System/Network/SNMP/v2c/trapReceiver

s/<ID>

| /ISAPI/System/Network/SNMP/v2c/trapReceivers/<ID> |                                     | General Resource | v2.0 |
|---------------------------------------------------|-------------------------------------|------------------|------|
| <b>GET</b>                                        |                                     |                  |      |
| Description                                       | Get SNMP trap receiver information. |                  |      |



on the device.

<SNMPNotificationFilterList> is a list to filter traps based on OIDs

### SNMPAdvanced XML Block

```
<SNMPAdvanced                                version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <localEngineID> <!-- req, xs:hexBinary, see RFC2571 --> </localEngineID>
  <authenticationNotificationEnabled>
    <!-- opt, xs:boolean -->
  </authenticationNotificationEnabled>
  <SNMPUserList/><!-- opt -->
  <SNMPNotificationFilterList/> <!-- opt -->
  <notificationEnabled> <!-- opt, xs:boolean --> </notificationEnabled>
  <SNMPNotificationReceiverList/> <!-- opt -->
  <enabled> <!--req, xs:boolean --> </enabled>
</SNMPAdvanced>
```

## 8.2.41 /ISAPI/System/Network/SNMP/advanced/users

| /ISAPI/System/Network/SNMP/advanced/users                   |                                 | General Resource | v2.0 |
|-------------------------------------------------------------|---------------------------------|------------------|------|
| GET                                                         |                                 |                  |      |
| Description                                                 | Get SNMP advanced user list.    |                  |      |
| Query                                                       | None                            |                  |      |
| Inbound Data                                                | None                            |                  |      |
| Success Return                                              | SNMPUserList                    |                  |      |
| PUT                                                         |                                 |                  |      |
| Description                                                 | Set SNMP advanced list          |                  |      |
| Query                                                       | None                            |                  |      |
| Inbound Data                                                | SNMPUserList                    |                  |      |
| Success Return                                              | ResponseStatus                  |                  |      |
| POST                                                        |                                 |                  |      |
| Description                                                 | create a new SNMP advanced user |                  |      |
| Query                                                       | None                            |                  |      |
| Inbound Data                                                | SNMPUser                        |                  |      |
| Success Return                                              | ResponseStatus                  |                  |      |
| DELETE                                                      |                                 |                  |      |
| Description                                                 | Delete SNMP advanced user list  |                  |      |
| Query                                                       | None                            |                  |      |
| Inbound Data                                                | None                            |                  |      |
| Success Return                                              | ResponseStatus                  |                  |      |
| Notes: Defines the set of SNMP users and their permissions. |                                 |                  |      |



#### SNMPUserList XML Block

```
<SNMPUserList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SNMPUser/>  <!-- opt -->
</SNMPUserList>
```

### 8.2.42 /ISAPI/System/Network/SNMP/advanced/users/ <ID>

| /ISAPI/System/Network/SNMP/advanced/users/ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     | General Resource | v2.0 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                  |      |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Get SNMP advanced user information. |                  |      |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | None                                |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | None                                |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SNMPUser                            |                  |      |
| PUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                  |      |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Set SNMP advanced user information  |                  |      |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | None                                |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SNMPUser                            |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ResponseStatus                      |                  |      |
| DELETE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                  |      |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Delete SNMP advanced user           |                  |      |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | None                                |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | None                                |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ResponseStatus                      |                  |      |
| Notes:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                  |      |
| <p>&lt;remoteEngineID&gt; indicates the remote SNMP entity to which the user is connected.</p> <p>&lt;snmpAuthenticationMethod&gt; indicates the authentication method used.</p> <p>&lt;snmpAuthenticationKey&gt; defines the authentication key if encryption is used for &lt;snmpAuthenticationMethod&gt;.</p> <p>&lt;snmpAuthenticationPassword&gt; optional password used to calculate the &lt;snmpAuthenticationKey&gt; value if encryption is used for &lt;snmpAuthenticationMethod&gt;.</p> <p>&lt;snmpPrivacyMethod&gt; indicates if messages are protected from disclosure, and if so, the type of privacy protocol used.</p> <p>&lt;snmpPrivacyKey&gt; defines the privacy key if encryption is used for &lt;snmpPrivacyMethod&gt;.</p> <p>&lt;snmpPrivacyPassword&gt; optional password used to calculate the &lt;snmpPrivacyKey&gt; value if encryptions is used for &lt;snmpPrivacyMethod&gt;</p> |                                     |                  |      |

### SNMPUser XML Block

```
<SNMPUser version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string;id -->    </id>
  <userName><!-- req, xs:string -->    </userName>
  <remoteEngineID>    <!-- req, xs:hexBinary --></remoteEngineID>
  <snmpAuthenticationMethod>
    <!-- req, xs:string, "MD5,SHA,none" -->
  </snmpAuthenticationMethod>
  <snmpAuthenticationKey> <!-- dep, xs:string -->    </snmpAuthenticationKey>
  <snmpAuthenticationPassword>
    <!-- dep, xs:string, see RFC3414 -->
  </snmpAuthenticationPassword>
  <snmpPrivacyMethod>    <!-- req, xs:string, "DES,AES,none" --> </snmpPrivacyMethod>
  <snmpPrivacyKey>    <!-- dep, xs:string -->    </snmpPrivacyKey>
  <snmpPrivacyPassword>    <!-- dep, xs:string, see RFC3414 --> </snmpPrivacyPassword>
</SNMPUser>
```

## 8.2.43 /ISAPI/System/Network/mailing

| /ISAPI/System/Network/mailling |                                                | General Resource | v2.0 |
|--------------------------------|------------------------------------------------|------------------|------|
| GET                            |                                                |                  |      |
| Description                    | It is used to get the configuration of e-mail. |                  |      |
| Query                          | None                                           |                  |      |
| Inbound Data                   | None                                           |                  |      |
| Success Return                 | maillingList                                   |                  |      |
| PUT                            |                                                |                  |      |
| Description                    | It is used to set the configuration of e-mail. |                  |      |
| Query                          | None                                           |                  |      |
| Inbound Data                   | maillingList                                   |                  |      |
| Success Return                 | ResponseStatus                                 |                  |      |
| Notes:                         |                                                |                  |      |

### mailingList XML Block

```
<mailingList xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mailing> <!-- opt, xs:string> </mailing>
</mailingList>
```

## 8.2.44 /ISAPI/System/Network/mailing/<ID>

| /ISAPI/System/Network/mailing/ID | General Resource | v2.0 |
|----------------------------------|------------------|------|
|----------------------------------|------------------|------|

| GET            |                                                             |
|----------------|-------------------------------------------------------------|
| Description    | It is used to get the configuration of a particular e-mail. |
| Query          | None                                                        |
| Inbound Data   | None                                                        |
| Success Return | <b>mailingList</b>                                          |
| PUT            |                                                             |
| Description    | It is used to set the configuration of a particular e-mail. |
| Query          | None                                                        |
| Inbound Data   | <b>mailingList</b>                                          |
| Success Return | <b>ResponseStatus</b>                                       |
| Notes:         |                                                             |

### mailing XML Block

```
<mailing xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <sender> <!--req-->
    <name> <!--req, xs:string> </name>
    <emailAddress> <!--req, xs:string --> </emailAddress>
    <smtp> <!-- req -->
      <enableAuthorization><!--req, xs:boolean--></enableAuthorization>
      <enableSSL><!--opt, xs:boolean--></enableSSL>
      <addressingFormatType>
        <!-- req, xs:string, "ipaddress,hostname" -->
      </addressingFormatType>
      <hostName> <!-- dep, xs:string --> </hostName>
      <ipAddress><!-- dep, xs:string --> </ipAddress>
      <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
      <portNo> <!-- opt, xs:integer --> </portNo>
      <accountName> <!-- dep, xs:string --> </accountName>
      <password><!-- dep, xs:string --> </password>
      <enableTLS><!--opt, xs:boolean--></enableTLS>
      <startTLS><!--dep, xs:boolean--></startTLS>
    </smtp>
  </sender>
  <receiverList> <!-- req -->
    <receiver>
      <id> <!--req, xs:string; id --> </id>
      <name> <!--req, xs:string --> </name>
      <emailAddress> <!-- req, xs:string --> </emailAddress>
    </receiver>
  </receiverList>
  <attachment><!--opt-->
    <snapshot> <!--opt-->
```

```

    <enabled><!--req, xs:boolean--></enabled>
    <interval><!--req, xs:integer, seconds></interval>
  </snapshot>
</attachment>
</mailing>

```

## 8.2.45 /ISAPI/System/Network/mailing/test

| /ISAPI/System/Network/mailling/test |                                                                                     | General Resource | v2.0 |
|-------------------------------------|-------------------------------------------------------------------------------------|------------------|------|
| GET                                 |                                                                                     |                  |      |
| Description                         | It is used to test the mail servers are functioning and the email address is valid. |                  |      |
| Query                               | None                                                                                |                  |      |
| Inbound Data                        | maillingTestDescription                                                             |                  |      |
| Success Return                      | maillingTestResult                                                                  |                  |      |
| POST                                |                                                                                     |                  |      |
| Description                         | It is used to test the mail servers are functioning and the email address is valid. |                  |      |
| Query                               | None                                                                                |                  |      |
| Inbound Data                        | maillingTestDescription                                                             |                  |      |
| Success Return                      | maillingTestResult                                                                  |                  |      |
| Notes:                              |                                                                                     |                  |      |

### mailingTestDescription XML Block

```

<mailingTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sendName><!--opt, xs:string --></sendName>
  <sendEmailAddress><!--req, xs:string --></sendEmailAddress>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName><!-- dep, xs:string --></hostName>
  <ipAddress><!-- dep, xs:string --></ipAddress>
  <ipv6Address><!-- dep, xs:string --></ipv6Address>
  <portNo><!-- req, xs:integer --></portNo>
  <enableSSL><!--opt, xs:boolean--></enableSSL>
  <enableAuthorization><!--req, xs:boolean--></enableAuthorization>
  <accountName><!-- dep, xs:string --></accountName>
  <password><!-- dep, xs:string --></password>
  <receiverList><!-- req -->
    <receiver>
      <id><!--req, xs:string; id --></id>

```

```

    <name> <!--req, xs:string --> </name>
    <emailAddress> <!-- req, xs:string --> </emailAddress>
  </receiver>
</receiverList>
</mailingTestDescription>

```

#### mailingTestResult XML Block

```

<mailingTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <errorDescription> <!-- req, xs:string --> </errorDescription>
</mailingTestResult>

```

## 8.2.46 /ISAPI/System/Network/UPnP

| /ISAPI/System/Network/UPnP |                                                  | General Resource | v2.0 |
|----------------------------|--------------------------------------------------|------------------|------|
| GET                        |                                                  |                  |      |
| Description                | Get theUPnP configuration on an IP media device. |                  |      |
| Query                      | None                                             |                  |      |
| Inbound Data               | None                                             |                  |      |
| Success Return             | UPnP                                             |                  |      |
| PUT                        |                                                  |                  |      |
| Description                | Set theUPnP configuration on an IP media device. |                  |      |
| Query                      | None                                             |                  |      |
| Inbound Data               | UPnP                                             |                  |      |
| Success Return             | ResponseStatus                                   |                  |      |
| Notes:                     |                                                  |                  |      |

#### UPnP XML Block

```

<UPnP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req -->
  <ports/> <!-- opt -->
</UPnP>

```

## 8.2.47 /ISAPI/System/Network/UPnP/ports

| /ISAPI/System/Network/UPnP/ports |                                                    | General Resource | v2.0 |
|----------------------------------|----------------------------------------------------|------------------|------|
| <b>GET</b>                       |                                                    |                  |      |
| Description                      | Get the Ports configuration on an IP media device. |                  |      |
| Query                            | None                                               |                  |      |
| Inbound Data                     | None                                               |                  |      |

|                |                                                |
|----------------|------------------------------------------------|
| Success Return | <b>ports</b>                                   |
| <b>PUT</b>     |                                                |
| Description    | Set Ports configuration on an IP media device. |
| Query          | None                                           |
| Inbound Data   | <b>ports</b>                                   |
| Success Return | <b>ResponseStatus</b>                          |
| Notes:         |                                                |

#### ports XML Block

```
<ports version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req -->
  <mapmode> <!-- req, xs:string, "auto,manual" --></mapmode>
  <natRouterLanAddr> <!-- opt -->
    <ipVersion> <!-- req, xs:string, "v4,v6,dual" --> </ipVersion>
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </natRouterLanAddr>
  <portList> <!-- req -->
    <port/>
  </portList>
  <natType> <!--req, xs:string, "manual, auto" --> </natType>
</ports>
```

## 8.2.48 /ISAPI/System/Network/UPnP/ports/status

| /ISAPI/System/Network/UPnP/ports/status                                                |                                             | General Resource | v2.0 |
|----------------------------------------------------------------------------------------|---------------------------------------------|------------------|------|
| GET                                                                                    |                                             |                  |      |
| Description                                                                            | Get NAT ports status on an IP media device. |                  |      |
| Query                                                                                  | None                                        |                  |      |
| Inbound Data                                                                           | None                                        |                  |      |
| Success Return                                                                         | portsStatus                                 |                  |      |
| Notes:                                                                                 |                                             |                  |      |
| <natRouter> if this element is provided, the ip media device will use this nat router. |                                             |                  |      |

#### portsStatus XML Block

```
<portsStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req -->
  <natRouterLanAddr> <!-- req -->
    <ipVersion> <!-- req, xs:string, "v4,v6,dual" --> </ipVersion>
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
```

```

</natRouterLanAddr>
<natRouterWanAddr> <!-- req -->
    <ipVersion> <!-- req, xs:string, "v4,v6,dual" --> </ipVersion>
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
</natRouterWanAddr>
<portStatusList> <!-- req -->
    <portStatus/> <!-- req -->
</portStatusList>
</portsStatus>

```

## 8.2.49 /ISAPI/System/Network/UPnP/ports/<ID>

| /ISAPI/System/Network/UPnP/ports/<ID> |                                                              |              | General Resource | v2.0 |
|---------------------------------------|--------------------------------------------------------------|--------------|------------------|------|
| GET                                   |                                                              |              |                  |      |
| Description                           | Get a specific NAT port configuration on an IP media device. |              |                  |      |
| Query                                 | None                                                         |              |                  |      |
| Inbound Data                          | None                                                         |              |                  |      |
| Success Return                        | port                                                         |              |                  |      |
| PUT                                   |                                                              |              |                  |      |
| Description                           | Set a specific NAT port configuration on an IP media device. |              |                  |      |
| Query                                 | None                                                         |              |                  |      |
| Inbound Data                          | None                                                         |              |                  |      |
| Success Return                        | port                                                         |              |                  |      |
| Error Status Code                     | statusCode                                                   | subStausCode | description      |      |
|                                       | 6                                                            | badPort      | Port Conflict    |      |
| Notes:                                |                                                              |              |                  |      |

### port XML Block

```

<port version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <id/> <!-- req, xs:string, id -->
    <enabled/> <!-- req, xs:boolean -->
    <internalPort/> <!-- req, xs:string, "http, admin, rtsp, ..." -->
    <externalPort/> <!-- req, xs:integer -->
</port>

```

## 8.2.50 /ISAPI/System/Network/UPnP/ports/<ID>/status

| /ISAPI/System/Network/UPnP/ports/<ID>/status | General Resource v2.0 |
|----------------------------------------------|-----------------------|
|----------------------------------------------|-----------------------|

| GET                                                                                    |                                            |
|----------------------------------------------------------------------------------------|--------------------------------------------|
| Description                                                                            | Get NAT port status on an IP media device. |
| Query                                                                                  | None                                       |
| Inbound Data                                                                           | None                                       |
| Success Return                                                                         | <b>portStatus</b>                          |
| Notes:                                                                                 |                                            |
| <natRouter> if this element is provided, the ip media device will use this nat router. |                                            |

#### portStatus XML Block

```
<portStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <enabled/> <!-- req -->
  <internalPort/> <!-- req, xs:string, "http, admin, rtsp, ..." -->
  <externalPort/> <!-- req, xs:integer -->
  <status/> <!-- req, xs:string, "inactive, active, conflict, ..." -->
</portStatus>
```

## 8.2.51 /ISAPI/System/Network/ftp/capabilities

| /ISAPI/System/Network/ftp/capabilities |                                   | General Resource | v2.0 |
|----------------------------------------|-----------------------------------|------------------|------|
| GET                                    |                                   |                  |      |
| Description                            | It is used to get ftp capability. |                  |      |
| Query                                  | None                              |                  |      |
| Inbound Data                           | None                              |                  |      |
| Success Return                         | < FTPNotificationList >           |                  |      |
| Notes:                                 |                                   |                  |      |

#### FTPNotificationList XML Block

```
<FTPNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FTPNotification/> <!-- opt -->
</FTPNotificationList>
```

#### FTPNotification XML Block

```
<FTPNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!--req, xs:boolean --> </enabled>
  <useSSL> <!--opt, xs:boolean> </useSSL>
  <addressingFormatType opt=" ipaddress,hostname">
    <!-- req, xs:string, -->
```



```

</addressingFormatType>
<hostName> <!-- dep, xs:string --> </hostName>
<ipAddress> <!-- dep, xs:string --> </ipAddress>
<ipv6Address> <!-- dep, xs:string --> </ipv6Address>
<portNo> <!-- opt, xs:integer --> </portNo>
<userName> <!-- req, xs:string --> </userName>
<password> <!-- wo, xs:string --> </password>
<passiveModeEnabled> <!-- opt, xs:boolean --> </passiveModeEnabled>
<annoyftp> <!--opt, xs:boolean --> </annoyftp>
<uploadPicture> <!--opt, xs:boolean --> </uploadPicture>
<uploadVideoClip> <!-- opt, xs:Boolean --> </uploadVideoClip>
<uploadPath> <!--req -->
  <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
  <topDirNameRule opt="devName,devId,devIp,customize">
    <!-- dep, xs:string, -->
  </topDirNameRule>
  <topDirName/> <!-- dep, xs:string-->
  <subDirNameRule opt="chanName,chanId,customize">
    <!-- dep, xs:string,
  </subDirNameRule>
  <subDirName/> <!-- dep, xs:string-->
</uploadPath>
<FtpUpload version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <vehiclePicName>
    <mode opt="default,custom"> <!--req, xs:string, --> </mode>
    <NameRuleType>
      <RuleTypeItem size="">
        <RuleTypeItem>
          <id><!-- req, xs: interger --></id>
          <item opt="capture_time,plate_No,alarm_type,camera_name"><!--
req, xs: string --></item>
          <cameraName min="" max=""><!-- dep, xs: string
"camera_name"--></cameraName>
        </RuleTypeItem>
      </RuleTypeItemList>
    </NameRuleType>
  </vehiclePicName>
</FtpUpload>
<picArchivingInterval min="" max=""><!--opt,xs:integer,"1~30,0-close"
--></picArchivingInterval>
<picNameRuleType opt="default,prefix"><!-- opt, xs:string --></picNameRuleType>
<picNamePrefix min="0" max="32"><!-- dep, xs:string --></picNamePrefix>
</FTPNotification>

```

## 8.2.52 /ISAPI/System/Network/ftp

| /ISAPI/System/Network/ftp |                                              | General Resource | v2.0 |
|---------------------------|----------------------------------------------|------------------|------|
| GET                       |                                              |                  |      |
| Description               | It is used to get the configurations of FTP. |                  |      |
| Query                     | None                                         |                  |      |
| Inbound Data              | None                                         |                  |      |
| Success Return            | FTPNotificationList                          |                  |      |
| PUT                       |                                              |                  |      |
| Description               | It is used to set the configurations of FTP. |                  |      |
| Query                     | None                                         |                  |      |
| Inbound Data              | FTPNotificationList                          |                  |      |
| Success Return            | ResponseStatus                               |                  |      |
| Notes:                    |                                              |                  |      |

### FTPNotificationList XML Block

```
<FTPNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FTPNotification/>  <!-- opt -->
</FTPNotificationList>
```

## 8.2.53 /ISAPI/System/Network/ftp/<ID>

/ISAPI/System/Network/ftp/ID

General Resourcev2.0

GET

|                |                                                          |
|----------------|----------------------------------------------------------|
| Description    | It is used to get the configuration of a particular FTP. |
| Query          | None                                                     |
| Inbound Data   | None                                                     |
| Success Return | FTPNotification                                          |

PUT

|                |                                                           |
|----------------|-----------------------------------------------------------|
| Description    | It is used to set the configurations of a particular FTP. |
| Query          | None                                                      |
| Inbound Data   | FTPNotification                                           |
| Success Return | ResponseStatus                                            |

Notes:

Depending on the value of <addressingFormatType>, either the <hostName> or the IP address fields will be used to locate the NTP server.

Note: FTP transfers are always in binary mode.

<pathDepth> the depth of path. For example, / depth is 0, /a depth is 1, /a/b depth is 2

#### FTPNotification XML Block

```
<FTPNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!--req, xs:boolean --> </enabled>
  <useSSL> <!--opt, xs:boolean> </useSSL>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <portNo> <!-- opt, xs:integer --> </portNo>
  <userName> <!-- req, xs:string --> </userName>
  <password> <!-- wo, xs:string --> </password>
  <passiveModeEnabled> <!-- opt, xs:boolean --> </passiveModeEnabled>
  <annoyftp> <!--opt, xs:boolean --> </annoyftp>
  <uploadPicture> <!--opt, xs:boolean --> </uploadPicture>
  <uploadVideoClip> <!-- opt, xs:Boolean --> </uploadVideoClip>
  <uploadPath> <!--req -->
    <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
    <topDirNameRule>
      <!-- dep, xs:string, "devName, devId, devIp, customize" -->
    </topDirNameRule>
    <topDirName/> <!-- dep, xs:string-->
    <subDirNameRule>
      <!-- dep, xs:string, "chanName, chanId, customize"
    </subDirNameRule>
    <subDirName/> <!-- dep, xs:string-->
  </uploadPath>
  <picArchivingInterval><!--opt,xs:integer, --></picArchivingInterval>
  <picNameRuleType><!-- opt, xs:string;"default,prefix" --></picNameRuleType>
  <picNamePrefix><!-- dep, xs:string --></picNamePrefix>
</FTPNotification>
```

## 8.2.54 /ISAPI/System/Network/ftp/test

| /ISAPI/System/Network/ftp/test |                                                    | General Resource | v2.0 |
|--------------------------------|----------------------------------------------------|------------------|------|
| GET                            |                                                    |                  |      |
| Description                    | It is used to test the ftp server available or not |                  |      |

|                |                                                    |
|----------------|----------------------------------------------------|
| Query          | None                                               |
| Inbound Data   | <b>FTPTestDescription</b>                          |
| Success Return | <b>FTPTestResult</b>                               |
| <b>POST</b>    |                                                    |
| Description    | It is used to test the ftp server available or not |
| Query          | None                                               |
| Inbound Data   | <b>FTPTestDescription</b>                          |
| Success Return | <b>FTPTestResult</b>                               |
| Notes:         |                                                    |

#### FTPTestDescription XML Block

```
<FTPTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <useSSL> <!--opt, xs:boolean> </useSSL>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <portNo> <!-- opt, xs:integer --> </portNo>
  <userName> <!-- req, xs:string --> </userName>
  <password> <!-- wo, xs:string --> </password>
  <passiveModeEnabled> <!-- opt, xs:boolean --> </passiveModeEnabled>
  <annoyftp> <!--opt, xs:boolean --> </annoyftp>
  <uploadPath> <!--req -->
    <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
    <topDirNameRule>
      <!-- dep, xs:string, "devName, devId, devIp, customize" -->
    </topDirNameRule>
    <topDirName/> <!-- dep, xs:string-->
    <subDirNameRule>
      <!-- dep, xs:string, "chanName, chanId, customize" -->
    </subDirNameRule>
    <subDirName/> <!-- dep, xs:string-->
  </uploadPath>
</FTPTestDescription>
```

#### FTPTestResult XML Block

```
<FTPTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <errorDescription> <!-- req, xs:string -->.</errorDescription>
</FTPTestResult>
```

## 8.2.55 /ISAPI/System/Network/ipFilter

| /ISAPI/System/Network/ipFilter                                                                                                                                   |                                | General Resource                                                       | v2.0 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------|------|
| GET                                                                                                                                                              |                                |                                                                        |      |
| Description                                                                                                                                                      | Access IP filtering settings.  |                                                                        |      |
| Query                                                                                                                                                            | None                           |                                                                        |      |
| Inbound Data                                                                                                                                                     | None                           |                                                                        |      |
| Success Return                                                                                                                                                   | IPFilter                       |                                                                        |      |
| PUT                                                                                                                                                              |                                |                                                                        |      |
| Description                                                                                                                                                      | Access IP filtering settings.. |                                                                        |      |
| Query                                                                                                                                                            | None                           |                                                                        |      |
| Inbound Data                                                                                                                                                     | IPFilter                       |                                                                        |      |
| Success Return                                                                                                                                                   | ResponseStatus                 |                                                                        |      |
| Notes:                                                                                                                                                           |                                |                                                                        |      |
| <permissionType> field, if provided as a direct child of level configuration and will apply to all of the value provided in a particular <IPFilterAddress> block |                                | <IPFilter>, acts as a system <IPFilterAddress> entries, overriding the |      |

### IPFilter XML Block

```
<IPFilter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <permissionType> <!-- opt, xs:string, "deny,allow" --> </permissionType>
  <IPFilterAddressList/> <!-- opt -->
</IPFilter>
```

## 8.2.56 /ISAPI/System/Network/ipFilter/filterAddresses

| /ISAPI/System/Network/ipFilter/filterAddresses |                                | General Resource | v2.0 |
|------------------------------------------------|--------------------------------|------------------|------|
| GET                                            |                                |                  |      |
| Description                                    | Access IP filtering settings.  |                  |      |
| Query                                          | None                           |                  |      |
| Inbound Data                                   | None                           |                  |      |
| Success Return                                 | IPFilterAddressList            |                  |      |
| PUT                                            |                                |                  |      |
| Description                                    | Access IP filtering settings.. |                  |      |
| Query                                          | None                           |                  |      |
| Inbound Data                                   | IPFilterAddressList            |                  |      |

|                                                                                                                                                    |                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Success Return                                                                                                                                     | ResponseStatus                 |
| <b>POST</b>                                                                                                                                        |                                |
| Description                                                                                                                                        | Access IP filtering settings.. |
| Query                                                                                                                                              | None                           |
| Inbound Data                                                                                                                                       | IPFilterAddress                |
| Success Return                                                                                                                                     | ResponseStatus                 |
| <b>DELETE</b>                                                                                                                                      |                                |
| Description                                                                                                                                        | Access IP filtering settings.. |
| Query                                                                                                                                              | None                           |
| Inbound Data                                                                                                                                       | IPFilterAddressList            |
| Success Return                                                                                                                                     | ResponseStatus                 |
| <b>Notes:</b><br><br>The IP filter address list allows addresses to be added and removed from the list, or the entire list to be uploaded at once. |                                |

#### IPFilterAddressList XML Block

```
<IPFilterAddressList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IPFilterAddress/>    <!-- opt -->
</IPFilterAddressList>
```

## 8.2.57 /ISAPI/System/Network/ipFilter/filterAddresses/

### <ID>

| /ISAPI/System/Network/ipFilter/filterAddresses/ID |                                | General Resource | v2.0 |
|---------------------------------------------------|--------------------------------|------------------|------|
| GET                                               |                                |                  |      |
| Description                                       | Access IP filtering settings.  |                  |      |
| Query                                             | None                           |                  |      |
| Inbound Data                                      | None                           |                  |      |
| Success Return                                    | IPFilterAddress                |                  |      |
| PUT                                               |                                |                  |      |
| Description                                       | Access IP filtering settings.. |                  |      |
| Query                                             | None                           |                  |      |
| Inbound Data                                      | IPFilterAddress                |                  |      |
| Success Return                                    | ResponseStatus                 |                  |      |
| DELETE                                            |                                |                  |      |
| Description                                       | Access IP filtering settings.. |                  |      |
| Query                                             | None                           |                  |      |
| Inbound Data                                      | IPFilterAddress                |                  |      |
| Success Return                                    | ResponseStatus                 |                  |      |

#### Notes:

If the <permissionType> tag is not provided as a direct child of <IPFilter>, the <permissionType> tag must be provided for each <IPFilterAddress>.

Since the ordering of the filters can change the behavior, filtering will be applied consecutively starting with the first <IPFilterAddress> in the list.

The <bitMask> field is applied to the corresponding IP address to identify a range of addresses. It indicates the number of '1' bits used to mask the address. For example: '24' would correspond to a subnet mask of 255.255.255.0 and '32' would correspond to a subnet mask of 255.255.255.255 (a single IP address) for IPv4.

If <addressFilterType> refers to "mask", the <AddressMask> block must be provided in place of the <AddressRange> block. If it refers to "range", the <Range> block must be provided in place of the <AddressMask> block.

Use of IPv4 or IPv6 addresses depends on the value of the <ipVersion> field in /ISAPI/System/Network/interfaces/ID/ipAddress.

#### IPFilterAddress XML Block

```
<IPFilterAddress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <permissionType><!-- dep, xs:string, "deny,allow" --></permissionType>
  <addressFilterType> <!-- req, xs:string, "mask,range" --> </addressFilterType>
    <AddressRange> <!-- dep, depends on <addressFilterType> -->
      <startIPAddress> <!-- dep, xs:string --> </startIPAddress>
      <endIPAddress> <!-- dep, xs:string --> </endIPAddress>
      <startIPv6Address> <!-- dep, xs:string --> </startIPv6Address>
      <endIPv6Address> <!-- dep, xs:string --> </endIPv6Address>
    </AddressRange>
    <AddressMask><!-- dep, depends on <addressFilterType> -->
      <ipAddress> <!-- dep, xs:string --> </ipAddress>
      <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
      <bitMask> <!-- req, xs:string --> </bitMask>
    </AddressMask>
</IPFilterAddress>
```

## 8.2.58 /ISAPI/System/Network/qos

| /ISAPI/System/Network/qos |                                            | General Resource | v2.0 |
|---------------------------|--------------------------------------------|------------------|------|
| GET                       |                                            |                  |      |
| Description               | This function is used to get QoS Settings. |                  |      |
| Query                     | None                                       |                  |      |
| Inbound Data              | None                                       |                  |      |
| Success Return            | QoS                                        |                  |      |
| PUT                       |                                            |                  |      |

|                                                                                |                                           |
|--------------------------------------------------------------------------------|-------------------------------------------|
| <b>Description</b>                                                             | This function is used to set QoS Settings |
| <b>Query</b>                                                                   | None                                      |
| <b>Inbound Data</b>                                                            | <b>QoS</b>                                |
| <b>Success Return</b>                                                          | <b>ResponseStatus</b>                     |
| <b>Notes:</b><br><br>At least one of <CoSList> or <DSCPList> must be provided. |                                           |

#### QoS XML Block

```
<QoS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <CoSList/> <!-- dep -->
  <DSCPList/> <!-- dep -->
</QoS>
```

## 8.2.59 /ISAPI/System/Network/qos/cos

| /ISAPI/System/Network/qos/cos |                                                                         | General Resource | v2.0 |
|-------------------------------|-------------------------------------------------------------------------|------------------|------|
| GET                           |                                                                         |                  |      |
| Description                   | This function is used to get the QoS cos list setting for the device.   |                  |      |
| Query                         | None                                                                    |                  |      |
| Inbound Data                  | None                                                                    |                  |      |
| Success Return                | CoSList                                                                 |                  |      |
| PUT                           |                                                                         |                  |      |
| Description                   | This function is used to set the QoS cos list setting for the device    |                  |      |
| Query                         | None                                                                    |                  |      |
| Inbound Data                  | CoSList                                                                 |                  |      |
| Success Return                | ResponseStatus                                                          |                  |      |
| POST                          |                                                                         |                  |      |
| Description                   | This function is used to creat the QoS cos setting for the device       |                  |      |
| Query                         | None                                                                    |                  |      |
| Inbound Data                  | CoS                                                                     |                  |      |
| Success Return                | ResponseStatus                                                          |                  |      |
| DELETE                        |                                                                         |                  |      |
| Description                   | This function is used to delete the QoS cos list setting for the device |                  |      |
| Query                         | None                                                                    |                  |      |
| Inbound Data                  | None                                                                    |                  |      |
| Success Return                | ResponseStatus                                                          |                  |      |
| Notes:                        |                                                                         |                  |      |

#### CoSList XML Block



```
<CoSList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <CoS/> <!-- opt -->
</CoSList>
```

## 8.2.60 /ISAPI/System/Network/qos/cos/<ID>

| /ISAPI/System/Network/qos/cos/ID |                                                                    | General Resource | v2.0 |
|----------------------------------|--------------------------------------------------------------------|------------------|------|
| GET                              |                                                                    |                  |      |
| Description                      | This function is used to get the QoS cos setting for the device    |                  |      |
| Query                            | None                                                               |                  |      |
| Inbound Data                     | None                                                               |                  |      |
| Success Return                   | CoS                                                                |                  |      |
| PUT                              |                                                                    |                  |      |
| Description                      | This function is used to set the QoS cos setting for the device    |                  |      |
| Query                            | None                                                               |                  |      |
| Inbound Data                     | CoS                                                                |                  |      |
| Success Return                   | ResponseStatus                                                     |                  |      |
| DELETE                           |                                                                    |                  |      |
| Description                      | This function is used to delete the QoS cos setting for the device |                  |      |
| Query                            | None                                                               |                  |      |
| Inbound Data                     | None                                                               |                  |      |
| Success Return                   | ResponseStatus                                                     |                  |      |
| Notes:                           |                                                                    |                  |      |

### CoS XML Block

```
<CoS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <priority> <!-- req, xs:integer --> </priority>
  <vlanID> <!-- req, xs:string --> </vlanID>
  <trafficType>
    <!-- req, xs:string, "devicemanagement,commandcontrol,video,audio" -->
  </trafficType>
</CoS>
```

## 8.2.61 /ISAPI/System/Network/qos/dscp

| /ISAPI/System/Network/qos/dscp |                                                                       | General Resource | v2.0 |
|--------------------------------|-----------------------------------------------------------------------|------------------|------|
| <b>GET</b>                     |                                                                       |                  |      |
| Description                    | This function is used to get the QoS dscp list setting for the device |                  |      |

|                                                                                                                                                                                                                                   |                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Query                                                                                                                                                                                                                             | None                                                                    |
| Inbound Data                                                                                                                                                                                                                      | None                                                                    |
| Success Return                                                                                                                                                                                                                    | <b>DSCPList</b>                                                         |
| <b>PUT</b>                                                                                                                                                                                                                        |                                                                         |
| Description                                                                                                                                                                                                                       | This function is used to set the QoS dscp list setting for the device   |
| Query                                                                                                                                                                                                                             | None                                                                    |
| Inbound Data                                                                                                                                                                                                                      | <b>DSCPList</b>                                                         |
| Success Return                                                                                                                                                                                                                    | <b>ResponseStatus</b>                                                   |
| <b>POST</b>                                                                                                                                                                                                                       |                                                                         |
| Description                                                                                                                                                                                                                       | This function is used to create the QoS dscp setting for the device     |
| Query                                                                                                                                                                                                                             | None                                                                    |
| Inbound Data                                                                                                                                                                                                                      | <b>DSCP</b>                                                             |
| Success Return                                                                                                                                                                                                                    | <b>ResponseStatus</b>                                                   |
| <b>DELETE</b>                                                                                                                                                                                                                     |                                                                         |
| Description                                                                                                                                                                                                                       | This function is used to delete the QoS cos list setting for the device |
| Query                                                                                                                                                                                                                             | None                                                                    |
| Inbound Data                                                                                                                                                                                                                      | <b>None</b>                                                             |
| Success Return                                                                                                                                                                                                                    | <b>ResponseStatus</b>                                                   |
| <b>Notes:</b><br><br>A list of            DSCP parameter blocks is            specified for each type of traffic: device management, command and control, video and audio streaming. Devices may extend the set of traffic types. |                                                                         |

#### DSCPList XML Block

```
<DSCPList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DSCP/>    <!-- opt -->
</DSCPList>
```

## 8.2.62 /ISAPI/System/Network/qos/dscp/<ID>

| /ISAPI/System/Network/qos/dscp/ID |                                                                  | General Resource | v2.0 |
|-----------------------------------|------------------------------------------------------------------|------------------|------|
| GET                               |                                                                  |                  |      |
| Description                       | This function is used to get the QoS dscp setting for the device |                  |      |
| Query                             | None                                                             |                  |      |
| Inbound Data                      | None                                                             |                  |      |
| Success Return                    | DSCP                                                             |                  |      |
| PUT                               |                                                                  |                  |      |
| Description                       | This function is used to set the QoS dscp setting for the device |                  |      |
| Query                             | None                                                             |                  |      |
| Inbound Data                      | DSCP                                                             |                  |      |

|                                                                       |                                                                     |
|-----------------------------------------------------------------------|---------------------------------------------------------------------|
| Success Return                                                        | ResponseStatus                                                      |
| <b>DELETE</b>                                                         |                                                                     |
| Description                                                           | This function is used to delete the QoS dscp setting for the device |
| Query                                                                 | None                                                                |
| Inbound Data                                                          | None                                                                |
| Success Return                                                        | ResponseStatus                                                      |
| Notes:                                                                |                                                                     |
| <trafficType> determines which kind of traffic the settings apply to. |                                                                     |

#### DSCP XML Block

```
<DSCP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string;id -->  </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <priorityValue>  <!-- req, xs:integer, 6 bits - refer to RFC2474 --> </priorityValue>
  <trafficType>
    <!-- req, xs:string, "devicemanagement,commandcontrol,video,audio" -->
  </trafficType>
</DSCP>
```

## 8.2.63 /ISAPI/System/Network/telnetd

| /ISAPI/System/Network/telnetd |                                                 | General Resource | v2.0 |
|-------------------------------|-------------------------------------------------|------------------|------|
| GET                           |                                                 |                  |      |
| Description                   | It is used to get the configurations of telnet. |                  |      |
| Query                         | None                                            |                  |      |
| Inbound Data                  | None                                            |                  |      |
| Success Return                | Telnetd                                         |                  |      |
| PUT                           |                                                 |                  |      |
| Description                   | It is used to set the configurations of telnet. |                  |      |
| Query                         | None                                            |                  |      |
| Inbound Data                  | Telnetd                                         |                  |      |
| Success Return                | ResponseStatus                                  |                  |      |
| Notes:                        |                                                 |                  |      |

#### Telnetd XML Block

```
<Telnetd version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>  <!-- req, xs:boolean -->  </enabled>
</Telnetd>
```

## 8.2.64 /ISAPI/System/Network/SIP

| /ISAPI/System/Network/SIP |                | General Resource | v2.0 |
|---------------------------|----------------|------------------|------|
| GET                       |                |                  |      |
| Description               |                |                  |      |
| Query                     | None           |                  |      |
| Inbound Data              | None           |                  |      |
| Success Return            | SIPServerList  |                  |      |
| PUT                       |                |                  |      |
| Description               |                |                  |      |
| Query                     | None           |                  |      |
| Inbound Data              | SIPServerList  |                  |      |
| Success Return            | ResponseStatus |                  |      |
| Notes:                    |                |                  |      |

### SIPServerList XML Block

```
<SIPServerList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SIPServer/> <!-- opt -->
</SIPServerList>
```

## 8.2.65 /ISAPI/System/Network/SIP/<ID>

| /ISAPI/System/Network/SIP/<ID> |                | General Resource | v2.0 |
|--------------------------------|----------------|------------------|------|
| GET                            |                |                  |      |
| Description                    |                |                  |      |
| Query                          | None           |                  |      |
| Inbound Data                   | None           |                  |      |
| Success Return                 | SIPServer      |                  |      |
| PUT                            |                |                  |      |
| Description                    |                |                  |      |
| Query                          | None           |                  |      |
| Inbound Data                   | SIPServer      |                  |      |
| Success Return                 | ResponseStatus |                  |      |
| Notes:                         |                |                  |      |

### SIPServer XML Block

```
<SIPServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <localPort> <!-- req, xs:integer, "1-65535"--> </localPort>
  <streamID> <!-- req, xs:integer, "1(main stream),2 (sub stream) "--> </streamID>
  <Standard> <!-- opt -->
    <registerStatus> <!-- ro, req, xs:boolean, "false (unregistered) ,true (registered) "
--></registerStatus>

    <enabled> <!-- req, xs:string, "true(sign in),false (log out) "--> </enabled>
    <registrar> <!-- req, xs:string--> </registrar>
    <registrarPort> <!-- req, xs:integer--> </registrarPort>
    <proxy> <!-- req, xs:string--> </proxy>
    <proxyPort> <!-- req, xs:integer--> </proxyPort>
    <displayName> <!-- req, xs:string--> </displayName>
    <userName> <!-- req, xs:string--> </userName>
    <authID> <!-- req, xs:string--> </authID>
    <password> <!-- wo, req, xs:string--> </password>
    <expires> <!-- req, xs:integer--> </expires>
  </Standard>
  <GB28181> <!-- opt -->
    <registerStatus> <!-- req, xs:boolean --></registerStatus>
    <enabled> <!-- req, xs:string, "true,false"--> </enabled>
    <registrar> <!-- req, xs:string--> </registrar>
    <registrarPort> <!-- req, xs:integer--> </registrarPort>
    <serverId> <!-- req, xs:string--> </serverId>
    <serverDomain> <!-- req, xs:integer--> </serverDomain>
    <userName> <!-- req, xs:string--> </userName>
    <authID> <!-- req, xs:string--> </authID>
    <password> <!-- wo, req, xs:string--> </password>
    <expires> <!-- req, xs:integer--> </expires>
    <liveTime> <!-- req, xs:integer--> </liveTime>
    <heartbeatTime> <!-- req, xs:integer--> </heartbeatTime>
    <heartbeatCount> <!-- req, xs:integer--> </heartbeatCount>
    <transportType> <!-- opt, xs:string, "UDP, TCP,TLS"--> </transportType>
    <registerInterval> <!-- opt, xs:integer, "60-600", second--> </registerInterval>
    <protocolVersion> <!-- opt, xs:string, "GB/T28181-2011,GB/T28181-2015"-->
  </protocolVersion>
</GB28181>
</SIPServer>
```

## 8.2.66 /ISAPI/System/Network/SIP/<ID>/SIPInfo

/ISAPI/System/Network/SIP/<ID>/SIPInfo

General Resource v2.0

GET

|                                                                                                                                                                                                                                                      |                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Description</b>                                                                                                                                                                                                                                   | Get device ID and alarm ID |
| <b>Query</b>                                                                                                                                                                                                                                         | None                       |
| <b>Inbound Data</b>                                                                                                                                                                                                                                  | None                       |
| <b>Success Return</b>                                                                                                                                                                                                                                | <b>SIPInfo</b>             |
| <b>PUT</b>                                                                                                                                                                                                                                           |                            |
| <b>Description</b>                                                                                                                                                                                                                                   | Set device ID and alarm ID |
| <b>Query</b>                                                                                                                                                                                                                                         | None                       |
| <b>Inbound Data</b>                                                                                                                                                                                                                                  | <b>SIPInfo</b>             |
| <b>Success Return</b>                                                                                                                                                                                                                                | <b>ResponseStatus</b>      |
| <b>Notes:</b><br>For IP camera or Speed Dome, videoID only stands for “Device ID” and doesn’t need to provide VideoInputList elements; For NVRs/DVRs supporting multiple video channels, videoInputList indicates separate ID of each video channel. |                            |

#### SIPInfo XML Block

```
<SIPInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <videoID> <!-- req, xs:string--> <videoID>
  <AlarmInList>
  <AlarmIn>
    <id> <!-- req, xs:string--> </id>
    <alarmInID> <!-- req, xs:string--> <alarmInID>
  </AlarmIn>
  <AlarmInList>
  <VideoInputList> <!--opt -->
    <VideoInput>
      <id> <!-- req, xs:string--> </id>
      <videoInputID> <!--req, xs:string> </videoInputID>
    </VideoInput>
  </VideoInputList>
</SIPInfo>
```

## 8.2.67 /ISAPI/System/Network/EZVIZ

| /ISAPI/System/Network/EZVIZ |                                               | General Resource | v2.0 |
|-----------------------------|-----------------------------------------------|------------------|------|
| GET                         |                                               |                  |      |
| Description                 | It is used to get the configurations of EZVIZ |                  |      |
| Query                       | None                                          |                  |      |
| Inbound Data                | None                                          |                  |      |
| Success Return              | EZVIZ                                         |                  |      |
| PUT                         |                                               |                  |      |

|                                                                                      |                                               |
|--------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Description</b>                                                                   | It is used to set the configurations of EZVIZ |
| <b>Query</b>                                                                         | None                                          |
| <b>Inbound Data</b>                                                                  | <b>EZVIZ</b>                                  |
| <b>Success Return</b>                                                                | <b>ResponseStatus</b>                         |
| <b>Notes:</b><br><redirect> whether allow the device to redirect the server address. |                                               |

#### EZVIZ XML Block

```
<EZVIZ version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <registerStatus> <!-- ro,opt xs:boolean --></registerStatus>
  <redirect><!--opt xs:boolean --></redirect>
  <serverAddress> <!--opt-->
    <addressingFormatType>
      <!-- req, xs:string, "ipaddress,hostname"-->
    </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  <serverAddress>
</EZVIZ>
```

## 8.2.68 /ISAPI/System/Network/pingtest

| /ISAPI/System/Network/pingtest |                                                      | General Resource | v2.0 |
|--------------------------------|------------------------------------------------------|------------------|------|
| GET                            |                                                      |                  |      |
| Description                    | It is used to check the IP address available or not. |                  |      |
| Query                          | None                                                 |                  |      |
| Inbound Data                   | pingTestDescription                                  |                  |      |
| Success Return                 | pingTestResult                                       |                  |      |
| POST                           |                                                      |                  |      |
| Description                    | It is used to check the IP address available or not. |                  |      |
| Query                          | None                                                 |                  |      |
| Inbound Data                   | pingTestDescription                                  |                  |      |
| Success Return                 | pingTestResult                                       |                  |      |
| Notes:                         |                                                      |                  |      |

#### pingTestDescription XML Block

```
<pingTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipAddress><!-- dep, xs:string --> </ipAddress>
```

```
</pingTestDescription>
```

#### pingTestResult XML Block

```
<pingTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <status> <!-- req, xs:string,"used,not used" -->.</status>
</pingTestResult>
```

## 8.2.69 /ISAPI/System/Network/ssh

| /ISAPI/System/Network/ssh |                                              | General Resource | v2.0 |
|---------------------------|----------------------------------------------|------------------|------|
| GET                       |                                              |                  |      |
| Description               | It is used to get the configurations of ssh. |                  |      |
| Query                     | None                                         |                  |      |
| Inbound Data              | None                                         |                  |      |
| Success Return            | SSH                                          |                  |      |
| PUT                       |                                              |                  |      |
| Description               | It is used to set the configurations of ssh. |                  |      |
| Query                     | None                                         |                  |      |
| Inbound Data              | SSH                                          |                  |      |
| Success Return            | ResponseStatus                               |                  |      |
| Notes:                    |                                              |                  |      |

#### SSH XML Block

```
<SSH version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</SSH>
```

## 8.2.70 /ISAPI/System/Network/Ehome

| /ISAPI/System/Network/Ehome |                                                | General Resource | v2.0 |
|-----------------------------|------------------------------------------------|------------------|------|
| GET                         |                                                |                  |      |
| Description                 | It is used to get the configurations of ehome. |                  |      |
| Query                       | None                                           |                  |      |
| Inbound Data                | None                                           |                  |      |
| Success Return              | Ehome                                          |                  |      |
| PUT                         |                                                |                  |      |
| Description                 | It is used to set the configurations of ehome. |                  |      |
| Query                       | None                                           |                  |      |



|                |                |
|----------------|----------------|
| Inbound Data   | Ehome          |
| Success Return | ResponseStatus |
| Notes:         |                |

#### Ehome XML Block

```
<Ehome version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName>          <!-- dep, xs:string -->          </hostName>
  <ipAddress>          <!-- dep, xs:string -->          </ipAddress>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <portNo> <!-- opt, xs:integer --> </portNo>
  <deviceId> <!-- req, xs:string --> </deviceId>
  <registerStatus> <!-- ro, xs:boolean --></registerStatus>
  <version> <!-- ro, xs:string --></version>
</Ehome>
```

## 8.2.71 /ISAPI/System/Network/WirelessDial

|                                    |                       |
|------------------------------------|-----------------------|
| /ISAPI/System/Network/WirelessDial | General Resource v2.0 |
| Notes: Wireless dial service       |                       |

## 8.2.72 /ISAPI/System/Network/WirelessDial/Interfaces

| /ISAPI/System/Network/WirelessDial/Interfaces |                                                | General Resource | v2.0 |
|-----------------------------------------------|------------------------------------------------|------------------|------|
| GET                                           |                                                |                  |      |
| Description                                   | It is used to get all wireless dial interaces. |                  |      |
| Query                                         | None                                           |                  |      |
| Inbound Data                                  | None                                           |                  |      |
| Success Return                                | WirelessDialInterfaceList                      |                  |      |
| PUT                                           |                                                |                  |      |
| Description                                   | It is used to get all wireless dial interaces. |                  |      |
| Query                                         | None                                           |                  |      |
| Inbound Data                                  | WirelessDialInterfaceList                      |                  |      |
| Success Return                                | ResponseStatus                                 |                  |      |
| Notes:                                        |                                                |                  |      |

#### WirelessDialInterfaceList XML Block

```
<WirelessDialInterfaceList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <WirelessDialInterface/>
</WirelessDialInterfaceList>
```

## 8.2.73 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>

| /ISAPI/System/Network/WirelessDial/Interfaces/<ID> |                                             | General Resource | v2.0 |
|----------------------------------------------------|---------------------------------------------|------------------|------|
| GET                                                |                                             |                  |      |
| Description                                        | It is used to get a wireless dial interace. |                  |      |
| Query                                              | None                                        |                  |      |
| Inbound Data                                       | None                                        |                  |      |
| Success Return                                     | WirelessDialInterface                       |                  |      |
| PUT                                                |                                             |                  |      |
| Description                                        | It is used to get a wireless dial interace. |                  |      |
| Query                                              | None                                        |                  |      |
| Inbound Data                                       | WirelessDialInterface                       |                  |      |
| Success Return                                     | ResponseStatus                              |                  |      |
| Notes:                                             |                                             |                  |      |

### WirelessDialInterface XML Block

```
<WirelessDialInterface version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <Dial/> <!-- opt -->
  <Schedule> <!-- opt -->
  <Dialstatus/> <!-- opt -->
  <messageConfig/> <!-- opt -->
  <messageList/> <!-- opt -->
</WirelessDialInterface>
```

## 8.2.74 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>/dial/capabilities

| /ISAPI/System/Network/WirelessDial/Interfaces/<ID>/dia<br>l/capabilities |                                                          | General Resource | v2.0 |
|--------------------------------------------------------------------------|----------------------------------------------------------|------------------|------|
| <b>GET</b>                                                               |                                                          |                  |      |
| Description                                                              | It is used to access wireless dial dialing capabilities. |                  |      |
| Query                                                                    | None                                                     |                  |      |
| Inbound Data                                                             | None                                                     |                  |      |





```

        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
    </dayOfWeek>
    <TimeRange>        <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time -->    </endTime>
    </TimeRange>
</TimeBlock>
</TimeBlockList>
</Schedule>

```

## 8.2.77 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>/dialstatus

| /ISAPI/System/Network/WirelessDial/Interfaces/<ID>/dia         |                                                       | General Resource | v2.0 |
|----------------------------------------------------------------|-------------------------------------------------------|------------------|------|
| Istatus                                                        |                                                       |                  |      |
| GET                                                            |                                                       |                  |      |
| Description                                                    | It is used to access wireless dialing configuratioin. |                  |      |
| Query                                                          | None                                                  |                  |      |
| Inbound Data                                                   | None                                                  |                  |      |
| Success Return                                                 | Dialstatus                                            |                  |      |
| PUT                                                            |                                                       |                  |      |
| Description                                                    | It is used to access wireless dialing configuratioin. |                  |      |
| Query                                                          | None                                                  |                  |      |
| Inbound Data                                                   | Dialstatus                                            |                  |      |
| Success Return                                                 | ResponseStatus                                        |                  |      |
| Notes:                                                         |                                                       |                  |      |
| The ID in “/Interfaces/ID”is defined as following declaration: |                                                       |                  |      |
| 1,2,3...                                                       |                                                       |                  |      |

### Dialstatus XML Block

```

<Dialstatus version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <RealtimeMode>        <!-- ro, xs:string, "CDMA1x,EVDO,HYBRID,GSM,GPRS,EDGE,WCDMA,HSDPA,HSUPA,HSPA,TDSCDMA,TD-LTE,FDD-LTE,LTE,UNKNOWN"-->    </RealtimeMode>
    <UIMInfo>    <!-- ro, xs:string, "UNKNOWN,VALID,NOVALID,ROAM,NOEXIST" --> </UIMInfo>
    <SignalStrength> <!-- ro, xs: integer --> </SignalStrength>
    <Dialstat>    <!-- ro, xs:string --> </Dialstat>
    <IpAddress>    <!-- req -->
    <IpAddress><!-- dep, xs:string --> </IpAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
    </IpAddress>

```

```
<SubnetMask><!-- req -->
<ipAddress><!-- dep, xs:string -->    </ipAddress>
<ipv6Address> <!-- dep, xs:string --> </ipv6Address>
</SubnetMask>
<Gateway> <!-- req -->
<ipAddress><!-- dep, xs:string -->    </ipAddress>
<ipv6Address> <!-- dep, xs:string --> </ipv6Address>
</Gateway>
<DNSAddress> <!-- req -->
<ipAddress><!-- dep, xs:string -->    </ipAddress>
<ipv6Address> <!-- dep, xs:string --> </ipv6Address>
</DNSAddress>
</Dialstatus>
```

## 8.2.78 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>/connect

|                                                                 |                                             |                  |      |
|-----------------------------------------------------------------|---------------------------------------------|------------------|------|
| /ISAPI/System/Network/WirelessDial/Interfaces/<ID>/connect      |                                             | General Resource | v2.0 |
| GET                                                             |                                             |                  |      |
| Description                                                     | It is used to connect the wireless network. |                  |      |
| Query                                                           | None                                        |                  |      |
| Inbound Data                                                    | None                                        |                  |      |
| Success Return                                                  | Connect                                     |                  |      |
| Notes:                                                          |                                             |                  |      |
| The ID in “/Interfaces/ID” is defined as following declaration: |                                             |                  |      |
| 1,2,3...                                                        |                                             |                  |      |

### Connect XML Block

```
<Connect version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req, xs:boolean,"true,false" -->
</Connect>
```

## 8.2.79 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messageConfig

| /ISAPI/System/Network/WirelessDial/Interfaces/IDmessageConfig | General Resource | v2.0 |
|---------------------------------------------------------------|------------------|------|
|---------------------------------------------------------------|------------------|------|

| GET            |                                    |
|----------------|------------------------------------|
| Description    | Access the message information.    |
| Query          | None                               |
| Inbound Data   |                                    |
| Success Return | <b>messageConfig</b>               |
| PUT            |                                    |
| Description    | configure the message information. |
| Query          | None                               |
| Inbound Data   | <b>messageConfig</b>               |
| Success Return | <b>ResponseStatus</b>              |
| Notes:         |                                    |

### MESSAGE CONFIG XML Block

```
<messageConfig version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req, xs:boolean,"true,false" -->
  <SMSWhiteList/>
</messageConfig>
```

## 8.2.80 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messageConfig/WhiteList

|                                                                          |                                                          |                  |      |
|--------------------------------------------------------------------------|----------------------------------------------------------|------------------|------|
| /ISAPI/System/Network/WirelessDial/Interfaces/ID/messageConfig/WhiteList |                                                          | General Resource | v2.0 |
| GET                                                                      |                                                          |                  |      |
| Description                                                              | It is used to get all messages information of whitelist. |                  |      |
| Query                                                                    | None                                                     |                  |      |
| Inbound Data                                                             |                                                          |                  |      |
| Success Return                                                           | SMSWhiteList                                             |                  |      |
| PUT                                                                      |                                                          |                  |      |
| Description                                                              | It is used to set all messages information of whitelist. |                  |      |
| Query                                                                    | None                                                     |                  |      |
| Inbound Data                                                             | SMSWhiteList                                             |                  |      |
| Success Return                                                           | ResponseStatus                                           |                  |      |
| Notes:                                                                   |                                                          |                  |      |

### SMS WHITE LIST XML Block

```
<SMSWhiteList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
```

```
<ListMember/>
</SMSWhiteList>
```

## 8.2.81 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messageConfig/WhiteList/ID

| /ISAPI/System/Network/WirelessDial/Interfaces/ID/messageConfig/WhiteList/ID |                                                             | General Resource v2.0 |
|-----------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------|
| GET                                                                         |                                                             |                       |
| Description                                                                 | It is used to get single messages information of whitelist. |                       |
| Query                                                                       | None                                                        |                       |
| Inbound Data                                                                |                                                             |                       |
| Success Return                                                              | ListMember                                                  |                       |
| PUT                                                                         |                                                             |                       |
| Description                                                                 | It is used to set single messages information of whitelist. |                       |
| Query                                                                       | None                                                        |                       |
| Inbound Data                                                                | ListMember                                                  |                       |
| Success Return                                                              | ResponseStatus                                              |                       |
| Notes:                                                                      |                                                             |                       |

### WHITE LIST MEMBER XML Block

```
<ListMember version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string--> </id>
  <phoneNumber> <!-- req, xs:string --> </phoneNumber>
  <SupportEntryList> <!-- req -->
    <SupportEntry>
      <entry/> <!-- req, xs:string, "SMSAlarm, SMSCtrl, CallCtrl" -->
      <enabled/> <!-- opt, xs:boolean,"true,false" -->
    </SupportEntry>
  </SupportEntryList>
  <SMSAlarmTypeList> <!-- dep -->
    <SMSAlarmType>
      <type/> <!-- req, xs:string, "diskfull, diskerror, nicbroken, ipconflict, illaccess,
AlarmInErr, tamper, vmd, wireless, pir, callhelp, AudioDetection, scenechangeDetection,
defocusDetection, facedetection, LineDetection, FieldDetection, regionEntrance, regionExiting,
loitering, group, rapidMove, parking, unattendedBaggage, attendedBaggage" -->
```



```

        <enabled/> <!-- opt, xs:boolean,"true,false" -->
    </SMSAlarmType>
</SMSAlarmTypeList>
<SMSCtrlTypeList>
    <SMSCtrlType>
        <type/> <!-- req, xs:string, "messageReboot" -->
        <enabled/> <!-- opt, xs:boolean,"true,false" -->
    </SMSCtrlType>
</SMSCtrlTypeList>
</ListMember>

```

## 8.2.82 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messages/ID

|          |                                                              |              |                  |      |          |
|----------|--------------------------------------------------------------|--------------|------------------|------|----------|
| URI      | /ISAPI/System/Network/WirelessDial/Interfaces/ID/messages/ID |              |                  | Type | Resource |
| Function | It is used to get/send message.                              |              |                  |      |          |
| Methods  | Query String(s)                                              | Inbound Data | Return Result    |      |          |
| GET      |                                                              |              | <message>        |      |          |
| PUT      |                                                              | <messag>     | <ResponseStatus> |      |          |
| Notes    |                                                              |              |                  |      |          |

### MESSAGE CONTENT RESULT XML Block

```

<message version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <id> <!-- opt, xs:string--> </id>
    <phoneNum> <!-- req, xs:string--> </phoneNum>
    <status> <!-- opt, xs:string--> </status>
    <time> <!-- opt, xs:string--> </time>
    <SMSContent> <!-- opt, xs:string--> </SMSContent>
</message>

```

## 8.2.83 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messageConfig/messageConfigCap

/ISAPI/System/Network/WirelessDial/Interfaces/ID/messageConfig/messageConfigCap

### GET

|                |                                     |
|----------------|-------------------------------------|
| Description    | Access the message cap information. |
| Query          | None                                |
| Inbound Data   |                                     |
| Success Return | messageConfigCap                    |

### MESSAGE CONFIG XML Block

```
<messageConfigCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <supportEntry/>
  <SMSAlarmType/>
  <SMSCtrlType/>
</messageConfigCap>
```

## 8.2.84 /ISAPI/ System/Network/GB28181Service

| /ISAPI/System/Network/GB28181Service |                | General Resource | v2.0 |
|--------------------------------------|----------------|------------------|------|
| GET                                  |                |                  |      |
| Description                          |                |                  |      |
| Query                                | None           |                  |      |
| Inbound Data                         | None           |                  |      |
| Success Return                       | GB28181Service |                  |      |
| PUT                                  |                |                  |      |
| Description                          |                |                  |      |
| Query                                | None           |                  |      |
| Inbound Data                         | GB28181Service |                  |      |
| Success Return                       | ResponseStatus |                  |      |
| Notes:                               |                |                  |      |

### GB28181Service XML Block

```
<GB28181Service version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <serverID> <!-- opt, xs:string, SIP ID --> </serverID>
  <port> <!-- opt, xs:integer, "1025~65535", SIP Port--> </port>
  <authPasswd> <!-- opt,wo, xs:string --> </authPasswd>
  <liveTime> <!-- opt, xs:integer,5~3600s-> </liveTime>
```

```
<heartbeatCount> <!-- opt, xs:integer, 3~255--> </heartbeatCount>
<autoAddIPC><!-- opt, xs:Boolean --> </autoAddIPC>
</GB28181Service>
```

## 8.2.85 /ISAPI/System/Network/GB28181Service/capabilities

| /ISAPI/System/Network/GB28181Service/capabilities |                           | General Resource | v2.0 |
|---------------------------------------------------|---------------------------|------------------|------|
| <b>GET</b>                                        |                           |                  |      |
| Description                                       |                           |                  |      |
| Query                                             | None                      |                  |      |
| Inbound Data                                      | None                      |                  |      |
| Success Return                                    | <b>GB28181Service cap</b> |                  |      |

### GB28181Service cap XML Block

```
<GB28181Service version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <serverID size="20"> <!-- opt, xs:string, SIP ID --> </serverID>
  <port min="1025" max="65535"> <!-- opt, xs:integer, "1025~65535", SIP Port--> </port>
  <authPasswd size="16"> <!-- opt, xs:string, --> </authPasswd>
  <liveTime min="5" max="3600"> <!-- opt, xs:integer, 5~3600s--> </liveTime>
  <heartbeatCount min="3" max="255"> <!-- opt, xs:integer, 3~255--> </heartbeatCount>
  <autoAddIPC><!-- opt, xs:Boolean, true.false --> </autoAddIPC>
</GB28181Service>
```

## 8.2.86 /ISAPI/System/Network/interfaces/<ID>/wirelessServer

| /ISAPI/System/Network/interfaces/<ID>/wirelessServer |                                 | General Resource | v2.0 |
|------------------------------------------------------|---------------------------------|------------------|------|
| GET                                                  |                                 |                  |      |
| Description                                          | Get Device Wireless Server Info |                  |      |
| Query                                                | NULL                            |                  |      |
| Inbound Data                                         | NULL                            |                  |      |
| Success Return                                       | WirelessServer                  |                  |      |
| PUT                                                  |                                 |                  |      |
| Description                                          | Set Device Wireless Server Info |                  |      |
| Query                                                | NULL                            |                  |      |
| Inbound Data                                         | WirelessServer                  |                  |      |

| Success Return | ResponseStatus |
|----------------|----------------|
|                |                |

#### WirelessServer XML Block

```
<WirelessServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <wifiApEnabled><!--opt,xs:boolean,"true,false"--></wifiApEnabled>
  <broadcastEnabled><!--opt,xs:boolean,"true,false"--></broadcastEnabled>
  <wlanShareEnabled><!--opt,xs:boolean,"true,false"--></wlanShareEnabled>
  <ssid min="" max=""><!-- opt, xs:string --></ssid>
  <WirelessSecurity/><!-- opt -->
  <DHCPEnabled><!--opt,xs:boolean,"true,false"--></DHCPEnabled>
  <ipVersion opt="v4,v6"><!-- opt, xs:string--></ipVersion>
  <HostIpAddress><!--opt-->
    <ipAddress><!-- dep, xs:string --></ipAddress>
    <ipv6Address><!-- dep, xs:string --></ipv6Address>
  </HostIpAddress>
  <IPMask><!--opt-->
    <subnetMask><!-- dep, xs:string, subnet mask for IPv4 address --></subnetMask>
    <bitMask><!-- dep, xs:integer, bitmask IPv6 address --></bitMask>
  </IPMask>
  <AddressPool><!--opt-->
    <startIPv4Address><!-- dep, xs:string --></startIPv4Address>
    <endIPv4Address><!-- dep, xs:string --></endIPv4Address>
    <startIPv6Address><!-- dep, xs:string --></startIPv6Address>
    <endIPv6Address><!-- dep, xs:string --></endIPv6Address>
  <AddressPool>
  <DNSAddressList size="2"><!--opt-->
    <DNSAddress><!--opt>
      <id><!--opt,xs:string,start from 1--></id>
      <ipAddress><!-- dep, xs:string --></ipAddress>
      <ipv6Address><!-- dep, xs:string --></ipv6Address>
    </DNSAddress>
  </DNSAddressList>
  <GatewayAddress>
    <ipAddress><!-- dep, xs:string --></ipAddress>
    <ipv6Address><!-- dep, xs:string --></ipv6Address>
  <GatewayAddress>
</WirelessServer>
```

## WirelessSecurity XML Block

```
<WirelessSecurity> <!-- opt -->
  <securityMode
    opt="disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,WPA-enterprise,WPA2-enterpri
    se">
    <!-- opt, xs:string,-->
  </securityMode>
  <WEP>
    <!-- dep, depends on <securityMode> -->
    <authenticationType opt="open,sharedkey,auto">
    <!-- req, xs:string, "" -->
  </authenticationType>
    <defaultTransmitKeyIndex min="" max="">
    <!-- req, xs:integer -->
  </defaultTransmitKeyIndex>
    <wepKeyLength opt="64,128"> <!-- opt, xs:integer "64,128" --> </wepKeyLength>
    <EncryptionKeyList size="">
      <encryptionKey
        <!-- req, xs:hexBinary, WEP encryption key in hexadecimal format -->
      </encryptionKey>
    </EncryptionKeyList>
  </WEP>
  <WPA>
    <!-- dep, depends on <securityMode> -->
    <algorithmType opt="TKIP,AES,TKIP/AES"> <!-- req, xs:string, "TKIP,AES,TKIP/AES" -->
  </algorithmType>
    <sharedKey> <!-- opt, xs:string, pre-shared key used in WPA --> </sharedKey>
    <wpaKeyLength min="" max=""> <!-- opt, xs: integer, "8-63" --> </wpaKeyLength>
    <defaultPassword><!--opt,xs:boolean,--></defaultPassword>
  </WPA>
</WirelessSecurity>
```

## 8.2.87 /ISAPI/System/Network/interfaces/<ID>/wireless Server/capabilities

/ISAPI/System/Network/interfaces/<ID>/wirelessServer/cap

General Resource v2.0

|                       |                                                                   |
|-----------------------|-------------------------------------------------------------------|
| abilities             |                                                                   |
| <b>GET</b>            |                                                                   |
| <b>Description</b>    | It is used to get <b>WirelessServer</b> configuration capability. |
| <b>Query</b>          | None                                                              |
| <b>Inbound Data</b>   | None                                                              |
| <b>Success Return</b> | <b>WirelessServer</b>                                             |
| <b>Notes:</b>         |                                                                   |

### WirelessServer XML Block

```
<WirelessServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <wifiApEnabled><!--opt,xs:boolean,"true,false"--></wifiApEnabled>
  <broadcastEnabled><!--opt,xs:boolean,"true,false"--></broadcastEnabled>
  <wlanShareEnabled><!--opt,xs:boolean,"true,false"--></wlanShareEnabled>
  <ssid min="" max=""><!-- opt, xs:string --> </ssid>
  <WirelessSecurity/> <!-- req -->
  <DHCPEnabled><!--opt,xs:boolean,"true,false"--></DHCPEnabled>
  <ipVersion opt="v4,v6"><!-- opt, xs:string--></ipVersion>
  <HostIpAddress><!--opt-->
    <ipAddress><!-- dep, xs:string --></ipAddress>
    <ipv6Address><!-- dep, xs:string --></ipv6Address>
  </HostIpAddress>
  <IPMask><!--opt-->
    <subnetMask><!-- dep, xs:string, subnet mask for IPv4 address --></subnetMask>
    <bitMask><!-- dep, xs:integer, bitmask IPv6 address --></bitMask>
  </IPMask>
  <AddressPool><!--opt-->
    <startIPv4Address><!-- dep, xs:string --></startIPv4Address>
    <endIPv4Address><!-- dep, xs:string --></endIPv4Address>
    <startIPv6Address><!-- dep, xs:string --></startIPv6Address>
    <endIPv6Address><!-- dep, xs:string --></endIPv6Address>
  </AddressPool>
  <DNSAddressList size="2"><!--opt-->
    <DNSAddress><!--opt>
      <id><!--opt,xs:string,start from 1--></id>
      <ipAddress><!-- dep, xs:string --></ipAddress>
      <ipv6Address><!-- dep, xs:string --></ipv6Address>
    </DNSAddress>
  </DNSAddressList>
  <GatewayAddress>
```

```
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
<GatewayAddress>
</WirelessServer>
```

## 8.2.88 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList

|                                                                     |                             |                          |
|---------------------------------------------------------------------|-----------------------------|--------------------------|
| /ISAPI/System/Network/interfaces/ID/wirelessServer/accessDeviceList |                             | General Resource<br>v2.0 |
| GET                                                                 |                             |                          |
| Description                                                         | Get Access Device List info |                          |
| Query                                                               | NULL                        |                          |
| Inbound Data                                                        | NULL                        |                          |
| Success Return                                                      | accessDeviceList            |                          |
| 注:                                                                  |                             |                          |

### accessDeviceList XML Block

```
<accessDeviceList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessDevice/>
</accessDeviceList>
```

## 8.2.89 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList/<ID>

| /ISAPI/System/Network/interfaces/ID/wireless/accessDeviceList/ID |                                           | General Resource<br>v2.0 |
|------------------------------------------------------------------|-------------------------------------------|--------------------------|
| GET                                                              |                                           |                          |
| Description                                                      | Get Network Interfaces Wireless Access ID |                          |
| Query                                                            | NULL                                      |                          |
| Inbound Data                                                     | NULL                                      |                          |
| Success Return                                                   | accessDevice                              |                          |
| 注:                                                               |                                           |                          |

### accessDevice XML Block

```
<accessDevice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer--> </id>
  <MACAddress> <!--opt, xs:string--> </MACAddress>
```

```
<ipV4Address>      <!-- dep, xs:string --> </ipV4Address>
<accessTime> <!-- req, xs:time, ISO8601 data --> </accessTime>
</accessDevice>
```

## 8.2.90 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList/capabilities

|                                                                              |                                                              |                  |      |
|------------------------------------------------------------------------------|--------------------------------------------------------------|------------------|------|
| /ISAPI/System/Network/interfaces/<ID>/wireless/accessDeviceList/capabilities |                                                              | General Resource | v2.0 |
| GET                                                                          |                                                              |                  |      |
| Description                                                                  | It is used to get accessDeviceList configuration capability. |                  |      |
| Query                                                                        | None                                                         |                  |      |
| Inbound Data                                                                 | None                                                         |                  |      |
| Success Return                                                               | accessDeviceList                                             |                  |      |
| Notes:                                                                       |                                                              |                  |      |

### accessDeviceList XML Block

```
<accessDeviceList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessDevice size="4">
    <id> <!-- req, xs:integer--> </id>
    <MACAddress> <!--opt, xs:string--> </MACAddress>
    <ipV4Address>      <!-- opt, xs:string --> </ipV4Address>
    <accessTime> <!-- req, xs:time, ISO8601 data --> </accessTime>
  </accessDevice>
</accessDeviceList>
```

## 8.3 /ISAPI/System/IO

|                  |                                              |         |      |
|------------------|----------------------------------------------|---------|------|
| /ISAPI/System/IO |                                              | Service | v2.0 |
| GET              |                                              |         |      |
| Description      | It is used to get the I/O ports information. |         |      |
| Query            | None                                         |         |      |
| Inbound Data     | None                                         |         |      |
| Success Return   | IOPortList                                   |         |      |
| Notes:           |                                              |         |      |



The allocation of IDs between input and output ports must be unique.

#### IOPortList XML Block

```
<IOPortList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOInputPortList/>    <!-- opt -->
  <IOOutputPortList/>   <!-- opt -->
</IOPortList>
```

### 8.3.1 /ISAPI/System/IO/capabilities

| /ISAPI/System/IO/capabilities |                                      | General Resource | v2.0 |
|-------------------------------|--------------------------------------|------------------|------|
| GET                           |                                      |                  |      |
| Description                   | It is used to get device capability. |                  |      |
| Query                         | None                                 |                  |      |
| Inbound Data                  | None                                 |                  |      |
| Success Return                | <IOCap>                              |                  |      |
| Notes:                        |                                      |                  |      |

#### IOCap XML Block

```
<IOCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOInputPortNums>    <!-- opt, xs:integer--> <IOInputPortNums>
  <IOOutputPortNums> <!-- opt, xs:integer--> <IOOutputPortNums>
  <isSupportStrobeLamp> <!-- opt, xs:integer--> <isSupportStrobeLamp>
</IOCap>
```

### 8.3.2 /ISAPI/System/IO/status

| /ISAPI/System/IO/status                                                                                                                                                                                                                                                             |                                                | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                 |                                                |                  |      |
| Description                                                                                                                                                                                                                                                                         | It is used to get the status of the I/O ports. |                  |      |
| Query                                                                                                                                                                                                                                                                               | None                                           |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                        | None                                           |                  |      |
| Success Return                                                                                                                                                                                                                                                                      | IOPortStatusList                               |                  |      |
| Notes:                                                                                                                                                                                                                                                                              |                                                |                  |      |
| <p>&lt;ioPortID&gt; refers to /IO/inputs/ID or /IO/outputs/ID. The port IDs are guaranteed to be unique across input and output ports.</p> <p>&lt;ioState&gt; indicates whether the input port is active or inactive. In most applications, a high signal is considered active.</p> |                                                |                  |      |

### IOPortStatusList XML Block

```
<IOPortStatusList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOPortStatus>    <!-- req -->
    <ioPortID>    <!-- req, xs:integer, "1, 2" -->          </ioPortID>
    <ioPortType>  <!-- req, xs:string, "input,output" -->    </ioPortType>
    <ioState>     <!-- req, xs:string, "active,inactive" -->  </ioState>
  </IOPortStatus>
</IOPortStatusList>
```

## 8.3.3 /ISAPI/System/IO/inputs

| /ISAPI/System/IO/inputs                                                                                                   |                                                | General | Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------|----------|------|
| GET                                                                                                                       |                                                |         |          |      |
| Description                                                                                                               | It is used to get the Input ports information. |         |          |      |
| Query                                                                                                                     | None                                           |         |          |      |
| Inbound Data                                                                                                              | None                                           |         |          |      |
| Success Return                                                                                                            | IOInputPortList                                |         |          |      |
| Notes:                                                                                                                    |                                                |         |          |      |
| IO inputs are hardwired, meaning that the inputs are statically allocated by the device and cannot be created or deleted. |                                                |         |          |      |

### IOInputPortList XML Block

```
<IOInputPortList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOInputPort/>    <!-- opt -->
</IOInputPort>
```

## 8.3.4 /ISAPI/System/IO/inputs/<ID>

| /ISAPI/System/IO/inputs/ID |                                                         | General Resource | v2.0 |
|----------------------------|---------------------------------------------------------|------------------|------|
| GET                        |                                                         |                  |      |
| Description                | It is used to get particular input port information.    |                  |      |
| Query                      | None                                                    |                  |      |
| Inbound Data               | None                                                    |                  |      |
| Success Return             | IOInputPort                                             |                  |      |
| PUT                        |                                                         |                  |      |
| Description                | It is used to update particular input port information. |                  |      |
| Query                      | None                                                    |                  |      |
| Inbound Data               | IOInputPort                                             |                  |      |
| Success Return             | ResponseStatus                                          |                  |      |

**Notes:**

<triggering> indicates the signal conditions to trigger the input port. High/Low will continuously trigger for the duration of high/low input signal.

<name> IO input port name.

**IOInputPort XML Block**

```
<IOInputPort version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>      <!-- req, xs:integer -->      </id>
  <enabled> <!-- req, Boolean, "true,false" --> </enabled>
  <triggering> <!-- req, xs:string, "high,low" --> <triggering>
  <name> <!-- opt, xs:string --> </name>
</IOInputPort>
```

### 8.3.5 /ISAPI/System/IO/inputs/<ID>/status

| /ISAPI/System/IO/inputs/ID/status                |                                                          | General Resource | v2.0 |
|--------------------------------------------------|----------------------------------------------------------|------------------|------|
| GET                                              |                                                          |                  |      |
| Description                                      | It is used to get the status of a particular input port. |                  |      |
| Query                                            | None                                                     |                  |      |
| Inbound Data                                     | None                                                     |                  |      |
| Success Return                                   | IOPortStatus                                             |                  |      |
| Notes:                                           |                                                          |                  |      |
| See /IO/status for an explanation of the fields. |                                                          |                  |      |

### 8.3.6 /ISAPI/System/IO/outputs

| /ISAPI/System/IO/outputs                                                                                                    |                                                 | General Resource | v2.0 |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------|------|
| GET                                                                                                                         |                                                 |                  |      |
| Description                                                                                                                 | It is used to get the output ports information. |                  |      |
| Query                                                                                                                       | None                                            |                  |      |
| Inbound Data                                                                                                                | None                                            |                  |      |
| Success Return                                                                                                              | IOOutputPortList                                |                  |      |
| Notes:                                                                                                                      |                                                 |                  |      |
| IO outputs are hardwired, meaning that the outputs are statically allocated by the device and cannot be created or deleted. |                                                 |                  |      |

**IOOutputPortList XML Block**

```
<IOOutputPortList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOOutputPort/> <!-- opt -->
```



| GET                                              |                                                           |
|--------------------------------------------------|-----------------------------------------------------------|
| Description                                      | It is used to get the status of a particular output port. |
| Query                                            | None                                                      |
| Inbound Data                                     | None                                                      |
| Success Return                                   | <b>IOPortStatus</b>                                       |
| Notes:                                           |                                                           |
| See /IO/status for an explanation of the fields. |                                                           |

### 8.3.9 /ISAPI/System/IO/outputs/<ID>/trigger

| /ISAPI/System/IO/outputs/ID/trigger                                     |                                                          | General Resource | v2.0 |
|-------------------------------------------------------------------------|----------------------------------------------------------|------------------|------|
| PUT                                                                     |                                                          |                  |      |
| Description                                                             | It is used to manually trigger a particular output port. |                  |      |
| Query                                                                   | None                                                     |                  |      |
| Inbound Data                                                            | <b>IOPortData</b>                                        |                  |      |
| Success Return                                                          | <b>ResponseStatus</b>                                    |                  |      |
| Notes:                                                                  |                                                          |                  |      |
| Note that the ID used here MUST correspond to the ID in /IO/outputs/ID. |                                                          |                  |      |
| The IO output port is toggled to a high or low signal accordingly.      |                                                          |                  |      |

#### IOPortData XML Block

```
<IOPortData xmlns="http://www.isapi.org/ver20/XMLSchema">
  <outputState>    <!-- req, xs:string, "high,low" -->    </outputState>
</IOPortData>
```

### 8.3.10 /ISAPI/System/IO/outputs/strobelampConf

| /ISAPI/System/IO/outputs/strobelampConf |                       | General Resource | v2.0 |
|-----------------------------------------|-----------------------|------------------|------|
| GET                                     |                       |                  |      |
| Description                             |                       |                  |      |
| Query                                   | None                  |                  |      |
| Inbound Data                            | None                  |                  |      |
| Success Return                          | <b>StrobeLampConf</b> |                  |      |
| PUT                                     |                       |                  |      |
| Description                             |                       |                  |      |
| Query                                   | None                  |                  |      |
| Inbound Data                            | <b>StrobeLampConf</b> |                  |      |
| Success Return                          | <b>ResponseStatus</b> |                  |      |

#### Notes:

#### StrobeLampConf XML Block

```
<StrobeLampConf version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <LineLock> <!-- opt -->
    <signalFrequency> <!-- opt, ro, xs:string "0-50hz, 60hz" --> </signalFrequency>
    <phase> <!-- opt, xs:integer --> </phase>
    <enabled> <!-- opt, xs:Boolean --> </enabled>
  </LineLock>
  <StrobeLampList>
    <StrobeLamp version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
      <IOWorkMode> <!-- req, xs:string, "strobelp,alarmoutput" --> </IOWorkMode>
      <syncOutputNo> <!-- req, xs:string, "F1,F2,F3" --> </syncOutputNo>
      <defaultState> <!-- opt, xs:string, "high,low" --> </defaultState>
      <workingState> <!-- opt, xs:string, "high,low,pulse" --> </workingState>
      <frequencyMultiplication> <!-- opt, xs:integer, 0-15 --> </frequencyMultiplication>
      <dutyRatio> <!-- opt, xs:integer,0-40 --> </dutyRatio>
      <FlashlightTime>
        <enabled> <!-- req, xs:Boolean --> </enabled>
        <Schedule> <!-- dep -->
          <scheduleType> <!-- req, xs:string, "day,night" --> </scheduleType>
          <TimeRange> <!-- req -->
            <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
            <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
          </TimeRange>
        </Schedule>
      </FlashlightTime>
    </StrobeLamp>
  </StrobeLampList>
</StrobeLampConf>
```

## 8.4 /ISAPI/System/Video

/ISAPI/System/Video

Service v2.0

#### Notes:

### 8.4.1 /ISAPI/System/Video/capabilities

/ISAPI/System/Video/capabilities

General Resource v2.0

GET

|                       |                                      |
|-----------------------|--------------------------------------|
| <b>Description</b>    | It is used to get device capability. |
| <b>Query</b>          | None                                 |
| <b>Inbound Data</b>   | None                                 |
| <b>Success Return</b> | <b>&lt;VideoCap&gt;</b>              |
| <b>Notes:</b>         |                                      |

#### VideoCap XML Block

```
<VideoCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <videoInputPortNums> <!-- opt, xs:integer--> <videoInputPortNums>
  <videoOutputPortNums> <!-- opt, xs:integer--> <videoOutputPortNums>
  <isSupportHeatmap> <!-- opt, xs:boolean--> </isSupportHeatmap>
  <isSupportCounting> <!-- opt, xs:boolean--> </isSupportCounting>
  <countingType> <!-- dep, xs:string, "human,object"--> </countingType>
</VideoCap>
```

## 8.4.2 /ISAPI/System/Video/inputs

| /ISAPI/System/Video/inputs                                                                                                                                         |                                                                         | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                |                                                                         |                  |      |
| Description                                                                                                                                                        | It is used to get the video inputs configuration on an IP media device. |                  |      |
| Query                                                                                                                                                              | None                                                                    |                  |      |
| Inbound Data                                                                                                                                                       | None                                                                    |                  |      |
| Success Return                                                                                                                                                     | VideoInput                                                              |                  |      |
| Notes:                                                                                                                                                             |                                                                         |                  |      |
| An IP media device may contain a set of video inputs. These inputs are hardwired by the device, meaning that the IDs can be discovered but not created or deleted. |                                                                         |                  |      |

#### VideoInput XML Block

```
<VideoInput version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VideoInputChannelList/> <!-- opt -->
</VideoInput>
```

## 8.4.3 /ISAPI/System/Video/inputs/channels

| ISAPI/System/Video/inputs/channels |                                                                                 | General Resource | v2.0 |
|------------------------------------|---------------------------------------------------------------------------------|------------------|------|
| <b>GET</b>                         |                                                                                 |                  |      |
| <b>Description</b>                 | It is used to get the video input channels configuration on an IP media device. |                  |      |
| <b>Query</b>                       | None                                                                            |                  |      |

|                                                                                                                                                            |                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>Inbound Data</b>                                                                                                                                        | None                         |
| <b>Success Return</b>                                                                                                                                      | <b>VideoInputChannelList</b> |
| <b>Notes:</b><br>Since video input channels are resources that are defined by the hardware configuration of the device, they cannot be created or deleted. |                              |

#### VideoInputChannelList XML Block

```
<VideoInputChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VideoInputChannel/>    <!-- opt -->
</VideoInputChannelList>
```

### 8.4.4 /ISAPI/System/Video/inputs/channels/<ID>

| ISAPI/System/Video/inputs/channels/ <i>ID</i> |                                                                                            | General Resource | v2.0 |
|-----------------------------------------------|--------------------------------------------------------------------------------------------|------------------|------|
| GET                                           |                                                                                            |                  |      |
| Description                                   | It is used to get a particular video input channel configuration on an IP media device.    |                  |      |
| Query                                         | None                                                                                       |                  |      |
| Inbound Data                                  | None                                                                                       |                  |      |
| Success Return                                | VideoInputChannel                                                                          |                  |      |
| PUT                                           |                                                                                            |                  |      |
| Description                                   | It is used to update a particular video input channel configuration on an IP media device. |                  |      |
| Query                                         | None                                                                                       |                  |      |
| Inbound Data                                  | VideoInputChannel                                                                          |                  |      |
| Success Return                                | ResponseStatus                                                                             |                  |      |
| Notes:                                        |                                                                                            |                  |      |

#### VideoInputChannel XML Block

```
<VideoInputChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <inputPort> <!-- req, xs:string --> </inputPort>
  <videoInputEnabled> <!-- opt, xs:boolean --> </videoInputEnabled>
  <name> <!-- opt, xs:string --> </name>
  <videoFormat> <!-- opt, xs:string, "PAL, NTSC" --> </videoFormat>
  <portType> <!--opt, xs:string, "SDI, OPT, VGA, HDMI, YPbPr" --> </portType>
  <resDesc> <!--opt, xs:string--> </resDesc>
</VideoInputChannel>
```



## 8.4.5 /ISAPI/System/Video/inputs/channels/<ID>/focus

| /ISAPI/System/Video/inputs/channels/ID/focus                                                                                                                        |                                       | General Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------|------|
| PUT                                                                                                                                                                 |                                       |                  |      |
| Description                                                                                                                                                         | Manually focus a video input channel. |                  |      |
| Query                                                                                                                                                               | None                                  |                  |      |
| Inbound Data                                                                                                                                                        | FocusData                             |                  |      |
| Success Return                                                                                                                                                      | ResponseStatus                        |                  |      |
| Notes:                                                                                                                                                              |                                       |                  |      |
| <focus>: focus vector data. Negative numbers focus near, positive numbers focus far. Numerical value is a percentage of the maximum focus speed of the lens module. |                                       |                  |      |

### FocusData XML Block

```
<FocusData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <focus> <!-- req, xs:intger -->    </focus>
</FocusData>
```

## 8.4.6 /ISAPI/System/Video/inputs/channels/<ID>/iris

| /ISAPI/System/Video/inputs/channels/ID/iris                                                                                                   |                                                 | General Resource | v2.0 |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------|------|
| PUT                                                                                                                                           |                                                 |                  |      |
| Description                                                                                                                                   | Manually adjust iris for a video input channel. |                  |      |
| Query                                                                                                                                         | None                                            |                  |      |
| Inbound Data                                                                                                                                  | IrisData                                        |                  |      |
| Success Return                                                                                                                                | ResponseStatus                                  |                  |      |
| Notes:                                                                                                                                        |                                                 |                  |      |
| <iris> negative numbers close iris, positive numbers open iris. Numerical value is a percentage of the maximum iris speed of the lens module. |                                                 |                  |      |

### IrisData XML Block

```
<IrisData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <iris>    <!-- req, xs:intger -->    </iris>
</IrisData>
```

## 8.4.7 /ISAPI/System/Video/inputs/channels/<ID>/privacyMask

| /ISAPI/System/Video/inputs/channels/ID/privacyMask                         |                                                                                   | General Resource | v2.0 |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------|------|
| GET                                                                        |                                                                                   |                  |      |
| Description                                                                | It is used to get the privacy masking configuration for a video input channel.    |                  |      |
| Query                                                                      | None                                                                              |                  |      |
| Inbound Data                                                               | None                                                                              |                  |      |
| Success Return                                                             | PrivacyMask                                                                       |                  |      |
| PUT                                                                        |                                                                                   |                  |      |
| Description                                                                | It is used to update the privacy masking configuration for a video input channel. |                  |      |
| Query                                                                      | None                                                                              |                  |      |
| Inbound Data                                                               | PrivacyMask                                                                       |                  |      |
| Success Return                                                             | ResponseStatus                                                                    |                  |      |
| Notes:                                                                     |                                                                                   |                  |      |
| Privacy masking can be enabled and the region list configured per channel. |                                                                                   |                  |      |

### PrivacyMask XML Block

```
<PrivacyMask version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <normalizedScreenSize> <!--opt-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <PrivacyMaskRegionList/> <!-- opt -->
  <regionType> <!-- opt, xs:string,"quadrilateral" --> </regionType>
</PrivacyMask>
```

## 8.4.8 /ISAPI/System/Video/inputs/channels/<ID>/privacyMask/regions

| /ISAPI/System/Video/inputs/channels/ID/privacyMask/regions |                                                                                     | General Resource | v2.0 |
|------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------|------|
| <b>GET</b>                                                 |                                                                                     |                  |      |
| Description                                                | It is used to get the privacy mask regions configuration for a video input channel. |                  |      |

|                                                                                                                              |                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Query                                                                                                                        | None                                                                                   |
| Inbound Data                                                                                                                 | None                                                                                   |
| Success Return                                                                                                               | <b>PrivacyMaskRegionList</b>                                                           |
| <b>PUT</b>                                                                                                                   |                                                                                        |
| Description                                                                                                                  | It is used to update the privacy mask regions configuration for a video input channel. |
| Query                                                                                                                        | None                                                                                   |
| Inbound Data                                                                                                                 | <b>PrivacyMaskRegionList</b>                                                           |
| Success Return                                                                                                               | <b>ResponseStatus</b>                                                                  |
| <b>POST</b>                                                                                                                  |                                                                                        |
| Description                                                                                                                  | It is used to add a privacy mask region for a video input channel.                     |
| Query                                                                                                                        | None                                                                                   |
| Inbound Data                                                                                                                 | <b>PrivacyMaskRegion</b>                                                               |
| Success Return                                                                                                               | <b>ResponseStatus</b>                                                                  |
| <b>DELETE</b>                                                                                                                |                                                                                        |
| Description                                                                                                                  | It is used to delete the privacy mask regions configuration for a video input channel. |
| Query                                                                                                                        | None                                                                                   |
| Inbound Data                                                                                                                 | None                                                                                   |
| Success Return                                                                                                               | <b>ResponseStatus</b>                                                                  |
| <b>Notes:</b><br>Privacy masking consists of a set of regions that are combined to grey or black out areas of a video input. |                                                                                        |

#### PrivacyMaskRegionList XML Block

```
<PrivacyMaskRegionList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <PrivacyMaskRegion/>  <!-- opt -->
</PrivacyMaskRegionList>
```

### 8.4.9 /ISAPI/System/Video/inputs/channels/<ID>/privacyMask/regions/<ID>

|                                                                      |                                                                                             |                         |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------|
| <b>/ISAPI/System/Video/inputs/channels/ID/privacyMask/regions/ID</b> |                                                                                             | <b>General Resource</b> |
|                                                                      |                                                                                             | <b>v2.0</b>             |
| <b>GET</b>                                                           |                                                                                             |                         |
| Description                                                          | It is used to get a particular privacy mask region configuration for a video input channel. |                         |
| Query                                                                | None                                                                                        |                         |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | None                                                                                           |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>PrivacyMaskRegion</b>                                                                       |
| <b>PUT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | It is used to update a particular privacy mask region configuration for a video input channel. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | None                                                                                           |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>PrivacyMaskRegion</b>                                                                       |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>ResponseStatus</b>                                                                          |
| <b>DELETE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | It is used to delete a particular privacy mask region configuration for a video input channel. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | None                                                                                           |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | None                                                                                           |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>ResponseStatus</b>                                                                          |
| <b>Notes:</b><br>Region coordinates are dependent on normalized screen size.<br>The computer screen coordinate system is used, which the origin coordinate is on top-left corner, the Y axis is vertical downwards, the X axis is horizontal rightwards.<br><br>Only support the rectangular region which will be “drawn” from four coordinates. The four points is counterclockwise direction, and the beginning point is the top-left point.<br>Ordering of <PrivacyMaskRegion> blocks is insignificant. |                                                                                                |

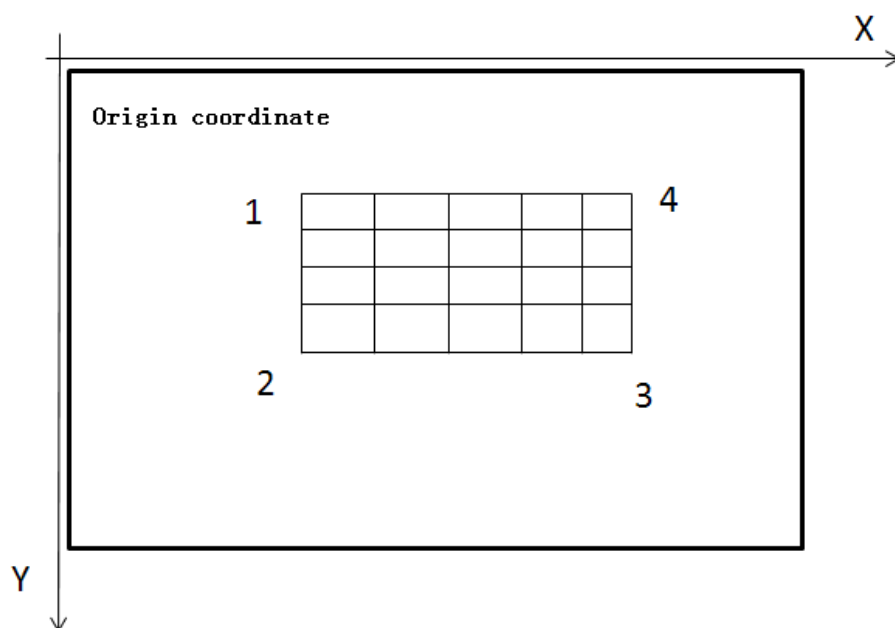
#### PrivacyMaskRegion XML Block

```

<PrivacyMaskRegion version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer --> </id>
  <enabled> <!-- req,xs:boolean --> </enabled>
  <RegionCoordinatesList> <!-- req -->
    <RegionCoordinates> <!-- req -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  <privacymaskName><!-- opt, xs:string--></privacymaskName>
  <maskType>
    <!--opt, xs:string "gray,red,yellow,blue,orange,green,
      transparent,half-transparent,mosaic"-->
  </maskType>
  <zoomdoorlimit> <!-- opt, xs:integer "10-1000"--> </zoomdoorlimit>
</PrivacyMaskRegion>

```

#### Example for priavacyMask Region:



#### 8.4.10 /ISAPI/System/Video/inputs/channels/<ID>/tamperDetection

| /ISAPI/System/Video/inputs/channels/ID/tamperDetection |                                                                                 | General Resource | v2.0 |
|--------------------------------------------------------|---------------------------------------------------------------------------------|------------------|------|
| GET                                                    |                                                                                 |                  |      |
| Description                                            | It is used to get the shelter alarm configuration for a video input channel.    |                  |      |
| Query                                                  | None                                                                            |                  |      |
| Inbound Data                                           | None                                                                            |                  |      |
| Success Return                                         | TamperDetection                                                                 |                  |      |
| PUT                                                    |                                                                                 |                  |      |
| Description                                            | It is used to update the shelter alarm configuration for a video input channel. |                  |      |
| Query                                                  | None                                                                            |                  |      |
| Inbound Data                                           | TmaperDetection                                                                 |                  |      |
| Success Return                                         | ResponseStatus                                                                  |                  |      |
| Notes:                                                 |                                                                                 |                  |      |

##### TameprDetection XML Block

```
<TamperDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize> <!--req-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
```

```

    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
    <normalizedScreenSize>
    < tamperSensitivityLevel>
    <!--req, xs:integer, 0..100, 0 is the least sensitive -->
    </ tamperSensitivityLevel>
    <TamperDetectionRegionList/>
    <!-- req -->
  </ TamperDetection >

```

### 8.4.11 /ISAPI/System/Video/inputs/channels/<ID>/tamperDetection/regions

| /ISAPI/System/Video/inputs/channels/ID/tamperDetection/regions |                                                                                         | General Resource<br>v2.0 |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------|
| GET                                                            |                                                                                         |                          |
| Description                                                    | It is used to get the shelter alarm regions configuration for a video input channel.    |                          |
| Query                                                          | None                                                                                    |                          |
| Inbound Data                                                   | None                                                                                    |                          |
| Success Return                                                 | TamperDetectionRegionList                                                               |                          |
| PUT                                                            |                                                                                         |                          |
| Description                                                    | It is used to update the shelter alarm regions configuration for a video input channel. |                          |
| Query                                                          | None                                                                                    |                          |
| Inbound Data                                                   | TamperDetectionRegionList                                                               |                          |
| Success Return                                                 | ResponseStatus                                                                          |                          |
| POST                                                           |                                                                                         |                          |
| Description                                                    | It is used to add a shelter alarm region for a video input channel.                     |                          |
| Query                                                          | None                                                                                    |                          |
| Inbound Data                                                   | TamperDetectionRegion                                                                   |                          |
| Success Return                                                 | ResponseStatus                                                                          |                          |
| DELETE                                                         |                                                                                         |                          |
| Description                                                    | It is used to delete the shelter alarm regions configuration for a video input channel. |                          |
| Query                                                          | None                                                                                    |                          |
| Inbound Data                                                   | None                                                                                    |                          |
| Success Return                                                 | ResponseStatus                                                                          |                          |
| Notes:                                                         |                                                                                         |                          |

#### TamperDetectionRegionList XML Block

```
<TamperDetectionRegionList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TamperDetectionRegion/> <!-- opt -->
</ TamperDetectionRegionList >
```

### 8.4.12 /ISAPI/System/Video/inputs/channels/<ID>/tamperDetection/regions/<ID>

| /ISAPI/System/Video/inputs/channels/ID/tamperDetection/regions/ID                                                                                                                                                             |                                                                                                 | General Resource v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------|
| GET                                                                                                                                                                                                                           |                                                                                                 |                       |
| Description                                                                                                                                                                                                                   | It is used to get a particular shelter alarm region configuration for a video input channel.    |                       |
| Query                                                                                                                                                                                                                         | None                                                                                            |                       |
| Inbound Data                                                                                                                                                                                                                  | None                                                                                            |                       |
| Success Return                                                                                                                                                                                                                | TamperDetectionRegion                                                                           |                       |
| PUT                                                                                                                                                                                                                           |                                                                                                 |                       |
| Description                                                                                                                                                                                                                   | It is used to update a particular shelter alarm region configuration for a video input channel. |                       |
| Query                                                                                                                                                                                                                         | None                                                                                            |                       |
| Inbound Data                                                                                                                                                                                                                  | TamperDetectionRegion                                                                           |                       |
| Success Return                                                                                                                                                                                                                | ResponseStatus                                                                                  |                       |
| DELETE                                                                                                                                                                                                                        |                                                                                                 |                       |
| Description                                                                                                                                                                                                                   | It is used to delete a particular shelter alarm region configuration for a video input channel. |                       |
| Query                                                                                                                                                                                                                         | None                                                                                            |                       |
| Inbound Data                                                                                                                                                                                                                  | None                                                                                            |                       |
| Success Return                                                                                                                                                                                                                | ResponseStatus                                                                                  |                       |
| Notes:                                                                                                                                                                                                                        |                                                                                                 |                       |
| Region coordinates are dependent on video resolution. Only support the rectangular region which will be “drawn” from four coordinates. The four points is clockwise direction, and the beginning point is the low-left point. |                                                                                                 |                       |
| Ordering of <TamperDetectionRegion> blocks is insignificant.                                                                                                                                                                  |                                                                                                 |                       |

#### TamperDetectionRegion XML Block

```
<TamperDetectionRegion version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string, id -->                </id>
```

```

<sensitivityLevel>
  <!--req, xs:integer, 0..100, 0 is the least sensitive -->
</sensitivityLevel>
<RegionCoordinatesList>  <!-- req -->
  <RegionCoordinates>  <!-- req -->
    <positionX>          <!-- req, xs:integer;coordinate -->    </positionX>
    <positionY>          <!-- req, xs:integer;coordinate -->    </positionY>
  </RegionCoordinates>
</RegionCoordinatesList>
</TamperDetectionRegion>

```

### 8.4.13 /ISAPI/System/Video/inputs/channels/<ID>/motionDetection

| /ISAPI/System/Video/inputs/channels/ <i>ID</i>                                                                                                                                                  |                                                                                    | Service | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|------|
| /MotionDetection                                                                                                                                                                                |                                                                                    |         |      |
| GET                                                                                                                                                                                             |                                                                                    |         |      |
| Description                                                                                                                                                                                     | It is used to get the motion detection configuration for all video input channels. |         |      |
| Query                                                                                                                                                                                           | None                                                                               |         |      |
| Inbound Data                                                                                                                                                                                    | None                                                                               |         |      |
| Success Return                                                                                                                                                                                  | MotionDetection                                                                    |         |      |
| PUT                                                                                                                                                                                             |                                                                                    |         |      |
| Description                                                                                                                                                                                     | It is used to update the motion detection configuration for a video input channel. |         |      |
| Query                                                                                                                                                                                           | None                                                                               |         |      |
| Inbound Data                                                                                                                                                                                    | MotionDetection                                                                    |         |      |
| Success Return                                                                                                                                                                                  | ResponseStatus                                                                     |         |      |
| Notes:                                                                                                                                                                                          |                                                                                    |         |      |
| If motion detection is supported by the device, a motion detection ID will be allocated for each video input channel ID. The motion detection ID must correspond to the video input channel ID. |                                                                                    |         |      |

#### MotionDetection XML Block

```

<MotionDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <enableHighlight>   <!-- opt, xs:boolean -->          </enableHighlight>
  <samplingInterval> <!-- opt, xs:integer, number of frames --> </samplingInterval>
  <startTriggerTime> <!-- opt, xs:integer, milliseconds --> </startTriggerTime>
  <endTriggerTime>   <!-- opt, xs:integer, milliseconds --> </endTriggerTime>
  <regionType>       <!-- ro, req, xs:string, "grid, roi, none" --> </regionType>

```



```

<Grid>      <!-- dep -->
  <rowGranularity>    <!-- ro, req, xs:integer -->  </rowGranularity>
  <columnGranularity> <!-- ro, req, xs:integer -->  </columnGranularity>
</Grid>
<ROI>  <!-- dep -->
  <normalizedScreenWidth> <!-- ro, req, xs:integer --></normalizedScreenWidth>
  <normalizedScreenHeight> <!-- ro, req, xs:integer --></normalizedScreenHeight>
</ROI>
<MotionDetectionLayout/>  <!-- req -->
</MotionDetection>

```

#### 8.4.14 /ISAPI/System/Video/inputs/channels/<ID>/motionDetection/layout

|                                                                     |                       |
|---------------------------------------------------------------------|-----------------------|
| /ISAPI/System/Video/inputs/channels/<ID><br>/MotionDetection/layout | General Resource v2.0 |
| Notes:                                                              |                       |

##### MotionDetectionLayout XML Block

```

<MotionDetectionLayout version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sensitivityLevel>    <!-- req -->
    <!-- req, xs:integer, "0-100", 0 is least sensitive -->
  </sensitivityLevel>
  <layout>
    <gridMap> <!--dep, xs:hexstring--> </gridMap>
    <roiMap/>
  </layout>
</MotionDetectionLayout>

```

#### 8.4.15 /ISAPI/System/Video/inputs/channels/<ID>/motionDetection/layout/gridLayout

|                                                                                |                                                                          |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| /ISAPI/System/Video/inputs/channels/<ID><br>/MotionDetection/layout/gridLayout | General Resource v2.0                                                    |
| GET                                                                            |                                                                          |
| Description                                                                    | It is used to get the motion detection regions configuration for a video |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | input channel.                                                                             |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | None                                                                                       |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | None                                                                                       |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>MotionDetectionGridLayout</b>                                                           |
| <b>PUT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                            |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | It is used to update the motion detection regions configuration for a video input channel. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | None                                                                                       |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>MotionDetectionGridLayout</b>                                                           |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>ResponseStatus</b>                                                                      |
| <b>Notes:</b><br><br>All motion detection regions share a sensitivity level.<br>It is possible to define mask regions that are subtracted from other regions.<br><gridMap> required when region type is grid.<br>A “1” denotes an grid to detect and a “0” no to detect.<br>The first cell is in the upper left corner. Then the cell order goes first from left to right and then from up to down (see flowing example).<br>If the number of cells is not a multiple of 8 the last byte is filled with zeros. |                                                                                            |

#### MotionDetectionGridLayout XML Block

```
<MotionDetectionGridLayout version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sensitivityLevel>    <!-- req -->
    <!-- req, xs:integer, "0-100", 0 is least sensitive -->
  </sensitivityLevel>
  <gridMap> <!--dep, xs:hexstring--> </gridMap>
</MotionDetectionGridLayout>
```

## 8.4.16 Motion Detection Example

### Set up Motion Detection

The following command configures two rectangular detection regions, with one “masked” region on video input channel ID 1. Example assumes a resolution of 1600x1200 and a grid motion detection algorithm:

- Motion detection is enabled with a granularity of a 22x18 grid (each row will reserve 2 grids, the actual region is 24x18; but generally the last two rows are ignored.) – this means the detection region coordinates will ultimately be defined by a grid of 432 regions. For a resolution of 1600x1200, this means that each “granule” will be 1600/22 x 1200/18 pixels. (If a coordinate doesn’t exactly match the configured granularity, it should be mapped internally to the nearest possible point).



|                                                |                                                                                    |         |      |
|------------------------------------------------|------------------------------------------------------------------------------------|---------|------|
| /ISAPI/System/Video/inputs/channels/ <i>ID</i> |                                                                                    | Service | v2.0 |
| /motionDetectionExt                            |                                                                                    |         |      |
| GET                                            |                                                                                    |         |      |
| Description                                    | It is used to get the motion detection configuration for all video input channels. |         |      |
| Query                                          | None                                                                               |         |      |
| Inbound Data                                   | None                                                                               |         |      |
| Success Return                                 | MotionDetectionExt                                                                 |         |      |

| PUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                               | It is used to update the motion detection configuration for a video input channel. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | None                                                                               |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>MotionDetectionExt</b>                                                          |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>ResponseStatus</b>                                                              |
| <b>Notes:</b><br><br>If motion detection is supported by the device, a motion detection ID will be allocated for each video input channel ID. The motion detection ID must correspond to the video input channel ID. The device supports two kinds of motion detection, <activeMode> is used to check current motion detection mode, if the value is normal, please refer to /motionDetection branch; if the value is expert, please refer to /motionDetectionExt branch. |                                                                                    |

#### MotionDetectionExt XML Block

```

<MotionDetectionExt version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <minObjectSize>
    <!-- opt, xs:integer, min number of pixels per object -->
  </minObjectSize>
  <maxObjectSize>
    <!-- opt, xs:integer, max number of pixels per object -->
  </maxObjectSize>
  <ROI> <!-- dep -->
    <normalizedScreenWidth> <!-- ro, req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- ro, req, xs:integer --></normalizedScreenHeight>
  </ROI>
  <enableHighlight> <!-- opt, xs:boolean --> </enableHighlight>
  <MotionDetectionSwitch/> <!-- opt -->
  <activeMode> <!-- ro, xs:string, "normal,expert" --> <activeMode>
  <MotionDetectionRegionList/> <!-- req -->
</MotionDetectionExt>

```

### 8.4.18 /ISAPI/System/Video/inputs/channels/<ID>/motionDetectionExt/regions

|                                        |                       |
|----------------------------------------|-----------------------|
| /ISAPI/System/Video/inputs/channels/ID | General Resource v2.0 |
| /motionDetectionExt/regions            |                       |
| GET                                    |                       |

#### MotionDetectionRegionList XML Block

```
<MotionDetectionRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <MotionDetectionRegion/>  <!-- opt -->
</MotionDetectionRegionList>
```

### 8.4.19 /ISAPI/System/Video/inputs/channels/<ID>/motionDetectionExt/regions/<ID>

| /ISAPI/System/Video/inputs/channels/ID                                                                                                                                                          |                                                                                    | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------|------|
| /motionDetectionExt/ID/regions/ID                                                                                                                                                               |                                                                                    |                  |      |
| GET                                                                                                                                                                                             |                                                                                    |                  |      |
| Description                                                                                                                                                                                     | It is used to get the motion detection configuration for all video input channels. |                  |      |
| Query                                                                                                                                                                                           | None                                                                               |                  |      |
| Inbound Data                                                                                                                                                                                    | None                                                                               |                  |      |
| Success Return                                                                                                                                                                                  | MotionDetectionRegion                                                              |                  |      |
| PUT                                                                                                                                                                                             |                                                                                    |                  |      |
| Description                                                                                                                                                                                     | It is used to update the motion detection configuration for a video input channel. |                  |      |
| Query                                                                                                                                                                                           | None                                                                               |                  |      |
| Inbound Data                                                                                                                                                                                    | MotionDetectionRegion                                                              |                  |      |
| Success Return                                                                                                                                                                                  | ResponseStatus                                                                     |                  |      |
| Notes:                                                                                                                                                                                          |                                                                                    |                  |      |
| If motion detection is supported by the device, a motion detection ID will be allocated for each video input channel ID. The motion detection ID must correspond to the video input channel ID. |                                                                                    |                  |      |

#### MotionDetectionRegion XML Block

```
<MotionDetectionRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string;id --></id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <sensitivityLevel><!-- req -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive -->
  </sensitivityLevel>
  <daySensitivityLevel>  <!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive-->
  </daySensitivityLevel>
  <nightSensitivityLevel>  <!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive-->
  </nightSensitivityLevel>
  <objectSize><!-- dep -->
```

```

    <!-- req, xs:integer, 0..100, 0 is least sensitive -->
</objectSize>
<dayObjectSize> <!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive -->
</dayObjectSize>
<nightObjectSize>    <!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive -->
</nightObjectSize>
<RegionCoordinatesList>    <!-- req -->
    <RegionCoordinates>    <!-- Note: at least two coordinates are required -->
        <positionX>    <!-- req, xs:integer -->    </positionX>
        <positionY>    <!-- req, xs:integer -->    </positionY>
    </RegionCoordinates>
</RegionCoordinatesList>
</MotionDetectionRegion>

```

## 8.4.20 /ISAPI/System/Video/inputs/channels/<ID>/motionDetectionExt/switch

| /ISAPI/System/Video/inputs/channels/ID/motionDetectionExt/switch                                                                                                                                |                                                                          | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                             |                                                                          |                  |      |
| Description                                                                                                                                                                                     | It is used to get the motion detection switch day and night settings.    |                  |      |
| Query                                                                                                                                                                                           | None                                                                     |                  |      |
| Inbound Data                                                                                                                                                                                    | None                                                                     |                  |      |
| Success Return                                                                                                                                                                                  | MotionDetectionSwitch                                                    |                  |      |
| PUT                                                                                                                                                                                             |                                                                          |                  |      |
| Description                                                                                                                                                                                     | It is used to update the motion detection switch day and night settings. |                  |      |
| Query                                                                                                                                                                                           | None                                                                     |                  |      |
| Inbound Data                                                                                                                                                                                    | MotionDetectionSwitch                                                    |                  |      |
| Success Return                                                                                                                                                                                  | ResponseStatus                                                           |                  |      |
| Notes:                                                                                                                                                                                          |                                                                          |                  |      |
| If motion detection is supported by the device, a motion detection ID will be allocated for each video input channel ID. The motion detection ID must correspond to the video input channel ID. |                                                                          |                  |      |

### MotionDetectionSwitch XML Block

```

<MotionDetectionSwitch version="2.0"
xmlns="http://www.isapi.com/ver10/XMLSchema">

```

```
<type>
  <!-- opt, xs:string, "off,auto,schedule"-->
</type>
<Schedule> <!--dep-->
  <scheduleType><!-- req,xs:string,"day,night"></scheduleType>
  <TimeRange> <!-- req -->
    <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
    <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
  </TimeRange>
</Schedule>
</MotionDetectionSwitch>
```

## 8.4.21 /ISAPI/System/Video/inputs/channels/<ID>/overlays

| /ISAPI/System/Video/inputs/channels/ID/overlays     |                                                                            | General Resource | v2.0 |
|-----------------------------------------------------|----------------------------------------------------------------------------|------------------|------|
| GET                                                 |                                                                            |                  |      |
| Description                                         | It is used to get the overlays configuration for a video input channel.    |                  |      |
| Query                                               | None                                                                       |                  |      |
| Inbound Data                                        | None                                                                       |                  |      |
| Success Return                                      | VideoOverlay                                                               |                  |      |
| PUT                                                 |                                                                            |                  |      |
| Description                                         | It is used to update the overlays configuration for a video input channel. |                  |      |
| Query                                               | None                                                                       |                  |      |
| Inbound Data                                        | VideoOverlay                                                               |                  |      |
| Success Return                                      | ResponseStatus                                                             |                  |      |
| Notes:                                              |                                                                            |                  |      |
| The <fontSize> is defined as following declaration. |                                                                            |                  |      |
| "adaptive,16*16,32*32,48*48,64*64"                  |                                                                            |                  |      |

### VideoOverlay XML Block

```
<VideoOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <normalizedScreenSize> <!--req-->
    <normalizedScreenWidth> <!--ro, req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!--ro, req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <attribute> <!--opt-->
    <transparent> <!-- req, xs:boolean --></transparent>
    <flashing> <!-- req, xs:boolean--> <flashing>
  </attribute>
```

```

<TextOverlayList/>    <!-- opt -->
<DateTimeOverlay /> <!-- opt -->
<channelNameOverlay /> <!-- opt -->
<fontSize> <!-- opt, xs:string,"adaptive,16*16,32*32,48*48,64*64" --> </fontSize>
<frontColorMode> <!-- opt, string,"auto,customize" --> </frontColorMode>
<frontColor> <!-- dep, xs: hexBinary;color --> </frontColor>
<BatteryPowerOverlay/><!-- opt -->
<alignment><!--opt,xs:string"customize,alignRight,alignLeft"--></alignment>
<publicSecurity> <!-- req, xs:boolean--> </publicSecurity>
</VideoOverlay>

```

## 8.4.22 /ISAPI/System/Video/inputs/channels/<ID>/overlays/text

| /ISAPI/System/Video/inputs/channels/ID/overlays/text |                                                                                 | General Resource | v2.0 |
|------------------------------------------------------|---------------------------------------------------------------------------------|------------------|------|
| GET                                                  |                                                                                 |                  |      |
| Description                                          | It is used to get the text overlays configuration for a video input channel.    |                  |      |
| Query                                                | None                                                                            |                  |      |
| Inbound Data                                         | None                                                                            |                  |      |
| Success Return                                       | TextOverlayList                                                                 |                  |      |
| PUT                                                  |                                                                                 |                  |      |
| Description                                          | It is used to update the text overlays configuration for a video input channel. |                  |      |
| Query                                                | None                                                                            |                  |      |
| Inbound Data                                         | TextOverlayList                                                                 |                  |      |
| Success Return                                       | ResponseStatus                                                                  |                  |      |
| POST                                                 |                                                                                 |                  |      |
| Description                                          | It is used to add a text overlay for a video input channel.                     |                  |      |
| Query                                                | None                                                                            |                  |      |
| Inbound Data                                         | TextOverlay                                                                     |                  |      |
| Success Return                                       | ResponseStatus                                                                  |                  |      |
| DELETE                                               |                                                                                 |                  |      |
| Description                                          | It is used to delete the text overlays configuration for a video input channel. |                  |      |
| Query                                                | None                                                                            |                  |      |
| Inbound Data                                         | None                                                                            |                  |      |
| Success Return                                       | ResponseStatus                                                                  |                  |      |
| Notes:                                               |                                                                                 |                  |      |



A set of text overlays is managed. They are composited over the video signal in increasing ID-order.

#### TextOverlayList XML Block

```
<TextOverlayList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TextOverlay/>    <!-- opt -->
</TextOverlayList>
```

### 8.4.23 /ISAPI/System/Video/inputs/channels/<ID>/overlays/text/<ID>

| /ISAPI/System/Video/inputs/channels/ID/overlays/text/ID                                                                                                                  |                                                                                         | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                      |                                                                                         |                  |      |
| Description                                                                                                                                                              | It is used to get a particular text overlay configuration for a video input channel.    |                  |      |
| Query                                                                                                                                                                    | None                                                                                    |                  |      |
| Inbound Data                                                                                                                                                             | None                                                                                    |                  |      |
| Success Return                                                                                                                                                           | TextOverlay                                                                             |                  |      |
| PUT                                                                                                                                                                      |                                                                                         |                  |      |
| Description                                                                                                                                                              | It is used to update a particular text overlay configuration for a video input channel. |                  |      |
| Query                                                                                                                                                                    | None                                                                                    |                  |      |
| Inbound Data                                                                                                                                                             | TextOverlay                                                                             |                  |      |
| Success Return                                                                                                                                                           | ResponseStatus                                                                          |                  |      |
| DELETE                                                                                                                                                                   |                                                                                         |                  |      |
| Description                                                                                                                                                              | It is used to delete a particular text overlay configuration for a video input channel. |                  |      |
| Query                                                                                                                                                                    | None                                                                                    |                  |      |
| Inbound Data                                                                                                                                                             | None                                                                                    |                  |      |
| Success Return                                                                                                                                                           | ResponseStatus                                                                          |                  |      |
| Notes:                                                                                                                                                                   |                                                                                         |                  |      |
| Position coordinates are dependent on normalized screen size.                                                                                                            |                                                                                         |                  |      |
| The computer screen coordinate system is used, which the origin coordinate is on top-left corner, the Y axis is vertical downwards, the X axis is horizontal rightwards. |                                                                                         |                  |      |

#### TextOverlay XML Block

```
<TextOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string;id -->        </id>
  <enabled>           <!-- req, xs:boolean -->         </enabled>
```



## 8.4.25 /ISAPI/System/Video/inputs/channels/<ID>/overlays/dateTimeOverlay

/ISAPI/System/Video/inputs/channels/ID/overlays/dateTime

General Resource v2.0

|                |                                                                       |
|----------------|-----------------------------------------------------------------------|
| GET            |                                                                       |
| Description    | It is used to get the OSD configuration for a video input channel.    |
| Query          | None                                                                  |
| Inbound Data   | None                                                                  |
| Success Return | DatetimeOverlay                                                       |
| PUT            |                                                                       |
| Description    | It is used to update the OSD configuration for a video input channel. |
| Query          | None                                                                  |
| Inbound Data   | DatetimeOverlay                                                       |
| Success Return | ResponseStatus                                                        |

Notes:

Position coordinates are dependent on normalized screen size.

The computer screen coordinate system is used, which the origin coordinate is on top-left corner, the Y axis is vertical downwards, the X axis is horizontal rightwards.

### DatetimeOverlay XML Block

```
<DateTimeOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled> //check whether to display date
  <positionX> <!-- req, xs:integer;coordinate --> </positionX>
  <positionY> <!-- req, xs:integer;coordinate --> </positionY>
  <dateStyle>
    <!-- opt, xs:string, "YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY, CHR-YYYY-MM-DD,
    CHR-MM-DD-YYYY, CHR-DD-MM-YYYY, CHR-YYYY/MM/DD, CHR-MM/DD/YYYY,
    CHR-DD/MM/YYYY" -->
  </dateStyle>
  <timeStyle> <!--opt, xs:string, "12hour, 24hour" --> </timeStyle>
  <displayWeek> <!-- opt, xs:boolean --> </displayWeek> //check whether to display week
</DateTimeOverlay>
```

## 8.4.26 /ISAPI/System/Video/inputs/channels/<ID>/image

e

| /ISAPI/System/Video/inputs/channels/ID/image |                                                      | General Resource | v2.0 |
|----------------------------------------------|------------------------------------------------------|------------------|------|
| GET                                          |                                                      |                  |      |
| Description                                  | Access on-screen Image for a special channel.        |                  |      |
| Query                                        | None                                                 |                  |      |
| Inbound Data                                 | None                                                 |                  |      |
| Success Return                               | ImageOverlayList                                     |                  |      |
| PUT                                          |                                                      |                  |      |
| Description                                  | Configure the on-screen Image for a special channel. |                  |      |
| Query                                        | None                                                 |                  |      |
| Inbound Data                                 | ImageOverlayList                                     |                  |      |
| Success Return                               | ResponseStatus                                       |                  |      |
| Notes:                                       |                                                      |                  |      |

### ImageOverlayList XML Block

```
<ImageOverlayList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ImageOverlay/> <!-- opt -->
</ImageOverlayList>
```

## 8.4.27 /ISAPI/System/Video/inputs/channels/<ID>/image

e/<ID>

| /ISAPI/System/Video/inputs/channels/ID/image/ID |                                                      | General Resource | v2.0 |
|-------------------------------------------------|------------------------------------------------------|------------------|------|
| GET                                             |                                                      |                  |      |
| Description                                     | Access on-screen Image for a special channel.        |                  |      |
| Query                                           | None                                                 |                  |      |
| Inbound Data                                    | None                                                 |                  |      |
| Success Return                                  | ImageOverlay                                         |                  |      |
| PUT                                             |                                                      |                  |      |
| Description                                     | Configure the on-screen Image for a special channel. |                  |      |
| Query                                           | None                                                 |                  |      |
| Inbound Data                                    | ImageOverlay                                         |                  |      |
| Success Return                                  | ResponseStatus                                       |                  |      |
| Notes:                                          |                                                      |                  |      |

### ImageOverlay XML Block

```
<ImageOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <imageName> <!-- req, xs:string --> </imageName>
  <positionX> <!-- opt, xs:integer;coordinate --> </positionX>
  <positionY> <!-- opt, xs:integer;coordinate --> </positionY>
  <transparentColorEnabled> <!-- opt, xs:boolean --> </transparentColorEnabled>
  <transparentColor> <!-- dep, xs:hexBinary;color --> </transparentColor>
  <imageWidth> <!--opt, xs:integer--> </imageWidth>
  <imageHeight> <!--opt, xs:integer--> </imageHeight>
</ImageOverlay>
```

## 8.4.28 /ISAPI/System/Video/inputs/channels/<ID>/image/picture

### /ISAPI/System/Video/inputs/channels/ID/image/picture

#### POST

|                |                                                      |
|----------------|------------------------------------------------------|
| Description    | Configure the on-screen Image for a special channel. |
| Query          | None                                                 |
| Inbound Data   | <b>Picture over HTTP</b>                             |
| Success Return | <b>ResponseStatus</b>                                |
| Notes:         |                                                      |

## 8.4.29 /ISAPI/System/Video/inputs/channels/<ID>/heatMap

### /ISAPI/System/Video/inputs/channels/ID/heatMap General Resource v2.0

#### GET

|                |                                                                         |
|----------------|-------------------------------------------------------------------------|
| Description    | It is used to get the heat map configuration for a video input channel. |
| Query          | None                                                                    |
| Inbound Data   | None                                                                    |
| Success Return | <b>HeatMap</b>                                                          |

#### PUT

|             |                                                                            |
|-------------|----------------------------------------------------------------------------|
| Description | It is used to update the heat map configuration for a video input channel. |
|-------------|----------------------------------------------------------------------------|

|                                                                               |                |
|-------------------------------------------------------------------------------|----------------|
| Query                                                                         | None           |
| Inbound Data                                                                  | HeatMap        |
| Success Return                                                                | ResponseStatus |
| Notes:<br>Heat map can be enabled and the region list configured per channel. |                |

#### HeatMap XML Block

```
<HeatMap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <normalizedScreenSize>  <!-- opt -->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <HeatMapRegionList/>  <!-- opt -->
</HeatMap>
```

### 8.4.30 /ISAPI/System/Video/inputs/channels/<ID>/heat Map/capabilities

| /ISAPI/System/Video/inputs/channels/<ID>/heatMap/capabilities |                                              | General Resource | v2.0 |
|---------------------------------------------------------------|----------------------------------------------|------------------|------|
| GET                                                           |                                              |                  |      |
| Description                                                   | It is used to get the heat map capabilities. |                  |      |
| Query                                                         | None                                         |                  |      |
| Inbound Data                                                  | None                                         |                  |      |
| Success Return                                                | HeatMap                                      |                  |      |
| Notes:                                                        |                                              |                  |      |

#### HeatMap XML Block

```
<HeatMap version="2.0" xmlns="http://www.hikvision.com/ver20/XMLSchema">
  <enabled opt="true,false">false</enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth>1000</normalizedScreenWidth>
    <normalizedScreenHeight>1000</normalizedScreenHeight>
  </normalizedScreenSize>
  <sensitivityLevel min="1" max="100">50</sensitivityLevel>
  <backgroundUpdateRate min="1" max="100">50</backgroundUpdateRate>
  <sceneChangeLevel min="1" max="100">50</sceneChangeLevel>
```

```
<targetTracking opt="true,false">false</targetTracking>
<minObjectSize min="1" max="100">50</minObjectSize>
<HeatMapRegionList size="8" >
  <HeatMapRegion>
    <id>1</id>
    <RegionCoordinatesList size="10" min="4">
    </RegionCoordinatesList>
  </HeatMapRegion>
</HeatMapRegionList>
<isSupportHeatMapPicInfo opt="true,false">false</isSupportHeatMapPicInfo>
</HeatMap>
```

### 8.4.31 /ISAPI/System/Video/inputs/channels/<ID>/heat Map/regions

| /ISAPI/System/Video/inputs/channels/ID/heatMap/regions |                                                                                    | General Resource<br>v2.0 |
|--------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------|
| GET                                                    |                                                                                    |                          |
| Description                                            | It is used to get the heat map regions configuration for a video input channel.    |                          |
| Query                                                  | None                                                                               |                          |
| Inbound Data                                           | None                                                                               |                          |
| Success Return                                         | HeatMapRegionList                                                                  |                          |
| PUT                                                    |                                                                                    |                          |
| Description                                            | It is used to update the heat map regions configuration for a video input channel. |                          |
| Query                                                  | None                                                                               |                          |
| Inbound Data                                           | HeatMapRegionList                                                                  |                          |
| Success Return                                         | ResponseStatus                                                                     |                          |
| POST                                                   |                                                                                    |                          |
| Description                                            | It is used to add a heat map region for a video input channel.                     |                          |
| Query                                                  | None                                                                               |                          |
| Inbound Data                                           | HeatMapRegion                                                                      |                          |
| Success Return                                         | ResponseStatus                                                                     |                          |
| DELETE                                                 |                                                                                    |                          |
| Description                                            | It is used to delete the heat map regions configuration for a video input channel. |                          |
| Query                                                  | None                                                                               |                          |

|                |                |
|----------------|----------------|
| Inbound Data   | None           |
| Success Return | ResponseStatus |
| Notes:         |                |

#### HeatMapRegionList XML Block

```
<HeatMapRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <HeatMapRegion/> <!-- opt -->
</HeatMapRegionList>
```

### 8.4.32 /ISAPI/System/Video/inputs/channels/<ID>/heatMap/regions/<ID>

| /ISAPI/System/Video/inputs/channels/ID/heatMap/regions/ID |                                                                                            | General Resource v2.0 |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------|
| GET                                                       |                                                                                            |                       |
| Description                                               | It is used to get a particular heat map region configuration for a video input channel.    |                       |
| Query                                                     | None                                                                                       |                       |
| Inbound Data                                              | None                                                                                       |                       |
| Success Return                                            | HeatMapRegion                                                                              |                       |
| PUT                                                       |                                                                                            |                       |
| Description                                               | It is used to update a particular heat map region configuration for a video input channel. |                       |
| Query                                                     | None                                                                                       |                       |
| Inbound Data                                              | HeatMapRegion                                                                              |                       |
| Success Return                                            | ResponseStatus                                                                             |                       |
| DELETE                                                    |                                                                                            |                       |
| Description                                               | It is used to delete a particular heat map region configuration for a video input channel. |                       |
| Query                                                     | None                                                                                       |                       |
| Inbound Data                                              | None                                                                                       |                       |
| Success Return                                            | ResponseStatus                                                                             |                       |
| Notes:                                                    |                                                                                            |                       |

#### HeatMapRegion XML Block

```
<HeatMapRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer --> </id>
  <sensitivityLevel> <!-- req, xs:integer --> </sensitivityLevel>
  <backgroundUpdateRate> <!-- opt, xs:integer --> </backgroundUpdateRate>
```



```

<sceneChangeLevel> <!-- opt, xs:integer --> </sceneChangeLevel>
<targetTracking> <!-- opt, xs:boolean--> </targetTracking>
<minObjectSize> <!-- opt, xs:integer --> </minObjectSize>
<RegionCoordinatesList> <!-- req -->
  <RegionCoordinates> <!-- req -->
    <positionX> <!-- req, xs:integer;coordinate --> </positionX>
    <positionY> <!-- req, xs:integer;coordinate --> </positionY>
  </RegionCoordinates>
</RegionCoordinatesList>
</HeatMapRegion>

```

### 8.4.33 /ISAPI/System/Video/inputs/channels/<ID>/heat Map/search

| /ISAPI/System/Video/inputs/channels/ID/heatMap/search |                                                          | General Resource | v2.0 |
|-------------------------------------------------------|----------------------------------------------------------|------------------|------|
| h                                                     |                                                          |                  |      |
| GET                                                   |                                                          |                  |      |
| Description                                           | It is used to get the value of heat for a time interval. |                  |      |
| Query                                                 | None                                                     |                  |      |
| Inbound Data                                          | HeatMapDataDescription                                   |                  |      |
| Success Return                                        | HeatMapDataResult                                        |                  |      |
| POST                                                  |                                                          |                  |      |
| Description                                           | It is used to get the value of heat for a time interval. |                  |      |
| Query                                                 | None                                                     |                  |      |
| Inbound Data                                          | HeatMapDataDescription                                   |                  |      |
| Success Return                                        | HeatMapDataResult                                        |                  |      |
| Notes:                                                |                                                          |                  |      |

#### HeatMapDataDescription XML Block

```

<HeatMapDataDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>
    <!-- req, xs:string, "daily,weekly,monthly, yearly"-->
  </reportType>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:datetime --></startTime>
      <endTime><!-- req, xs:datetime --></endTime>
    </timeSpan>
  </timeSpanList>

```

```
</HeatMapDataDescription>
```

#### HeatMapDataResult XML Block

```
<HeatMapDataResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <responseStatus><!-- req, xs:boolean--></responseStatus>
  <responseStatusStrg><!-- req, xs:string--></responseStatusStrg>
  <numOfMatches><!-- req, xs:integer --></numOfMatches>
  <matchList> <!-- opt -->
    <matchElement> <!-- opt -->
      <timeSpan> <!-- opt -->
        <startTime><!-- req, xs:datetime --></startTime>
        <endTime><!-- req, xs:datetime --></endTime>
      </timeSpan>
      <value> <!-- req, xs:integer --> </value>
    </matchElement>
  </matchList>
</HeatMapDataResult>
```

### 8.4.34 /ISAPI/System/Video/inputs/channels/ID/heatMap/picture

| /ISAPI/System/Video/inputs/channels/ID/heatMap/picture                                                             |                                            | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------------|------|
| e                                                                                                                  |                                            |                  |      |
| GET                                                                                                                |                                            |                  |      |
| Description                                                                                                        | It is used to get the picture of heat map. |                  |      |
| Query                                                                                                              | starttime<br>endtime                       |                  |      |
| Inbound Data                                                                                                       | None                                       |                  |      |
| Success Return                                                                                                     | Picture over HTTP                          |                  |      |
| Notes:                                                                                                             |                                            |                  |      |
| Examples:                                                                                                          |                                            |                  |      |
| GET                                                                                                                |                                            |                  |      |
| /ISAPI/System/Video/inputs/channels/ID/heatMap/picture?starttime=2014-01-11T11:00:00Z&endtime=2014-01-11T11:59:59Z |                                            |                  |      |

## 8.4.35 /ISAPI/System/Video/inputs/channels/ID/heatMap/pictureInfo

|                                                            |                                                 |                  |      |
|------------------------------------------------------------|-------------------------------------------------|------------------|------|
| /ISAPI/System/Video/inputs/channels/ID/heatMap/pictureInfo |                                                 | General Resource | v2.0 |
| GET                                                        |                                                 |                  |      |
| Description                                                | It is used to get the picture of heat map Info. |                  |      |
| Query                                                      | None                                            |                  |      |
| Inbound Data                                               | HeatMapDataDescription                          |                  |      |
| Success Return                                             | HeatMapPicInfo                                  |                  |      |
| Notes:                                                     |                                                 |                  |      |

### HeatMapDataDescription XML Block

```
<HeatMapDataDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>
    <!-- req, xs:string, "daily,weekly,monthly, yearly"-->
  </reportType>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:datetime --></startTime>
      <endTime><!-- req, xs:datetime --></endTime>
    </timeSpan>
  </timeSpanList>
</HeatMapDataDescription>
```

### HeatMapPicInfo XML Block

```
<HeatMapPicInfo version="2.0" xmlns="http://www.hikvision.com/ver20/XMLSchema">
  <MaxValue><!-- opt, xs:integer, "0~365*24*60*60" --></MaxValue>
  <MinValue><!-- opt, xs:integer, "0~365*24*60*60" --></MinValue>
</HeatMapPicInfo>
```

## 8.4.36 /ISAPI/System/Video/inputs/channels/<ID>/counting

|                                                 |  |                  |      |
|-------------------------------------------------|--|------------------|------|
| /ISAPI/System/Video/inputs/channels/ID/counting |  | General Resource | v2.0 |
| <b>GET</b>                                      |  |                  |      |

|                                                                                                                          |                                                                            |
|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Description</b>                                                                                                       | It is used to get the counting configuration for a video input channel.    |
| <b>Query</b>                                                                                                             | None                                                                       |
| <b>Inbound Data</b>                                                                                                      | None                                                                       |
| <b>Success Return</b>                                                                                                    | <b>Counting</b>                                                            |
| <b>PUT</b>                                                                                                               |                                                                            |
| <b>Description</b>                                                                                                       | It is used to update the counting configuration for a video input channel. |
| <b>Query</b>                                                                                                             | None                                                                       |
| <b>Inbound Data</b>                                                                                                      | <b>Counting</b>                                                            |
| <b>Success Return</b>                                                                                                    | <b>ResponseStatus</b>                                                      |
| <b>Notes:</b><br><dataUploadCycle> : PDC data upload cycle<br><SECUploadEnabled> : Per second upload mechanism to enable |                                                                            |

### Counting XML Block

```

<Counting version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <normalizedScreenSize> <!-- opt -->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <MountingConfiguration> <!-- opt -->
    <viewingAngle> <!-- req, xs:string, "vertical,tilt" --> </viewingAngle>
    <mountHeight> <!-- opt, xs:integer;cm --> </mountHeight>
    <horizontalDistance> <!-- opt, xs:integer;cm --> </horizontalDistance>
    <focalLength> <!-- opt, xs:integer;mm --> </focalLength>
  </MountingConfiguration>
  <Demarcation> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <DemarcationRegionList> <!-- req -->
      <DemarcationRegion> <!-- opt -->
        <id> <!-- req, xs:integer --> </id>
        <RegionCoordinatesList>
          <RegionCoordinates> <!-- req, -->
            <positionX> <!-- req, xs:integer;coordinate --> </positionX>
            <positionY> <!-- req, xs:integer;coordinate --> </positionY>
          </RegionCoordinates>
        </RegionCoordinatesList>
      </DemarcationRegion>
    </DemarcationRegionList>
    <DemarcationLine>

```

```

<StartPoint> <!--req -->
    <positionX> <!-- req, xs:integer --> </positionX>
    <positionY> <!-- req, xs:integer --> </positionY>
</StartPoint>
<EndPoint> <!--req -->
    <positionX> <!-- req, xs:integer --> </positionX>
    <positionY> <!-- req, xs:integer --> </positionY>
</EndPoint>
</DemarcationLine>
</Demarcation>
<CountingRegionType><!-- ro, req, xs:string, "region,line" --></CountingRegionType>
<CountingRegionList/> <!-- opt -->
<CountingLineItemList/> <!-- opt -->
<dataUploadCycle><!--opt, xs:integer, --></dataUploadCycle>
<SECUploadEnabled> <!-- opt, xs:boolean --> </SECUploadEnabled>
</Counting>

```

| /ISAPI/System/Video/inputs/channels/ID/counting/lineItem/ID                                      |                                                                                          | General Resource<br>v2.0 |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------|
| GET                                                                                              |                                                                                          |                          |
| Description                                                                                      | It is used to get a particular counting Line configuration for a video input channel.    |                          |
| Query                                                                                            | None                                                                                     |                          |
| Inbound Data                                                                                     | None                                                                                     |                          |
| Success Return                                                                                   | CountingLineItem                                                                         |                          |
| PUT                                                                                              |                                                                                          |                          |
| Description                                                                                      | It is used to update a particular counting Line configuration for a video input channel. |                          |
| Query                                                                                            | None                                                                                     |                          |
| Inbound Data                                                                                     | CountingLineItem                                                                         |                          |
| Success Return                                                                                   | ResponseStatus                                                                           |                          |
| DELETE                                                                                           |                                                                                          |                          |
| Description                                                                                      | It is used to delete a particular counting Line configuration for a video input channel. |                          |
| Query                                                                                            | None                                                                                     |                          |
| Inbound Data                                                                                     | None                                                                                     |                          |
| Success Return                                                                                   | ResponseStatus                                                                           |                          |
| Notes:                                                                                           |                                                                                          |                          |
| <horizontalDistance> is used to get or set Horizontal Distance between Camera and Entrance/Exit. |                                                                                          |                          |

### CountingRegion XML Block

```
<CountingLineItem version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer --> </id>
  <direction> <!-- req -->
    <StartPoint> <!-- req -->
      <positionX> <!-- req, xs:integer --> </positionX>
      <positionY> <!-- req, xs:integer --> </positionY>
    </StartPoint>
    <EndPoint> <!-- req -->
      <positionX> <!-- req, xs:integer --> </positionX>
      <positionY> <!-- req, xs:integer --> </positionY>
    </EndPoint>
  </direction>
  <sensitivityLevel><!-- req, xs:integer --> </sensitivityLevel>
  <spaceGenerationSpeed> <!-- opt, xs:integer --> </spaceGenerationSpeed>
  <timeGenerationSpeed> <!-- opt, xs:integer --> </timeGenerationSpeed>
  <countingSpeed><!-- opt, xs:integer --> </countingSpeed>
  <detectionType> <!-- opt, xs:string, "auto,head,shoulder"--> </detectionType>
  <objectSizeCorrection> <!-- opt, xs: integer --> </objectSizeCorrection>
  <LineCoordinatesList>
    <Coordinates> <!-- req, -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </Coordinates>
  </LineCoordinatesList>
</CountingLineItem>
```

### 8.4.37 /ISAPI/System/Video/inputs/channels/<ID>/counting/capabilities

| /ISAPI/System/Video/inputs/channels/<ID>/counting/capabilities |                                                                                      | General Resource | v2.0 |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------|------|
| s                                                              |                                                                                      |                  |      |
| GET                                                            |                                                                                      |                  |      |
| Description                                                    | It is used to get the counting configuration Capabilities for a video input channel. |                  |      |
| Query                                                          | None                                                                                 |                  |      |
| Inbound Data                                                   | None                                                                                 |                  |      |
| Success Return                                                 | CountingCap                                                                          |                  |      |
| Notes:                                                         |                                                                                      |                  |      |

#### CountingCap XML Block

```
<CountingCap version="2.0" xmlns="http://www.hikvision.com/ver20/XMLSchema">
  <CountingRegionType><!-- opt, xs:string,"line" --></CountingRegionType>
  <dataUploadCycle opt="1,5,10,15,20,30,60"><!--opt, xs:integer, --></dataUploadCycle>
  <isSupportSECUpload><!-- opt, xs:boolean --></isSupportSECUpload>
  <isSupportRecommendValue><!-- opt, xs:boolean,"true" --></isSupportRecommendValue>
  <isSupportFlashRemoveCouting><!-- opt, xs:boolean,"true"--></isSupportFlashRemoveCouting>
</CountingCap>
```

### 8.4.38 /ISAPI/System/Video/inputs/channels/<ID>/counting/RecommendValue

|                                                                  |                              |                  |      |
|------------------------------------------------------------------|------------------------------|------------------|------|
| /ISAPI/System/Video/inputs/channels/<ID>/counting/RecommendValue |                              | General Resource | v2.0 |
| GET                                                              |                              |                  |      |
| Description                                                      | Get counting recommend value |                  |      |
| Query                                                            | None                         |                  |      |
| Inbound Data                                                     | None                         |                  |      |
| Success Return                                                   | CountingRecommendValue       |                  |      |
| Notes:                                                           |                              |                  |      |
| <widthPercent> : [0,1000]                                        |                              |                  |      |

#### CountingRecommendValue XML Block

```
<CountingRecommendValue version="2.0"
xmlns="http://www.hikvision.com/ver20/XMLSchema">
  <width><!--opt,xs:integer, --></width>
</CountingRecommendValue>
```

### 8.4.39 /ISAPI/System/Video/inputs/channels/<ID>/counting/regions

| /ISAPI/System/Video/inputs/channels/<ID>/counting/regions |                                                                                 | General Resource | v2.0 |
|-----------------------------------------------------------|---------------------------------------------------------------------------------|------------------|------|
| <b>GET</b>                                                |                                                                                 |                  |      |
| Description                                               | It is used to get the counting regions configuration for a video input channel. |                  |      |

|                |                                                                                    |
|----------------|------------------------------------------------------------------------------------|
| Query          | None                                                                               |
| Inbound Data   | None                                                                               |
| Success Return | <b>CountingRegionList</b>                                                          |
| <b>PUT</b>     |                                                                                    |
| Description    | It is used to update the counting regions configuration for a video input channel. |
| Query          | None                                                                               |
| Inbound Data   | <b>CountingRegionList</b>                                                          |
| Success Return | <b>ResponseStatus</b>                                                              |
| <b>POST</b>    |                                                                                    |
| Description    | It is used to add a counting region for a video input channel.                     |
| Query          | None                                                                               |
| Inbound Data   | <b>CountingRegion</b>                                                              |
| Success Return | <b>ResponseStatus</b>                                                              |
| <b>DELETE</b>  |                                                                                    |
| Description    | It is used to delete the counting regions configuration for a video input channel. |
| Query          | None                                                                               |
| Inbound Data   | None                                                                               |
| Success Return | <b>ResponseStatus</b>                                                              |
| Notes:         |                                                                                    |

#### CountingRegionList XML Block

```
<CountingRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <CountingRegion/>  <!-- opt -->
</CountingRegionList>
```

### 8.4.40 /ISAPI/System/Video/inputs/channels/<ID>/counting/regions/<ID>

|                                                            |                                                                                         |                          |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------|
| /ISAPI/System/Video/inputs/channels/ID/counting/regions/ID |                                                                                         | General Resource<br>v2.0 |
| GET                                                        |                                                                                         |                          |
| Description                                                | It is used to get a particular counting region configuration for a video input channel. |                          |
| Query                                                      | None                                                                                    |                          |
| Inbound Data                                               | None                                                                                    |                          |
| Success Return                                             | CountingRegion                                                                          |                          |
| PUT                                                        |                                                                                         |                          |



|                                                                                                                   |                                                                                            |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Description</b>                                                                                                | It is used to update a particular counting region configuration for a video input channel. |
| <b>Query</b>                                                                                                      | None                                                                                       |
| <b>Inbound Data</b>                                                                                               | <b>CountingRegion</b>                                                                      |
| <b>Success Return</b>                                                                                             | <b>ResponseStatus</b>                                                                      |
| <b>DELETE</b>                                                                                                     |                                                                                            |
| <b>Description</b>                                                                                                | It is used to delete a particular counting region configuration for a video input channel. |
| <b>Query</b>                                                                                                      | None                                                                                       |
| <b>Inbound Data</b>                                                                                               | None                                                                                       |
| <b>Success Return</b>                                                                                             | <b>ResponseStatus</b>                                                                      |
| <b>Notes:</b><br><horizontalDistance> is used to get or set Horizontal Distance between Camera and Entrance/Exit. |                                                                                            |

#### CountingRegion XML Block

```

<CountingRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer --> </id>
  <Direction> <!--req -->
    <StartPoint> <!--req -->
      <positionX> <!-- req, xs:integer --> </positionX>
      <positionY> <!-- req, xs:integer --> </positionY>
    </StartPoint>
    <EndPoint> <!--req -->
      <positionX> <!-- req, xs:integer --> </positionX>
      <positionY> <!-- req, xs:integer --> </positionY>
    </EndPoint>
  </Direction>
  <sensitivityLevel><!-- req, xs:integer --> </sensitivityLevel>
  <spaceGenerationSpeed> <!-- opt, xs:integer --> </spaceGenerationSpeed>
  <timeGenerationSpeed> <!-- opt, xs:integer --> </timeGenerationSpeed>
  <countingSpeed><!-- opt, xs:integer --> </countingSpeed>
  <detectionType> <!-- opt, xs:string, "auto,head,shoulder"--> </detectionType>
  <objectSizeCorrection> <!-- opt, xs: integer --> </objectSizeCorrection>
  <RegionCoordinatesList> <!-- req -->
    <RegionCoordinates> <!-- req -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</CountingRegion>

```

## 8.4.41 /ISAPI/System/Video/inputs/channels/<ID>/counting/search

| /ISAPI/System/Video/inputs/channels/ID/counting/search |                                                         | General Resource | v2.0 |
|--------------------------------------------------------|---------------------------------------------------------|------------------|------|
| h                                                      |                                                         |                  |      |
| GET                                                    |                                                         |                  |      |
| Description                                            | It is used to get the value of counter for a time range |                  |      |
| Query                                                  | None                                                    |                  |      |
| Inbound Data                                           | CountingStatisticsDescription                           |                  |      |
| Success Return                                         | CountingStatisticsResult                                |                  |      |
| POST                                                   |                                                         |                  |      |
| Description                                            | It is used to get the value of counter for a time range |                  |      |
| Query                                                  | None                                                    |                  |      |
| Inbound Data                                           | CountingStatisticsDescription                           |                  |      |
| Success Return                                         | CountingStatisticsResult                                |                  |      |
| Notes:                                                 |                                                         |                  |      |

### CountingStatisticsDescription XML Block

```
<CountingStatisticsDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <statisticType><!-- req, xs:string, "enternum, exitnum"--> </statisticType>
  <reportType>
    <!-- req, xs:string, "daily,weekly,monthly, yearly"-->
  </reportType>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:datetime --></startTime>
      <endTime><!-- req, xs:datetime --></endTime>
    </timeSpan>
  </timeSpanList>
</CountingStatisticsDescription>
```

### CountingStatisticsResult XML Block

```
<CountingStatisticsResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <responseStatus><!-- req, xs:boolean--></responseStatus>
  <responseStatusStr><!-- req, xs:string--></responseStatusStr>
  <numOfMatches><!-- req, xs:integer --></numOfMatches>
  <matchList> <!-- opt -->
    <matchElement> <!-- opt -->
```

```

<timeSpan> <!-- opt -->
    <startTime><!-- req, xs:datetime --></startTime>
    <endTime><!-- req, xs:datetime --></endTime>
</timeSpan>
<enterCount> <!-- dep, xs:integer --> </enterCount>
<exitCount> <!-- dep, xs:integer --> </exitCount>
</matchElement>
</matchList>
</CountingStatisticsResult>

```

#### 8.4.42 /ISAPI/System/Video/inputs/channels/ID/counting/resetCount

| /ISAPI/System/Video/inputs/channels/ID/counting/resetCount |                                                         | General Resource | v2.0 |
|------------------------------------------------------------|---------------------------------------------------------|------------------|------|
| PUT                                                        |                                                         |                  |      |
| Description                                                | It is used to reset the count of a video input channel. |                  |      |
| Query                                                      | None                                                    |                  |      |
| Inbound Data                                               | None                                                    |                  |      |
| Success Return                                             | ResponseStatus                                          |                  |      |
| Notes:                                                     |                                                         |                  |      |

#### 8.4.43 /ISAPI/System/Video/inputs/channels/ID/VCAResource

| /ISAPI/System/Video/inputs/channels/ID/VCAResource |                                                               | General Resource | v2.0 |
|----------------------------------------------------|---------------------------------------------------------------|------------------|------|
| GET                                                |                                                               |                  |      |
| Description                                        | Intelligent acquisition of resources configuration parameters |                  |      |
| Query                                              | None                                                          |                  |      |
| Inbound Data                                       | None                                                          |                  |      |
| Success Return                                     | VCAResource                                                   |                  |      |
| PUT                                                |                                                               |                  |      |
| Description                                        | Intelligent resource parameter settings                       |                  |      |
| Query                                              | None                                                          |                  |      |
| Inbound Data                                       | VCAResource                                                   |                  |      |
| Success Return                                     | ResponseStatus                                                |                  |      |

Notes:

#### VCAResource XML Block

```
<VCAResource version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type> <!--                                req,                                xs:string,
  "basicBehavior,fullBehavior,facesnapBehavior,facesnap,TFS,smartVehicleDetection,smartHVTDe
  ction,smart,judicial,smart264AndRoadDetection,smart264AndFaceDetection,smart264AndHeatM
  ap" --> </type>
</VCAResource>
```

### 8.4.44 /ISAPI/System/Video/outputs

| /ISAPI/System/Video/outputs                                                                                                                                          |                                                                          | General Resource | v2.0 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                  |                                                                          |                  |      |
| Description                                                                                                                                                          | It is used to get the video outputs configuration on an IP media device. |                  |      |
| Query                                                                                                                                                                | None                                                                     |                  |      |
| Inbound Data                                                                                                                                                         | None                                                                     |                  |      |
| Success Return                                                                                                                                                       | VideoOutput                                                              |                  |      |
| Notes:                                                                                                                                                               |                                                                          |                  |      |
| An IP media device may contain a set of video outputs. These outputs are hardwired by the device, meaning that the IDs can be discovered but not created or deleted. |                                                                          |                  |      |

#### VideoOutput XML Block

```
<VideoOutput version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VideoOutputChannellist/> <!-- opt -->
</VideoOutput>
```

### 8.4.45 /ISAPI/System/Video/outputs/channels

| ISAPI/System/Video/outputs/channels |                                                                                  | General Resource | v2.0 |
|-------------------------------------|----------------------------------------------------------------------------------|------------------|------|
| GET                                 |                                                                                  |                  |      |
| Description                         | It is used to get the video output channels configuration on an IP media device. |                  |      |
| Query                               | None                                                                             |                  |      |
| Inbound Data                        | None                                                                             |                  |      |
| Success Return                      | VideoOutputChannelList                                                           |                  |      |
| Notes:                              |                                                                                  |                  |      |

Since video output channels are resources that are defined by the hardware configuration of the device, they cannot be created or deleted.

#### VideoOutputChannelList XML Block

```
<VideoOutputChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VideoOutputChannel/>    <!-- opt -->
</VideoOutputChannelList>
```

### 8.4.46 /ISAPI/System/Video/outputs/channels/<ID>

| ISAPI/System/Video/outputs/channels/<ID>                                             |                                                                                         | General Resource | v2.0 |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------|------|
| GET                                                                                  |                                                                                         |                  |      |
| Description                                                                          | It is used to get a particular video input channel configuration on an IP media device. |                  |      |
| Query                                                                                | None                                                                                    |                  |      |
| Inbound Data                                                                         | None                                                                                    |                  |      |
| Success Return                                                                       | VideoOutputChannel                                                                      |                  |      |
| Notes:                                                                               |                                                                                         |                  |      |
| <menu> required if the port support display menu.                                    |                                                                                         |                  |      |
| <mirrorMenu> check whether to support to display menu of another port simultaneously |                                                                                         |                  |      |

#### VideoOutputChannel XML Block

```
<VideoOutputChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string;id --> </id>
  <type>  <!-- req, xs:string, "VGA,CVBS,HDMI,Spot,SDI" --> </type>
  <menu>  <!-- dep, ro -->
    <mirrorMenu> <!--req, xs:boolean--> </mirrorMenu>
  </menu>
  <mode> <!--opt,xs:string,"close,clip,scale,open,SDI_1080P25..."--> </mode>
  <resolution> <!--opt, xs:string, "1920*1080/60HZ,1280*720/50HZ..." --> </resolution>
</VideoOutputChannel>
```

### 8.4.47 /ISAPI/System/Video/Menu

| URI             | /ISAPI/System/Video/Menu                                   |                     | Type                 | Resource |
|-----------------|------------------------------------------------------------|---------------------|----------------------|----------|
| <b>Function</b> | Access the local menu configuration on an IP media device. |                     |                      |          |
| <b>Methods</b>  | <b>Query String(s)</b>                                     | <b>Inbound Data</b> | <b>Return Result</b> |          |

|              |                                                                                                                                                                                                                                              |  |            |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|
| <b>GET</b>   |                                                                                                                                                                                                                                              |  | <MenuList> |
| <b>Notes</b> | An IP media device may contain a set of local menus. These menus are hardwired by the device, meaning that the IDs can be discovered but not created or deleted. ID numbering or values should be considered arbitrary and device-dependent. |  |            |

#### MenuList XML Block

```
<MenuList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Menu/>  <!-- opt  -->
</MenuList>
```

### 8.4.48 /ISAPI/System/Video/Menu/<ID>

| URI      | /ISAPI/System/Video/Menu/<ID>              |              | Type             | Resource |
|----------|--------------------------------------------|--------------|------------------|----------|
| Function | Access menu configuration.                 |              |                  |          |
| Methods  | Query String(s)                            | Inbound Data | Return Result    |          |
| GET      |                                            | None         | <Menu>           |          |
| PUT      |                                            | <Menu>       | <ResponseStatus> |          |
| Notes    | If(mode == auto) VideoOutputPortList is ro |              |                  |          |

#### Menu XML Block

```
<Menu version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode> <!--req, xs:string, "auto, manual" --> </mode>
  <VideoOutputPortList>  <!-- req -->
    <videoOutputPortID> <!-- opt, xs:string, id-->  </videoOutputPortID>
  </VideoOutputPortList>
</Menu>
```

### 8.4.49 /ISAPI/System/Video/inputs/channels/<ID>/overlays/capabilities

| /ISAPI/System/Video/inputs/channels/ID/overlays/capabilities |                                                                         | General Resource | v2.0 |
|--------------------------------------------------------------|-------------------------------------------------------------------------|------------------|------|
| <b>GET</b>                                                   |                                                                         |                  |      |
| <b>Description</b>                                           | It is used to get the overlays configuration for a video input channel. |                  |      |
| <b>Query</b>                                                 | None                                                                    |                  |      |



Position coordinates are dependent on normalized screen size.  
The computer screen coordinate system is used, which the origin coordinate is on top-left corner, the Y axis is vertical downwards, the X axis is horizontal rightwards.

#### BatteryPowerOverlay XML Block

```
<BatteryPowerOverlay>
  <enabled><!-- req, xs:boolean --></enabled>
  <positionX><!-- req, xs:integer;coordinate --></positionX>
  <positionY><!-- req, xs:integer;coordinate --></positionY>
</BatteryPowerOverlay>
```

### 8.4.51 /ISAPI/System/Video/inputs/channels/<ID>/overlays/BatteryPowerOverlay/capabilities

|                                                                                    |                                                                                                    |                  |      |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------|------|
| /ISAPI/System/Video/inputs/channels/<ID>/overlays/BatteryPowerOverlay/capabilities |                                                                                                    | General Resource | v2.0 |
| GET                                                                                |                                                                                                    |                  |      |
| Description                                                                        | It is used to get a BatteryPowerOverlayOverlay configuration for a video input channel capability. |                  |      |
| Query                                                                              | None                                                                                               |                  |      |
| Inbound Data                                                                       | None                                                                                               |                  |      |
| Success Return                                                                     | BatteryPowerOverlay                                                                                |                  |      |
| Notes:                                                                             |                                                                                                    |                  |      |

#### BatteryPowerOverlay XML Block

```
<BatteryPowerOverlay>
  <enabled><!-- req, xs:boolean --></enabled>
  <positionX><!-- req, xs:integer;coordinate --></positionX>
  <positionY><!-- req, xs:integer;coordinate --></positionY>
</BatteryPowerOverlay>
```

### 8.4.52 /ISAPI/System/Video/inputs/channels/<ID>/roadInfo/<ID>/overlays/capabilities

|                                                                         |  |                  |      |
|-------------------------------------------------------------------------|--|------------------|------|
| /ISAPI/System/Video/inputs/channels/<ID>/roadInfo/overlays/capabilities |  | General Resource | v2.0 |
| GET                                                                     |  |                  |      |





#### RoadInfo XML Block

```
<RoadInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <displayRoadInfo> <!-- req, xs:boolean --></displayRoadInfo>
  <intersection min="" max=""> <!-- req, xs:integer, "路口 ID" --> </intersection>
  <RoadInfoOverlayList/> <!-- opt -->
</RoadInfo>
```

### 8.4.54 /ISAPI/System/Video/inputs/channels/<ID>/roadInfo/<ID>/overlays/text

| /ISAPI/System/Video/inputs/channels/<ID>/roadInfo/<ID>/overlays/text                                 |                                                                                 | General Resource | v2.0 |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------|------|
| GET                                                                                                  |                                                                                 |                  |      |
| Description                                                                                          | It is used to get the text overlays configuration for a video input channel.    |                  |      |
| Query                                                                                                | None                                                                            |                  |      |
| Inbound Data                                                                                         | None                                                                            |                  |      |
| Success Return                                                                                       | RoadInfoOverlayList                                                             |                  |      |
| PUT                                                                                                  |                                                                                 |                  |      |
| Description                                                                                          | It is used to update the text overlays configuration for a video input channel. |                  |      |
| Query                                                                                                | None                                                                            |                  |      |
| Inbound Data                                                                                         | RoadInfoOverlayList                                                             |                  |      |
| Success Return                                                                                       | ResponseStatus                                                                  |                  |      |
| POST                                                                                                 |                                                                                 |                  |      |
| Description                                                                                          | It is used to add a text overlay for a video input channel.                     |                  |      |
| Query                                                                                                | None                                                                            |                  |      |
| Inbound Data                                                                                         | RoadInfoOverlay                                                                 |                  |      |
| Success Return                                                                                       | ResponseStatus                                                                  |                  |      |
| DELETE                                                                                               |                                                                                 |                  |      |
| Description                                                                                          | It is used to delete the text overlays configuration for a video input channel. |                  |      |
| Query                                                                                                | None                                                                            |                  |      |
| Inbound Data                                                                                         | None                                                                            |                  |      |
| Success Return                                                                                       | ResponseStatus                                                                  |                  |      |
| Notes:                                                                                               |                                                                                 |                  |      |
| A set of text overlays is managed. They are composited over the video signal in increasing ID-order. |                                                                                 |                  |      |



## 8.5 /ISAPI/System/Audio

|                     |         |      |
|---------------------|---------|------|
| /ISAPI/System/Audio | Service | v2.0 |
| Notes:              |         |      |

### 8.5.1 /ISAPI/System/Audio/capabilities

|                                  |                                     |                  |      |
|----------------------------------|-------------------------------------|------------------|------|
| /ISAPI/System/Audio/capabilities |                                     | General Resource | v2.0 |
| GET                              |                                     |                  |      |
| Description                      | It is used to get audio capability. |                  |      |
| Query                            | None                                |                  |      |
| Inbound Data                     | None                                |                  |      |
| Success Return                   | <AudioCap>                          |                  |      |
| Notes:                           |                                     |                  |      |

#### AudioCap XML Block

```
<AudioCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <audioInputNums> <!-- req, xs:integer> </audioInputNums>
  <audioOutputNums> <!-- req, xs:integer> </audioOutputNums>
  <mixAudioInSet><!-- opt xs:Boolean --></mixAudioInSet>
  <mixAudioOutSet"><!-- opt xs:Boolean--></mixAudioOutSet>
</AudioCap>
```

### 8.5.2 /ISAPI/System/Audio/channels

/ISAPI/System//Audio/channels

General Resourcev2.0

|                |                                                                           |
|----------------|---------------------------------------------------------------------------|
| GET            |                                                                           |
| Description    | It is used to get the audio channels configuration on an IP media device. |
| Query          | None                                                                      |
| Inbound Data   | None                                                                      |
| Success Return | AudioChannelList                                                          |

Notes:

Since inputs are resources that are defined by the hardware configuration of the device, audio channels cannot be created or deleted.

#### AudioChannelList XML Block

```
<AudioChannelList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <AudioChannel/> <!-- opt -->
</AudioChannelList>
```

### 8.5.3 /ISAPI/System/Audio/channels/<ID>

| /ISAPI/System/Audio/channels/ID                                                            |                                                                                   | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------|------|
| GET                                                                                        |                                                                                   |                  |      |
| Description                                                                                | It is used to get a particular audio channel configuration on an IP media device. |                  |      |
| Query                                                                                      | None                                                                              |                  |      |
| Inbound Data                                                                               | None                                                                              |                  |      |
| Success Return                                                                             | AudioChannel                                                                      |                  |      |
| Notes:                                                                                     |                                                                                   |                  |      |
| <audioMode> is the duplex mode for audio transmission between the client and media device. |                                                                                   |                  |      |

#### AudioChannel XML Block

```
<AudioChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:string -->          </id>
  <enabled>     <!-- req, xs:boolean -->         </enabled>
</AudioChannel>
```

### 8.5.4 /ISAPI/System/Audio/channels/<ID>/dynamicCap

| /ISAPI/System/Audio/channels/ID/dynamicCap |                                                                                                                                                     | General Resource | v2.0 |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------|
| GET                                        |                                                                                                                                                     |                  |      |
| Description                                | Get dynamic capabilities, different audioSamplingRate have different audioBitRate; different audio compression types have different audio bit rate. |                  |      |
| Query                                      | None                                                                                                                                                |                  |      |
| Inbound Data                               | AudioDscriptor                                                                                                                                      |                  |      |
| Success Return                             | DynamicCap                                                                                                                                          |                  |      |
| Notes:                                     |                                                                                                                                                     |                  |      |

#### AudioDescriptor XML Block

```
<AudioDescriptor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <audioCompressionType>
    <!--                                opt,
xs:string,"G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"-
->
    </audioCompressionType>
  <audioSamplingRate>  <!-- opt, xs:float,kHz --></audioSamplingRate>
```

```
</AudioDescriptor>
```

### DynamicCap XML Block

```
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ResolutionAvailableDescriptorList>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
      <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
      <supportedFrameRate> <!-- req, xs:string --> </supportedFrameRate>
    </ResolutionAvailableDescriptor>
  </ResolutionAvailableDescriptorList>
  <CodecParamDescriptorList>
    <CodecParamDescriptor>
      <videoCodecType>
        <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264" --></videoCodecType>
        <isSupportProfile> <!--dep, xs:boolean,""--> </isSupportProfile>
        <CBRCap> 定码率
          <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
        </CBRCap>
        <VBRCap> 变码率
          <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
        </VBRCap>
        <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
        <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
        <SmartCodecCap><!--opt-->
          <readOnlyParams opt="keyFrameInterval,Profile,SVC,fixedQuality "><!-- opt, ro,
xs:string, --></readOnlyParams>
          <!--req, 当 Smart264 开启后, 在变码率情况下, 界面上码率上限下方增加一行, 标
题为平均码率, 同时码率上限灰显, 不能修改,
          平均码率默认值根据码率上限做转换, 平均码率的范围为(0,码率上限]。平均码率
          单独保存, 不复用码率上限;
          当码率类型为定码率时, 要求平均码率隐藏, 码率上限可以配置。-->
          <BitrateType>
            <Constant><!--opt,定码率-->
              <support opt="videoBitrate"><!--opt, xs:string,"averageVideoBitrate(平均码
率),videoBitrate(码率上限)"--></support>
              <hiddenAbility opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></hiddenAbility>
            </Constant>
            <Variable><!--opt,变码率-->
              <support opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></support>
              <readOnlyAbility opt="videoBitrate"><!--opt,
```

```

xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></readOnlyAbility>
</Variable>
</BitrateType>
<vbrAverageDefault><!--dep,xs:integer in kbps "平均码率推荐值"
--></vbrAverageDefault>
</SmartCodecCap>
</CodecParamDescriptor>
</CodecParamDescriptorList>
<AudioDescriptorList>
  <audioCompressionType>
    <!-- req, xs:string,
      "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM
      ,MP2L2"-->
    </audioCompressionType>
  </AudioDescriptorList>
</DynamicCap>
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <AudioDescriptorList>
    <AudioDescriptor>
      <audioCompressionType>
        <!-- req,
xs:string,"G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"-
->
      </audioCompressionType>
      <audioItemList>
        <audioItem>
          <audioSamplingRate, default = "">
            <!--opt,xs:string --></audioSamplingRate>
          <audioBitRate opt= ""> <!-- dep, xs:integer --> </audioBitRate>
          <noiseReduce>
            <!--default = "true,false"><!-- req, xs:string,"true,false" -->
          </noiseReduce>
        </audioItem>
      </audioItemList>
    </AudioDescriptor>
  </AudioDescriptorList>
  <CodecParamDescriptorList>
    <CodecParamDescriptor>
      <videoCodecType>
        <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264" --></videoCodecType>
        <isSupportProfile> <!--dep, xs: boolean,""--> </isSupportProfile>
        <CBRCap> 定码率
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>

```

```

</CBRCap>
<VBRCap> 变码率
  <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
</VBRCap>
<isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
<isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
<SmartCodecCap><!--opt-->
  <readOnlyParams opt="keyFrameInterval,Profile,SVC"><!-- opt, ro, xs:string, "需要灰显
的项有：I 帧间隔、编码复杂度、SVC"--></readOnlyParams>
  <!--req, 当 Smart264 开启后，在变码率情况下，界面上码率上限下方增加一行，标
题为平均码率，同时码率上限灰显，不能修改，
  平均码率默认值根据码率上限做转换，平均码率的范围为(0,码率上限]。平均码率
  单独保存，不复用码率上限；
  当码率类型为定码率时，要求平均码率隐藏，码率上限可以配置。-->
  <BitrateType>
    <Constant><!--opt,定码率-->
      <support opt="videoBitrate"><!--opt, xs:string,"averageVideoBitrate(平均码
率),videoBitrate(码率上限)"--></support>
      <hiddenAbility opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></hiddenAbility>
    </Constant>
    <Variable><!--opt,变码率-->
      <support opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></support>
      <readOnlyAbility opt="videoBitrate"><!--opt,
xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></readOnlyAbility>
    </Variable>
  </BitrateType>
  <vbrAverageDefault><!--dep,xs:integer in kbps "平均码率推荐值
"--></vbrAverageDefault>
</SmartCodecCap>
</CodecParamDscriptor>
</CodecParamDscriptorList>
</DynamicCap>

```

## 8.5.5 /ISAPI/System/TwoWayAudio

|                               |                       |
|-------------------------------|-----------------------|
| /ISAPI/System/TwoWayAudio     | General Resource v2.0 |
| Notes: two way audio Service. |                       |



## 8.5.6 /ISAPI/System/TwoWayAudio/channels

| /ISAPI/System/TwoWayAudio/channels |                                                   | General Resource | v2.0 |
|------------------------------------|---------------------------------------------------|------------------|------|
| GET                                |                                                   |                  |      |
| Description                        | It is used to get the two way audio channels list |                  |      |
| Query                              | None                                              |                  |      |
| Inbound Data                       | None                                              |                  |      |
| Success Return                     | TwoWayAudioChannelList                            |                  |      |
| Notes:                             |                                                   |                  |      |

### TwoWayAudioChannelList XML Block

```
<TwoWayAudioChannelList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TwoWayAudioChannel/> <!-- opt -->
</TwoWayAudioChannelList>
```

## 8.5.7 /ISAPI/System/TwoWayAudio/channels/<ID>

/ISAPI/System/TwoWayAudio/channels/ID

General Resourcev2.0

|                                                                                  |                                                      |
|----------------------------------------------------------------------------------|------------------------------------------------------|
| GET                                                                              |                                                      |
| Description                                                                      | It is used to get a particular two way audio channel |
| Query                                                                            | None                                                 |
| Inbound Data                                                                     | None                                                 |
| Success Return                                                                   | TwoWayAudioChannel                                   |
| PUT                                                                              |                                                      |
| Description                                                                      | It is used to get a particular transparent channel   |
| Query                                                                            | None                                                 |
| Inbound Data                                                                     | TwoWayAudioChannel                                   |
| Success Return                                                                   | ResponseStatus                                       |
| Notes:                                                                           |                                                      |
| When <enabled>is true, two way audio is open; otherwise two way audio is closed. |                                                      |
| When <audioCompressionType> is MP212, <audioBitRate> supports to set bit rate.   |                                                      |

### TwoWayAudioChannel XML Block

```
<TwoWayAudioChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
```

```

<enabled> <!-- req, xs:boolean --> </enabled>
<audioCompressionType>
  <!-- req, xs:string,
    "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"
  -->
</audioCompressionType>
<audioInboundCompressionType>
  <!-- opt, xs:string,
    "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM"
  -->
</audioInboundCompressionType>
<speakerVolume> <!-- opt, xs:int--> </speakerVolume>
<microphoneVolume> <!-- opt, xs:int--> </microphoneVolume>
<noisereduce> <!-- opt, xs: Boolean,"true, false" --> </noisereduce>
<audioBitRate> <!-- opt, xs:integer;kbs--> </audioBitRate>
<audioInputType > <!-- opt, xs:string, "MicIn, LineIn"--> </audioInputType>
<associateVideoInputs> <!-- opt -->
  <enabled> <!-- req, xs:Boolean --> </enabled>
  <videoInputChannelList> <!-- req -->
    <videoInputChannelID> <!-- opt, xs:string; id --> </videoInputChannelID>
  </videoInputChannelList>
</associateVideoInputs>
<audioSamplingRate> <!-- opt, xs:float, in kHz --> </audioSamplingRate>
</TwoWayAudioChannel>

```

## 8.5.8 /ISAPI/System/TwoWayAudio/channels/<ID>/open

| /ISAPI/System/TwoWayAudio/channels/ID/open                                                                      |                                               | General | Resource |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------|----------|
|                                                                                                                 |                                               | v2.0    |          |
| PUT                                                                                                             |                                               |         |          |
| Description                                                                                                     | It is used to open the two way audio channel. |         |          |
| Query                                                                                                           | None                                          |         |          |
| Inbound Data                                                                                                    | None                                          |         |          |
| Success Return                                                                                                  | TwoWayAudioSession                            |         |          |
| Notes:                                                                                                          |                                               |         |          |
| In sessionId 8.6.5, if send Voice data, need to use this field to represent the communication on which session. |                                               |         |          |

### TwoWayAudioSession XML Block

```
<TwoWayAudioSession version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sessionId> <!-- req, xs:string --> </sessionId>
</TwoWayAudioSession>
```

### 8.5.9 /ISAPI/System/TwoWayAudio/channels/<ID>/close

| /ISAPI/System/TwoWayAudio/channels/ID/close |                                                | General Resource | v2.0 |
|---------------------------------------------|------------------------------------------------|------------------|------|
| PUT                                         |                                                |                  |      |
| Description                                 | It is used to close the two way audio channel. |                  |      |
| Query                                       | None                                           |                  |      |
| Inbound Data                                | None                                           |                  |      |
| Success Return                              | ResponseStatus                                 |                  |      |
| Notes:                                      |                                                |                  |      |

### 8.5.10 /ISAPI/System/TwoWayAudio/channels/<ID>/audioData

| /ISAPI/System/TwoWayAudio/channels/ID/audioData |                                                     | General Resource |
|-------------------------------------------------|-----------------------------------------------------|------------------|
|                                                 |                                                     | v2.0             |
| GET                                             |                                                     |                  |
| Description                                     | It is used to get data on the transparent channel.  |                  |
| Query                                           | sessionId                                           |                  |
| Inbound Data                                    | Raw Data                                            |                  |
| Success Return                                  | ResponseStatus                                      |                  |
| PUT                                             |                                                     |                  |
| Description                                     | It is used to send data on the transparent channel. |                  |
| Query                                           | None                                                |                  |
| Inbound Data                                    | Raw Data                                            |                  |
| Success Return                                  | ResponseStatus                                      |                  |
| Notes:                                          |                                                     |                  |

**Example: Client sends audio data to server**

```
PUT /ISAPI/System/TwoWayAudio/channels/ID/transData HTTP 1.1
...
Content-Type: application/binary; charset="UTF-8"\r\n
\r\n
TwowayAudio Data...
```

...

#### Example: Client receives audio data from server

GET /ISAPI/System/TwoWayAudio/channels/ID/transData HTTP/1.1

HTTP/1.1 200 OK

...

Content-Type: application/binary; charset="UTF-8"\r\n

\r\n

TwoWayAudio Data.....

### 8.5.11 /ISAPI/System/Audio/AudioIn/channels/<ID>/capabilities

| /ISAPI/System/Audio/AudioIn/channels/<ID>/capabilities |                                       | General Resource | v2.0 |
|--------------------------------------------------------|---------------------------------------|------------------|------|
| GET                                                    |                                       |                  |      |
| Description                                            | It is used to get audioin capability. |                  |      |
| Query                                                  | None                                  |                  |      |
| Inbound Data                                           | None                                  |                  |      |
| Success Return                                         | <AudioInCap>                          |                  |      |
| Notes:                                                 |                                       |                  |      |

#### AudioInCap XML Block

```
<AudioInCap version="20" xmlns="http://www.wisapi.org/ver20/XMLSchema">
  <id><!--req, xs:string--></id>
  <MixAudioIn><!-- req, ro -->
    <enabled opt="true,false"><!--req, xs:Boolean--></enabled>
    <audioInputType opt="micIn, lineIn"><!-- opt, xs:string--> </audioInputType>
    <highPassFilter
opt="0,8,16,24,31,39,47,55,63,71,79,87,94,102,110,118,126,134,142,150,157,165,173,181,189,1
97,205,213,220,228,236,244,252,260,268,276,283,291,299,307,315,323,331,339,346,354,362,37
0,378,386,394,402,409,417,425,433,441,449,457,465,472,480,488,496,504,512,520,528,535,543,
551,559,567,575,583,591,598,606,614,622,630,638,646,654,661,669,677,685,693,701,709,717,7
24,732,740,748,756,764,772,780,787,795,803,811,819,827,835,843,850,858,866,874,882,890,89
8,906,913,921,929,937,945,953,961,969,976,984,992,1000" default="30"><!--req,
xs:integer;Hz--></highPassFilter>
    <noiseMargin
opt="1000,660,657,653,650,647,643,640,637,633,-630,627,623,620,617,613,610,607,603,600,59
7,593,590,587,583,580,577,573,570,567,563,560,557,553,550,547,543,540,537,533,530,527,523,
520,517,513,510,507,503,500,497,493,490,487,483,480,477,473,470,467,463,460,457,453,450,4
```

```

47,443,440,437,433,430,427,423,420,417,413,410,407,403,400,397,393,390,387,383,380,377,37
3,370,367,363,360,357,353,350,347,343,340,337,333,330,327,323,320,317,313,310,307,303,300,
297,293,290,287,283,280,277,273,270,267,263,260,257,253,250,247,243,240"
default="30"><!--req, xs:integer;-dB--></noiseMargin>
  <AutoLimitWave><!--dep,audioInputType-->
    <FBCEnable opt="true,false"><!--req, xs:Boolean--></FBCEnable>
    <mode opt="fast,general,slow" default="general"><!--req, xs:string--></mode>
    <filterQValue opt="40,10" default="40"><!--req, xs:integer;Oct--></filterQValue>
    <staticFilterNum min="0" max="12" default="0"><!--req,
xs:integer--></staticFilterNum>
  </AutoLimitWave>
</MixAudioIn>
<AudioInVolumelist>
  <AudioInVlome>
    <type><!--req, xs:string;"audioOutput,audioEncode"--></type>
    <volume min="0" max="127" defalut="50"><!--req, xs:integer--></volume>
  </AudioInVlome>
</AudioInVolumelist>
</AudioInCap>

```

## 8.5.12 /ISAPI/System/Audio/AudioOut/channels/<ID>/capabilities

| /ISAPI/System/Audio/AudioOut/channels/<ID>/capabilities |                                         | General Resource | v2.0 |
|---------------------------------------------------------|-----------------------------------------|------------------|------|
| s                                                       |                                         |                  |      |
| GET                                                     |                                         |                  |      |
| Description                                             | It is used to get audio out capability. |                  |      |
| Query                                                   | None                                    |                  |      |
| Inbound Data                                            | None                                    |                  |      |
| Success Return                                          | <AudioCap>                              |                  |      |
| Notes:                                                  |                                         |                  |      |

### AudioOutCap XML Block

```

<AudioOutCapversion="20"xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!--req,xs:string--></id>
  <MixAudioOut>
    <enabled opt="true,false"><!--req,xs:Boolean--></enabled>
    <modulatorEnbale opt="true,false"><!--req,xs:Boolean--></modulatorEnbale>
    <postFilter opt="false,true" default="true"><!--req,xs:Boolean--></postFilter>
    <limitPressure opt="false,true" default="true"><!--req,xs:Boolean--></limitPressure>
    <modulatorValue min="0" max="127" default="10"><!--req,xs:integer;Oct--></modulatorValue>

```

```

    <triggerTime
opt="1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,2,2,2,2,2,2,2,2,2,2,3,3,3,3,3,3,3,4,4,4,4,4,5,5,5,6,
6,6,7,7,7,8,8,8,9,9,10,10,11,11,12,12,13,14,15,15,16,17,18,19,20,21,23,24,25,27,29,30,32,34,36,3
8,41,43,46,49,52,55,59,63,67,72,76,82,87,93,10,
17,114,123,132,141,152,163,175,188,23,218,235,254,274,296,320,347,375,47,441,479,520,566,6
16,671,731,798,872" default="4"><!req,xs:integer;ms></triggerTime>
    <freeTime
opt="98,11,15,18,112,116,120,124,129,133,138,143,148,154,159,165,171,177,184,191,198,26,21
3,222,230,239,248,258,268,278,289,31,313,325,338,352,366,381,397,413,430,448,467,486,57,52
8,551,575,60,626,653,682,712,743,776,811,848,887,927,970,1014,1062,1111,1163,1218,1276,13
37,142,1470,1541,1617,1697,1781,1870,1964,2063,2168,2279,2397,2521,2653,2792,2940,3097,
3263,3439,3626,3825,4035,4259,
4497,4750,5020,536,5611,5936,6282,6651,7045,7465,7914,8393,895,9452,10037,10664,11335,1
2053,12824,13650,14537,15489,16511,17610,18793,20065,21435,22911,2452,26219,28073,300
75,32239,34580,37114,39859,42834,46062" default="42"><!req,xs:integer;ms></freeTime>
    <compressThreshold opt="1,2,4,8" default="2"><!req,xs:integer;x></compressThreshold>
    <compressMode opt="soft,hard" default="soft"><!req,xs:string;ms></compressMode>
    <compressRate min="0" max="127"><!req,xs:integer;x></compressRate>
    <recoveryGain opt="1,2,4,8" default="2"><!req,xs:integer;x></recoveryGain>
    <outputGain
opt="100,421,361,325,30,281,265,252,240,230,221,212,25,198,192,186,180,175,170,165,161,15
6,152,148,145,141,138,134,131,128,125,122,120,117,114,112,110,17,15,13,10,98,96,94,92,90,88
,86,85,83,81,79,78,76,74,73,71,70,68,67,65,64,62,61,60,58,57,56,54,53,52,51,49,48,47,46,45,43,
42,41,40,39,38,37,36,35,34,33,32,31,30,29,28,27,26,25,24,23,23,22,21,20,19,18,17,17,16,15,14,1
3,12,12,11,10,9,9,8,7,6,6,5,4,3,3,2,1,1,0"><!req,xs:integer></outputGain>
    </MixAudioOut>
    <AudioOutVolumelist>
    <AudioOutVlome>
    <type><!req,xs:string;"audioOutput,audioEncode"></type>
    <volume min="0" max="127" default="50"><!req,xs:integer></volume>
    </AudioOutVlome>
    </AudioOutVolumelist>
</AudioOutCap>

```

### 8.5.13 /ISAPI/System/Audio/AudioIn/channels/<ID>

| /ISAPI/System/Audio/AudioIn/channels/<ID> |                                     | General Resource | v2.0 |
|-------------------------------------------|-------------------------------------|------------------|------|
| GET                                       |                                     |                  |      |
| Description                               | It is used to get audio capability. |                  |      |
| Query                                     | None                                |                  |      |
| Inbound Data                              | None                                |                  |      |

|                |                                                                 |
|----------------|-----------------------------------------------------------------|
| Success Return | < AudioIn>                                                      |
| <b>PUT</b>     |                                                                 |
| Description    | Loitering detection configuration for all video input channels. |
| Query          | None                                                            |
| Inbound Data   | <b>AudioIn</b>                                                  |
| Success Return | <b>ResponseStatus</b>                                           |
| Notes:         |                                                                 |

#### AudioIn XML Block

```
<AudioIn version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!--req, xs:string--></id>
  <MixAudioIn><!-- req, ro -->
    <enabled><!--req, xs:Boolean--></enabled>
    <audioInputType><!-- opt, xs:string--> </audioInputType>
    <highPassFilter><!--req, xs:integer;Hz--></highPassFilter>
    <noiseMargin><!--req, xs:integer;dB--></noiseMargin>
    <AutoLimitWave><!--dep,audioInputType-->
      <FBCEnable><!--req, xs:Boolean--></FBCEnable>
      <mode><!--req, xs:string--></mode>
      <filterQValue><!--req, xs:string;Oct--></filterQValue>
      <staticFilterNum><!--req, xs:integer--></staticFilterNum>
    </AutoLimitWave>
  </MixAudioIn>
  <AudioInVolumelist>
    <AudioInVlome>
      <type><!--req, xs:string;"audioOutput,audioEncode"--></type>
      <volume><!--req, xs:integer--></volume>
    </AudioInVlome>
  </AudioInVolumelist>
</AudioIn>
```

### 8.5.14 /ISAPI/System/Audio/AudioOut/channels/<ID>

| /ISAPI/System/Audio/capabilities |                                                                 | General Resource | v2.0 |
|----------------------------------|-----------------------------------------------------------------|------------------|------|
| GET                              |                                                                 |                  |      |
| Description                      | It is used to get audio capability.                             |                  |      |
| Query                            | None                                                            |                  |      |
| Inbound Data                     | None                                                            |                  |      |
| Success Return                   | < AudioOut>                                                     |                  |      |
| PUT                              |                                                                 |                  |      |
| Description                      | Loitering detection configuration for all video input channels. |                  |      |

|                |                |
|----------------|----------------|
| Query          | None           |
| Inbound Data   | AudioOut       |
| Success Return | ResponseStatus |
| Notes:         |                |

#### AudioOut XML Block

```
<AudioOut version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!--req, xs:string--></id>
  <MixAudioOut>
    <enabled><!--req, xs:Boolean--></enabled>
    <modulatorEnbale><!--req, xs:Boolean--></modulatorEnbale>
    <postFilter><!--req, xs:Boolean--></postFilter>
    <limitPressure><!--req, xs:Boolean--></limitPressure>
    <modulatorValue><!--req, xs:integer;--></modulatorValue>
    <triggerTime><!--req, xs:integer;ms--></triggerTime>
    <freeTime><!--req, xs:integer;ms--></freeTime>
    <compressThreshold><!--req, xs:integer;x--></compressThreshold>
    <compressMode><!--req, xs:string;ms--></compressMode>
    <compressRate><!--req, xs:integer;x--></compressRate>
    <recoveryGain><!--req, xs:integer;x--></recoveryGain>
    <outputGain><!--req, xs: integer --></outputGain>
  </MixAudioOut>
  <AudioOutVolumelist>
    <AudioOutVlome>
      <type><!--req, xs:string;"audioOutput,audioEncode"--></type>
      <volume><!--req, xs:integer--></volume>
    </AudioOutVlome>
  </AudioOutVolumelist>
</AudioOut>
```

## 8.6 /ISAPI/System/Serial

|                             |              |
|-----------------------------|--------------|
| /ISAPI/System/Serial        | Service v2.0 |
| Notes: Serial port service. |              |



## 8.6.1 /ISAPI/System/Serial/capabilities

| /ISAPI/System/Serial/capabilities |                                      | General Resource | v2.0 |
|-----------------------------------|--------------------------------------|------------------|------|
| GET                               |                                      |                  |      |
| Description                       | It is used to get device capability. |                  |      |
| Query                             | None                                 |                  |      |
| Inbound Data                      | None                                 |                  |      |
| Success Return                    | <SerialCap>                          |                  |      |
| Notes:                            |                                      |                  |      |

### SerialCap XML Block

```
<SerialCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <rs485PortNums> <!-- opt, xs:integer --> </rs485PortNums>
  <supportRS232Config> <!-- opt, xs:Boolean --> </supportRS232Config>
  <rs422PortNums> <!-- opt, xs:integer--> </rs422PortNums>
  <rs232PortNums> <!-- opt, xs:integer--> </rs232PortNums>
</SerialCap>
```

## 8.6.2 /ISAPI/System/Serial/ports

/ISAPI/System/Serial/ports

General Resourcev2.0

|                |                                                                     |
|----------------|---------------------------------------------------------------------|
| GET            |                                                                     |
| Description    | It is used to get the list of serial ports supported by the device. |
| Query          | None                                                                |
| Inbound Data   | None                                                                |
| Success Return | SerialPorList                                                       |

Notes:

Since serial ports are resources that are defined by the hardware configuration of the device, they cannot be created or deleted.

### SerialPortList XML Block

```
<SerialPortList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SerialPort/> <!-- opt -->
</SerialPortList>
```

## 8.6.3 /ISAPI/System/Serial/ports/<ID>

| /Serial/ports/ID                                                                 |                                                                                  | General Resource | v2.0 |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------|------|
| GET                                                                              |                                                                                  |                  |      |
| Description                                                                      | It is used to get the configuration of a serial port supported by the device.    |                  |      |
| Query                                                                            | None                                                                             |                  |      |
| Inbound Data                                                                     | None                                                                             |                  |      |
| Success Return                                                                   | SerialPort                                                                       |                  |      |
| PUT                                                                              |                                                                                  |                  |      |
| Description                                                                      | It is used to update the configuration of a serial port supported by the device. |                  |      |
| Query                                                                            | None                                                                             |                  |      |
| Inbound Data                                                                     | SerialPort                                                                       |                  |      |
| Success Return                                                                   | ResponseStatus                                                                   |                  |      |
| Notes:                                                                           |                                                                                  |                  |      |
| Access to the serial port parameters.                                            |                                                                                  |                  |      |
| <serialPortType> set the type of port; RS232, RS485, etc.                        |                                                                                  |                  |      |
| <direction> indicates whether the port is bidirectional.                         |                                                                                  |                  |      |
| <duplexMode> indicates whether the serial port runs in full or half duplex mode. |                                                                                  |                  |      |
| <workMode> is required only when serial port type is RS232                       |                                                                                  |                  |      |

### SerialPort XML Block

```
<SerialPort version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <serialPortType><!-- req, xs:string, "RS485,RS422,RS232" --></serialPortType>
  <duplexMode> <!-- req, xs:string, "half,full" --> </duplexMode>
  <direction> <!-- req, xs:string, "monodirectional,bidirectional" --> </direction>
  <baudRate><!-- req, xs:integer --></baudRate>
  <dataBits> <!-- req, xs:integer --> </dataBits>
  <parityType><!-- req, xs:string, "none,even,odd,mark,space" --> </parityType>
  <stopBits> <!-- req, xs:string, "1,1.5,2" --> </stopBits>
  <workMode> <!--dep, xs:string, "console, transparent" --> </workMode>
  <flowCtrl> <!-- req, xs:string, "none, software, hardware" --> </flowCtrl>
</SerialPort>
```

## 8.6.4 /ISAPI/System/Serial/ports/<ID>/Transparent

| /ISAPI/System/Serial/ports/ID/Transparent | General Resource v2.0 |
|-------------------------------------------|-----------------------|
|-------------------------------------------|-----------------------|

Notes: Transparent Service.

## 8.6.5 /ISAPI/System/Serial/ports/<ID>/Transparent/channels

| /ISAPI/System/Serial/ports/ID/Transparent/channels |                                                 | General Resource | v2.0 |
|----------------------------------------------------|-------------------------------------------------|------------------|------|
| GET                                                |                                                 |                  |      |
| Description                                        | It is used to get the transparent channels list |                  |      |
| Query                                              | None                                            |                  |      |
| Inbound Data                                       | None                                            |                  |      |
| Success Return                                     | TransparentChannelList                          |                  |      |
| Notes:                                             |                                                 |                  |      |

### TransparentChannelList XML Block

```
<TransparentChannelList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TransparentChannel/>    <!-- opt -->
</TransparentChannelList>
```

## 8.6.6 /ISAPI/System/Serial/ports/<ID>/Transparent/channels /<ID>

| /ISAPI/System/Serial/ports/ID/Transparent/channels/ID |                                                    | General Resource | v2.0 |
|-------------------------------------------------------|----------------------------------------------------|------------------|------|
| GET                                                   |                                                    |                  |      |
| Description                                           | It is used to get a particular transparent channel |                  |      |
| Query                                                 | None                                               |                  |      |
| Inbound Data                                          | None                                               |                  |      |
| Success Return                                        | TransparentChannel                                 |                  |      |
| PUT                                                   |                                                    |                  |      |
| Description                                           | It is used to get a particular transparent channel |                  |      |
| Query                                                 | None                                               |                  |      |
| Inbound Data                                          | TransparentChannel                                 |                  |      |
| Success Return                                        | ResponseStatus                                     |                  |      |
| Notes:                                                |                                                    |                  |      |

### TransparentChannel XML Block

```
<TransparentChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
```

```
<enabled> <!-- req, xs:boolean --> </enabled>
<serialPortID> <!--req,ro, xs:string; id --> </serialPortID>
</TransparentChannel>
```

### 8.6.7 /ISAPI/System/Serial/ports/<ID>/Transparent/channels /<ID>/open

|                                                            |                                             |                          |
|------------------------------------------------------------|---------------------------------------------|--------------------------|
| /ISAPI/System/Serial/ports/ID/Transparent/channels/ID/open |                                             | General<br>Resource v2.0 |
| PUT                                                        |                                             |                          |
| Description                                                | It is used to open the transparent channel. |                          |
| Query                                                      | None                                        |                          |
| Inbound Data                                               | None                                        |                          |
| Success Return                                             | ResponseStatus                              |                          |
| Notes:                                                     |                                             |                          |
| Only support RS485 transparent channel.                    |                                             |                          |

### 8.6.8 /ISAPI/System/Serial/ports/<ID>/Transparent/channels /<ID>/close

|                                                             |                                              |                          |
|-------------------------------------------------------------|----------------------------------------------|--------------------------|
| /ISAPI/System/Serial/ports/ID/Transparent/channels/ID/close |                                              | General Resource<br>v2.0 |
| PUT                                                         |                                              |                          |
| Description                                                 | It is used to close the transparent channel. |                          |
| Query                                                       | None                                         |                          |
| Inbound Data                                                | None                                         |                          |
| Success Return                                              | ResponseStatus                               |                          |
| Notes:                                                      |                                              |                          |

### 8.6.9 /ISAPI/System/Serial/ports/<ID>/Transparent/channels /<ID>/transData

| /ISAPI/System/Serial/ports/ID/Transparent/channels/ID/transData | General |
|-----------------------------------------------------------------|---------|
|-----------------------------------------------------------------|---------|

| Resource v2.0  |                                                     |
|----------------|-----------------------------------------------------|
| <b>GET</b>     |                                                     |
| Description    | It is used to get data on the transparent channel.  |
| Query          | None                                                |
| Inbound Data   | <b>Raw Data</b>                                     |
| Success Return | <b>ResponseStatus</b>                               |
| <b>PUT</b>     |                                                     |
| Description    | It is used to send data on the transparent channel. |
| Query          | None                                                |
| Inbound Data   | <b>Raw Data</b>                                     |
| Success Return | <b>ResponseStatus</b>                               |
| Notes:         |                                                     |

#### Example:

```
GET /ISAPI/System/Serial/ports/ID/Transparent/channels/ID/transData HTTP/1.1

HTTP/1.1 200 OK
...
Content-Type: application/binary; charset="UTF-8"
Content-Length: ISAPI
\r\n
Raw data...
```

#### Example:

```
PUT /ISAPI/System/Serial/ports/ID/Transparent/channels/ID/transData HTTP/1.1

...
Content-Type: application/binary; charset="UTF-8"
\r\n
Raw data...
```

## 8.7 /ISAPI/System/Hardware/

| /ISAPI/System/Hardware/ | Service v2.0 |
|-------------------------|--------------|
| Notes:                  |              |

### 8.7.1 /ISAPI/System/Hardware

| /ISAPI/System/Hardware | General Resource v2.0 |
|------------------------|-----------------------|
| <b>GET</b>             |                       |

|                       |                                                           |
|-----------------------|-----------------------------------------------------------|
| <b>Description</b>    | It is used to get the configurations of hardware service. |
| <b>Query</b>          | None                                                      |
| <b>Inbound Data</b>   | None                                                      |
| <b>Success Return</b> | <b>HardwareService</b>                                    |
| <b>PUT</b>            |                                                           |
| <b>Description</b>    | It is used to set the configurations of hardware service. |
| <b>Query</b>          | None                                                      |
| <b>Inbound Data</b>   | <b>HardwareService</b>                                    |
| <b>Success Return</b> | <b>ResponseStatus</b>                                     |
| <b>Notes:</b>         |                                                           |

### HardwareService XML Block

```
<HardwareService version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IrLightSwitch> <!-- opt -->
    <mode> <!-- req, xs:string,"open,close" --> </mode>
  </IrLightSwitch>
  <ABF> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
  </ABF>
  <LED> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
  </LED>
  <Defog> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
  </Defog>
</HardwareService>
```

## 8.7.2 /ISAPI/System/Hardware/IrLightSwitch

| /ISAPI/System/Hardware/irLightSwitch |                | General Resource | v2.0 |
|--------------------------------------|----------------|------------------|------|
| GET                                  |                |                  |      |
| Description                          |                |                  |      |
| Query                                | None           |                  |      |
| Inbound Data                         | None           |                  |      |
| Success Return                       | IrLightSwitch  |                  |      |
| PUT                                  |                |                  |      |
| Description                          |                |                  |      |
| Query                                | None           |                  |      |
| Inbound Data                         | IrLightSwitch  |                  |      |
| Success Return                       | ResponseStatus |                  |      |

Notes:

#### IrLightSwitch XML Block

```
<IrLightSwitch version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode> <!-- req, xs:string,"open,close" --> </mode>
</IrLightSwitch>
```

### 8.7.3 /ISAPI/System/Hardware/ABF

| /ISAPI/System/Hardware/ABF |                                             | General Resource | v2.0 |
|----------------------------|---------------------------------------------|------------------|------|
| GET                        |                                             |                  |      |
| Description                | It is used to get the configurations of ABF |                  |      |
| Query                      | None                                        |                  |      |
| Inbound Data               | None                                        |                  |      |
| Success Return             | ABF                                         |                  |      |
| PUT                        |                                             |                  |      |
| Description                | It is used to set the configurations of ABF |                  |      |
| Query                      | None                                        |                  |      |
| Inbound Data               | ABF                                         |                  |      |
| Success Return             | ResponseStatus                              |                  |      |
| Notes:                     |                                             |                  |      |

#### ABF XML Block

```
<ABF version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</ABF>
```

### 8.7.4 /ISAPI/System/Hardware/LED

| /ISAPI/System/Hardware/LED |                                             | General Resource | v2.0 |
|----------------------------|---------------------------------------------|------------------|------|
| GET                        |                                             |                  |      |
| Description                | It is used to get the configurations of LED |                  |      |
| Query                      | None                                        |                  |      |
| Inbound Data               | None                                        |                  |      |
| Success Return             | LED                                         |                  |      |
| PUT                        |                                             |                  |      |
| Description                | It is used to set the configurations of LED |                  |      |

|                |                |
|----------------|----------------|
| Query          | None           |
| Inbound Data   | LED            |
| Success Return | ResponseStatus |
| Notes:         |                |

#### LED XML Block

```
<LED version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</LED>
```

## 8.7.5 /ISAPI/System/Hardware/defog

| /ISAPI/System/Hardware/defog |                                                | General Resource | v2.0 |
|------------------------------|------------------------------------------------|------------------|------|
| GET                          |                                                |                  |      |
| Description                  | It is used to get the configurations of defog. |                  |      |
| Query                        | None                                           |                  |      |
| Inbound Data                 | None                                           |                  |      |
| Success Return               | Defog                                          |                  |      |
| PUT                          |                                                |                  |      |
| Description                  | It is used to set the configurations of defog  |                  |      |
| Query                        | None                                           |                  |      |
| Inbound Data                 | Defog                                          |                  |      |
| Success Return               | ResponseStatus                                 |                  |      |
| Notes:                       |                                                |                  |      |

#### Defog XML Block

```
<Defog version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</Defog>
```

## 8.8 ISAPI/System/dbglog

| ISAPI/System/dbglog |                          | General Resource | v2.0 |
|---------------------|--------------------------|------------------|------|
| PUT                 |                          |                  |      |
| Description         | It is used to get dbglog |                  |      |
| Query               | None                     |                  |      |
| Inbound Data        | None                     |                  |      |
| Success Return      | Opaque Data              |                  |      |
| Notes:              |                          |                  |      |



## 8.9 /ISAPI/Security

|                 |              |
|-----------------|--------------|
| /ISAPI/Security | Service v2.0 |
| Notes:          |              |

### 8.9.1 /ISAPI/Security/capabilities

|                              |                                        |
|------------------------------|----------------------------------------|
| /ISAPI/Security/capabilities | General Resource v2.0                  |
| <b>GET</b>                   |                                        |
| Description                  | It is used to get security capability. |
| Query                        | None                                   |
| Inbound Data                 | None                                   |
| Success Return               | <SecurityCap>                          |
| Notes:                       |                                        |

#### SecurityCap XML Block

```
<SecurityCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <supportUserNums> <!-- opt, xs:integer --> <supportUserNums>
  <userBondIpNums> <!-- opt, xs:integer --> <userBondIpNums>
  <userBondMacNums> <!-- opt, xs:integer --> <userBondIpNums>
  <issupIllegalLoginLock> <!-- opt, xs: Boolean,"true, false" --> <issupIllegalLoginLock>
  <isSupportOnlineUser> <!-- opt, xs: Boolean,"true,false" --> <isSupportOnlineUser>
  <isSupportAnonymous> <!-- opt, xs: Boolean,"true,false" --> <isSupportAnonymous>
</SecurityCap>
```

### 8.9.2 /ISAPI/Security/challenge

|                           |                             |
|---------------------------|-----------------------------|
| /ISAPI/Security/challenge | General Resource v2.0       |
| <b>POST</b>               |                             |
| Description               | It is used to get challenge |
| Query                     | None                        |
| Inbound Data              | <PublicKey>                 |
| Success Return            | <Challenge>                 |
| Notes:                    |                             |

#### PublicKey XML Block

```
<PublicKey version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
```

```
<key><!-- req, xs:string --></key>
</PublicKey>
```

#### Challenge XML Block

```
<Challenge version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <key><!-- req, xs:string --></key>
</Challenge>
```

### 8.9.3 /ISAPI/Security/users

| /ISAPI/Security/users                                                                                                                            |                                                    | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------|------|
| GET                                                                                                                                              |                                                    |                  |      |
| Description                                                                                                                                      | It is used to get the user list for the device.    |                  |      |
| Query                                                                                                                                            | None                                               |                  |      |
| Inbound Data                                                                                                                                     | None                                               |                  |      |
| Success Return                                                                                                                                   | UserList                                           |                  |      |
| PUT                                                                                                                                              |                                                    |                  |      |
| Description                                                                                                                                      | It is used to update the user list for the device. |                  |      |
| Query                                                                                                                                            | None                                               |                  |      |
| Inbound Data                                                                                                                                     | UserList                                           |                  |      |
| Success Return                                                                                                                                   | ResponseStatus                                     |                  |      |
| POST                                                                                                                                             |                                                    |                  |      |
| Description                                                                                                                                      | It is used to add a user for the device.           |                  |      |
| Query                                                                                                                                            | None                                               |                  |      |
| Inbound Data                                                                                                                                     | User                                               |                  |      |
| Success Return                                                                                                                                   | ResponseStatus                                     |                  |      |
| DELETE                                                                                                                                           |                                                    | Administrator    |      |
| Description                                                                                                                                      | It is used to delete the user list for the device. |                  |      |
| Query                                                                                                                                            | None                                               |                  |      |
| Inbound Data                                                                                                                                     | None                                               |                  |      |
| Success Return                                                                                                                                   | ResponseStatus                                     |                  |      |
| Notes:                                                                                                                                           |                                                    |                  |      |
| A default user account, “admin”, must be provided. Its default password is “12345”. It has an Administrator user level, and must not be deleted. |                                                    |                  |      |
| Passwords can only be uploaded - they are never revealed during GET operations.                                                                  |                                                    |                  |      |

#### UserList XML Block

```
<UserList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
```

```
<User/>    <!-- opt -->
</UserList>
```

## 8.9.4 /ISAPI/Security/users/<ID>

| /ISAPI/Security/users/ID                                           |                                                                      | General Resource v2.0 |
|--------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------|
| GET                                                                |                                                                      | Viewer                |
| Description                                                        | It is used to get a particular user configuration for the device.    |                       |
| Query                                                              | None                                                                 |                       |
| Inbound Data                                                       | None                                                                 |                       |
| Success Return                                                     | User                                                                 |                       |
| PUT                                                                |                                                                      | Administrator         |
| Description                                                        | It is used to update a particular user configuration for the device. |                       |
| Query                                                              | None                                                                 |                       |
| Inbound Data                                                       | User                                                                 |                       |
| Success Return                                                     | ResponseStatus                                                       |                       |
| DELETE                                                             |                                                                      | Administrator         |
| Description                                                        | It is used to delete a particular user for the device.               |                       |
| Query                                                              | None                                                                 |                       |
| Inbound Data                                                       | None                                                                 |                       |
| Success Return                                                     | ResponseStatus                                                       |                       |
| Notes:                                                             |                                                                      |                       |
| <id> of “admin” account is 1. “admin” account must not be deleted. |                                                                      |                       |
| <password> is a write-only field.                                  |                                                                      |                       |

### User XML Block

```
<User version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:integer, "1-16" -->    </id>
  <userName>     <!-- req, xs:string -->             </userName>
  <password>     <!-- wo, req, xs:string -->         </password>
  <bondIpAddressList>
    <bondIpAddress/>
  </bondIpAddressList>
  <bondMacAddressList>
    <bondMacAddress/>
  </bondMacAddressList>
  <userLevel> <!-- opt, xs:string, "Administrator, Operator, Viewer" --> </userLevel>
  <attribute> <!-- opt -->
    <inherent> <!--xs:boolean --> </inherent>
  </attribute>
</User>
```

#### bondIpAddress XML Block

```
< bondIpAddress>
  <id>          <!-- req, xs:integer -->      </id>
  <ipAddress>    <!-- dep, xs:string -->      </ipAddress>
  <ipv6Address>  <!-- dep, xs:string -->      </ipv6Address>
</ bondIpAddress>
```

#### bondMacAddress XML Block

```
< bondMacAddress>
  <id>          <!-- req, xs:integer -->      </id>
  <macAddress> <!-- opt, xs:string --> </macAddress>
</ bondMacAddress>
```

## 8.9.5 /ISAPI/Security/adminAccesses

| /ISAPI/Security/adminAccesses                                                |                                                                     | General Resource | v2.0 |
|------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------|------|
| GET                                                                          |                                                                     | Viewer           |      |
| Description                                                                  | It is used to get administrative access protocol for the device.    |                  |      |
| Query                                                                        | None                                                                |                  |      |
| Inbound Data                                                                 | None                                                                |                  |      |
| Success Return                                                               | AdminAccessProtocolList                                             |                  |      |
| PUT                                                                          |                                                                     | Administrator    |      |
| Description                                                                  | It is used to update administrative access protocol for the device. |                  |      |
| Query                                                                        | None                                                                |                  |      |
| Inbound Data                                                                 | AdminAccessProtocolList                                             |                  |      |
| Success Return                                                               | ResponseStatus                                                      |                  |      |
| Notes:                                                                       |                                                                     |                  |      |
| <protocol> is the protocol name for admin access, i.e. "HTTP", "HTTPS", etc. |                                                                     |                  |      |

#### AdminAccessProtocolList XML Block

```
AdminAccessProtocolList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  < AdminAccessProtocol />
</ AdminAccessProtocolList >
```

## 8.9.6 /ISAPI/Security/adminAccesses/<ID>

| /ISAPI/Security/adminAccesses/ID |  | General Resource v2.0 |
|----------------------------------|--|-----------------------|
| <b>GET</b>                       |  | <b>Viewer</b>         |

|                                                                                               |                                                                     |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>Description</b>                                                                            | It is used to get administrative access protocol for the device.    |
| <b>Query</b>                                                                                  | None                                                                |
| <b>Inbound Data</b>                                                                           | None                                                                |
| <b>Success Return</b>                                                                         | <b>AdminAccessProtocol</b>                                          |
| <b>PUT Administrator</b>                                                                      |                                                                     |
| <b>Description</b>                                                                            | It is used to update administrative access protocol for the device. |
| <b>Query</b>                                                                                  | None                                                                |
| <b>Inbound Data</b>                                                                           | <b>AdminAccessProtocol</b>                                          |
| <b>Success Return</b>                                                                         | <b>ResponseStatus</b>                                               |
| <b>Notes:</b><br><protocol> is the protocol name for admin access, i.e. "HTTP", "HTTPS", etc. |                                                                     |

#### AdminAccessProtocol XML Block

```
<AdminAccessProtocol version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string;id -->    </id>
  <protocol> <!-- req, xs:string; "HTTP, HTTPS,RTSP,DEV_MANAGE" --> </protocol>
  <portNo> <!-- req, xs:integer -->    </portNo>
</AdminAccessProtocol>
```

## 8.9.7 /ISAPI/Security/userCheck

/ISAPI/Security/userCheck

General Resource

v2.0

GET

|                |                                                   |
|----------------|---------------------------------------------------|
| Description    | It is used to check is password matche user name. |
| Query          | None                                              |
| Inbound Data   | None                                              |
| Success Return | userCheck                                         |

Notes:

userCheck is successful, the device returns HTTP 200/OK

userCheck is failed, the device returns HTTP 401/Unauthorized

The client software checks user name/password via <statusValue>. If the value is 200, it means match, otherwise, if the value is 401, it means mismatch.

#### userCheck XML Block

```
<userCheck version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <statusValue>    <!-- req, xs:integer, '200, 401' --> </statusValue>
  <statusString>    <!-- opt, xs:string, 'OK, Unauthorized --> </statusString>
```

```
<isDefaultPassword><!--opt, xs:boolean--></isDefaultPassword>
<isRiskPassword><!--opt, xs:boolean></isRiskPassword>
<isActivated><!--opt, xs:boolean></isActivated>
</userCheck>
```

## 8.9.8 /ISAPI/Security/UserPermission

| /ISAPI/Security/UserPermission                                           |                                                  | General Resource | v2.0 |
|--------------------------------------------------------------------------|--------------------------------------------------|------------------|------|
| GET                                                                      |                                                  |                  |      |
| Description                                                              | It is used to get user permission of the device. |                  |      |
| Query                                                                    | None                                             |                  |      |
| Inbound Data                                                             | None                                             |                  |      |
| Success Return                                                           | UserPermissionList                               |                  |      |
| PUT                                                                      |                                                  |                  |      |
| Description                                                              | It is used to set user permission of the device. |                  |      |
| Query                                                                    | None                                             |                  |      |
| Inbound Data                                                             | UserPermissionList                               |                  |      |
| Success Return                                                           | ResponseStatus                                   |                  |      |
| Notes:                                                                   |                                                  |                  |      |
| only the user “admin” has the right to review or edit user’s permission. |                                                  |                  |      |

### UserPermissionList XML Block

```
<UserPermissionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <UserPermission/> <!-- opt -->
</UserPermissionList>
```

## 8.9.9 /ISAPI/Security/UserPermission/<ID>

| /ISAPI/Security/UserPermission/ID |                                                  | General Resource | v2.0 |
|-----------------------------------|--------------------------------------------------|------------------|------|
| GET                               |                                                  |                  |      |
| Description                       | It is used to get a particular user’s permission |                  |      |
| Query                             | None                                             |                  |      |
| Inbound Data                      | None                                             |                  |      |
| Success Return                    | UserPermission                                   |                  |      |
| PUT                               |                                                  |                  |      |
| Description                       | It is used to set a particular user’s permission |                  |      |
| Query                             | None                                             |                  |      |
| Inbound Data                      | UserPermission                                   |                  |      |

| Success Return                                                                                                                                                                                                                                                                                                                                                                                                          | ResponseStatus |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Notes:</b><br><br><userID> links the user permission to a user, see /ISAPI/Security/AAA/users/ID.<br><userType> The type value of the user, which can be 'admin', 'operator' or 'viewer'. 'admin' is the administrator of the IPMD, it have all permissions. 'operator' and 'viewer' have default permission policy. The default permission policy can be edited by providing <localPermission>, <remotePermission>. |                |

#### UserPermission XML Block

```
<UserPermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!--req, xs:string !--> </id>
  <userID> <!--req, xs:string; id --> </userID>
  <userType> <!-- req, xs:string, "admin, operator, viewer"--> </userType>\
  <localPermission/> <!-- opt -->
  <remotePermission/> <!-- opt -->
</UserPermission>
```

### 8.9.10 /ISAPI/Security/UserPermission/<ID>/localPermission

| /ISAPI/Security/UserPermission/ID/localPermission |                                                        | General Resource | v2.0 |
|---------------------------------------------------|--------------------------------------------------------|------------------|------|
| GET                                               |                                                        |                  |      |
| Description                                       | It is used to get a particular user’s local permission |                  |      |
| Query                                             | None                                                   |                  |      |
| Inbound Data                                      | None                                                   |                  |      |
| Success Return                                    | localPermission                                        |                  |      |
| PUT                                               |                                                        |                  |      |
| Description                                       | It is used to set a particular user’s local permission |                  |      |
| Query                                             | None                                                   |                  |      |
| Inbound Data                                      | localPermission                                        |                  |      |
| Success Return                                    | ResponseStatus                                         |                  |      |
| Notes:                                            |                                                        |                  |      |

#### localPermission XML Block

```
<localPermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <backup> <!-- opt, xs:boolean --> </backup>
  <record> <!-- opt, xs:boolean --> </record>
  <playBack> <!-- opt, xs:boolean --> </playBack>
  <videoChannelPermissionList> <!-- opt -->
```

```

<videoChannelPermission> <!-- opt -->
  <id> <!-- req, must correspond to the video input channel id --> </id>
  <playBack> <!-- opt, xs:boolean --> </playBack>
  <record> <!-- opt, xs:boolean --> </record>
  <backup> <!-- opt, xs:boolean --> </backup>
</videoChannelPermission>
</videoChannelPermissionList>
<ptzControl> <!-- req, xs:boolean --> </ptzControl>
<ptzChannelPermissionList> <!-- opt -->
  <ptzChannelPermission> <!-- req -->
    <id> <!-- req, must correspond to ptz id, see /ISAPI/PTZCtrl/channels/ID--> </id>
    <ptzControl> <!-- opt, xs:boolean --> </ptzControl>
  </ptzChannelPermission>
</ptzChannelPermissionList>
<logOrStateCheck> <!-- opt, xs:boolean --> </logOrStateCheck>
<parameterConfig> <!-- opt, xs:boolean --> </parameterConfig>
<restartOrShutdown> <!-- opt, xs:boolean --> </restartOrShutdown>
<upgrade> <!-- opt, xs:boolean --> </upgrade>
</localPermission>

```

### 8.9.11 /ISAPI/Security/UserPermission/<ID>/remotePermission

| /ISAPI/Security/UserPermission/ID/remotePermission |                                                         | General Resource | v2.0 |
|----------------------------------------------------|---------------------------------------------------------|------------------|------|
| GET                                                |                                                         |                  |      |
| Description                                        | It is used to get a particular user’s remote permission |                  |      |
| Query                                              | None                                                    |                  |      |
| Inbound Data                                       | None                                                    |                  |      |
| Success Return                                     | remotePermission                                        |                  |      |
| PUT                                                |                                                         |                  |      |
| Description                                        | It is used to set a particular user’s remote permission |                  |      |
| Query                                              | None                                                    |                  |      |
| Inbound Data                                       | remotePermission                                        |                  |      |
| Success Return                                     | ResponseStatus                                          |                  |      |
| Notes:                                             |                                                         |                  |      |

#### remotePermission XML Block

```

<remotePermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <record> <!-- opt, xs:boolean --> </record>
  <playBack> <!-- opt, xs:boolean --> </playBack>

```



```

<preview> <!-- opt, xs:boolean --> </preview>
<videoChannelPermissionList> <!-- opt -->
  <videoChannelPermission> <!-- opt -->
    <id> <!-- req, must correspond to the video input channel id --> </id>
    <preview> <!-- opt, xs:boolean --> </preview>
    <palyBack> <!-- opt, xs:boolean --> </palyBack>
    <record> <!--opt, xs:Boolean --> </record>
  </videoChannelPermission>
</videoChannelPermissionList>
<ptzControl> <!-- opt, xs:boolean --> </ptzControl>
<ptzChannelPermissionList> <!-- opt -->
  <ptzChannelPermission> <!-- opt -->
    <id> <!--req, must correspond to ptz id, see /ISAPI/PTZCtrl/channels/ID--> </id>
    <ptzControl> <!-- opt, xs:boolean --> </ptzControl>
  </ptzChannelPermission>
</ptzChannelPermissionList>
<logOrStateCheck> <!-- opt, xs:boolean --> </logOrStateCheck>
<parameterConfig> <!--opt, xs:boolean --> </parameterConfig>
<restartOrShutdown> <!--opt, xs:boolean --> </restartOrShutdown>
<upgrade> <!--opt, xs:boolean --> </upgrade>
<voiceTalk> <!--opt, xs:boolean --> </voiceTalk>
<transParentChannel> <!--opt, xs:boolean --> <transParentChannel>
<contorlLocalOut> <!-- opt, xs:boolean --> </contorlLocalOut>
<alarmOutOrUpload> <!-- opt, xs:boolean --> </alarmOutOrUpload>
</remotePermission>

```

## 8.9.12 /ISAPI/Security/UserPermission/anonymouslogin

| /ISAPI/Security/UserPermission/anonymouslogin                    |                                             | General Resource | v2.0 |
|------------------------------------------------------------------|---------------------------------------------|------------------|------|
| GET                                                              |                                             |                  |      |
| Description                                                      | Access and configure the user’s permission. |                  |      |
| Query                                                            | None                                        |                  |      |
| Inbound Data                                                     | None                                        |                  |      |
| Success Return                                                   | anonymouslogin                              |                  |      |
| PUT                                                              |                                             |                  |      |
| Description                                                      | Access and configure the user’s permission. |                  |      |
| Query                                                            | None                                        |                  |      |
| Inbound Data                                                     | anonymouslogin                              |                  |      |
| Success Return                                                   | ResponseStatus                              |                  |      |
| Notes:                                                           |                                             |                  |      |
| Anonymouslogin owns corresponding privilege of interfaces below: |                                             |                  |      |

/ISAPI/Streaming/channels is used to get the resolution  
 /ISAPI/Security/userCheck  
 /ISAPI/System/Network/interfaces and /ISAPI/System/Network/UPnP/ports/status  
 /ISAPI/Security/adminAccesses

#### anonymouslogin XML Block

```
<anonymouslogin version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>                                <!-- req, xs:boolean --> </enabled>
</anonymouslogin>
```

### 8.9.13 /ISAPI/Security/UserPermission/operatorCap

| /ISAPI/Security/UserPermission/operatorCap |                                                     | General Resource | v2.0 |
|--------------------------------------------|-----------------------------------------------------|------------------|------|
| GET                                        |                                                     |                  |      |
| Description                                | It is used to get default capabilities of operator. |                  |      |
| Query                                      | None                                                |                  |      |
| Inbound Data                               | None                                                |                  |      |
| Success Return                             | UserPermissionCap                                   |                  |      |
| Notes:                                     |                                                     |                  |      |

#### UserPermissionCap XML Block

```
<UserPermissionCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <userType> <!-- req, xs:string, "admin, operator, viewer" --> </userType>
  <localPermissionCap> <!-- opt -->
  </localPermissionCap>
  <remotePermissionCap> <!-- opt -->
  </remotePermissionCap>
</UserPermissionCap>
```

### 8.9.14 /ISAPI/Security/UserPermission/viewerCap

| /ISAPI/Security/UserPermission/viewerCap |                                                   | General Resource | v2.0 |
|------------------------------------------|---------------------------------------------------|------------------|------|
| GET                                      |                                                   |                  |      |
| Description                              | It is used to get default capabilities of viewer. |                  |      |
| Query                                    | None                                              |                  |      |
| Inbound Data                             | None                                              |                  |      |
| Success Return                           | UserPermissionCap                                 |                  |      |
| Notes:                                   |                                                   |                  |      |

## 8.9.15 /ISAPI/Security/deviceCertificate

| /ISAPI/Security/deviceCertificate                               |                                                                                                                                                            | General Resource | v2.0 |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------|
| GET                                                             |                                                                                                                                                            |                  |      |
| Description                                                     | This function is used to upload a user certificate to the device. The user certificate is used for 802.1x (radius) with various authentication mechanisms. |                  |      |
| Query                                                           | None                                                                                                                                                       |                  |      |
| Inbound Data                                                    | None                                                                                                                                                       |                  |      |
| Success Return                                                  | Data                                                                                                                                                       |                  |      |
| PUT                                                             |                                                                                                                                                            |                  |      |
| Description                                                     | This function is used to upload a user certificate to the device. The user certificate is used for 802.1x (radius) with various authentication mechanisms. |                  |      |
| Query                                                           | None                                                                                                                                                       |                  |      |
| Inbound Data                                                    | Data                                                                                                                                                       |                  |      |
| Success Return                                                  | ResponseStatus                                                                                                                                             |                  |      |
| Notes:                                                          |                                                                                                                                                            |                  |      |
| The format of the certificate is device-dependent.              |                                                                                                                                                            |                  |      |
| Distinguish different certificate by Content-type:              |                                                                                                                                                            |                  |      |
| CA- certificate (root certificate ): application/x-x509-ca-cert |                                                                                                                                                            |                  |      |
| Clent certificate: application/x-x509-client-cert               |                                                                                                                                                            |                  |      |
| Clent password : application/x-x509-client-key                  |                                                                                                                                                            |                  |      |

## 8.9.16 /ISAPI/Security/webCertificate

| /ISAPI/Security/webCertificate |                                                        | General Resource v2.0 |
|--------------------------------|--------------------------------------------------------|-----------------------|
| GET                            |                                                        | Administrator         |
| Description                    | It is used to get the certificate type of webservice.  |                       |
| Query                          | None                                                   |                       |
| Inbound Data                   | None                                                   |                       |
| Success Return                 | WebCertificate                                         |                       |
| PUT                            |                                                        | Administrator         |
| Description                    | It is used to set the certificate type of webservice . |                       |
| Query                          | None                                                   |                       |
| Inbound Data                   | WebCertificate                                         |                       |
| Success Return                 | ResponseStatus                                         |                       |
| Notes:                         |                                                        |                       |

### WebCertificate XML Block

```
< WebCertificate version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <CertificateType>    <!-- req, xs:string, basic, digest -->  </CertificateType>
```

</ WebCertificate >

## 8.9.17 /ISAPI/Security/serverCertificate/certificate

| /ISAPI/Security/serverCertificate/certificate |                                                                           | General Resource v2.0 |
|-----------------------------------------------|---------------------------------------------------------------------------|-----------------------|
| GET                                           |                                                                           | Administrator         |
| Description                                   | This function is used to get a certificate information of the device.     |                       |
| Query                                         | None                                                                      |                       |
| Inbound Data                                  | None                                                                      |                       |
| Success Return                                | CertificateInfo                                                           |                       |
| PUT                                           |                                                                           | Administrator         |
| Description                                   | This function is used to upload a certificated certificate to the device. |                       |
| Query                                         | None                                                                      |                       |
| Inbound Data                                  | Data                                                                      |                       |
| Success Return                                | ResponseStatus                                                            |                       |
| DELETE                                        |                                                                           | Administrator         |
| Description                                   | This function is used to delete the installed certificate of the device.  |                       |
| Query                                         | None                                                                      |                       |
| Inbound Data                                  | None                                                                      |                       |
| Success Return                                | ResponseStatus                                                            |                       |
| Notes:                                        |                                                                           |                       |

### CertificateInfo XML Block

```
<CertificateInfo version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <version><!-- opt, xs:string --> </version>
  <IssuerDN/> <!-- req, isapi:DN>
  <SubjectDN/> <!-- req, isapi:DN>
  <signatureAlgorithm> <!-- req, xs:string, RSA_3, RSA_F4--> </signatureAlgorithm>
  <keyAlgorithm> <!-- opt, xs:string --> </keyAlgorithm>
  <startDate> <!-- req, xs:time, ISO8601 time --> </startDate>
  <endDate> <!-- req, xs:time, ISO8601 time --> </endDate>
  <serialNumber> <!-- req, xs:string,uuid --> </serialNumber>
</CertificateInfo>
```

### DN XML Block

```
<countryName> <!-- req, xs:string --> </countryName>
<stateOrProvinceName> <!-- opt, xs:string --> </stateOrProvinceName>
<localityName> <!-- opt, xs:string --> </localityName>
<organizationName> <!-- opt, xs:string --> </organizationName>
```

```
<organizationUnitName> <!-- opt, xs:string --> </organizationUnitName>
<commonName> <!-- req, xs:string --> </commonName>
<email> <!-- opt, xs:string --> </email>
```

### 8.9.18 /ISAPI/Security/serverCertificate/selfSignCert

| /ISAPI/Security/serverCertificate/selfSignCert |                                                                              | General Resource | v2.0 |
|------------------------------------------------|------------------------------------------------------------------------------|------------------|------|
| PUT                                            |                                                                              | Administrator    |      |
| Description                                    | This function is used to create a new self-signed certificate of the device. |                  |      |
| Query                                          | None                                                                         |                  |      |
| Inbound Data                                   | CertificateReq                                                               |                  |      |
| Success Return                                 | ResponseStatus                                                               |                  |      |
| Notes:                                         |                                                                              |                  |      |
| passwd: password to protect private key        |                                                                              |                  |      |
| validity: validity days                        |                                                                              |                  |      |

#### CertificateReq XML Block

```
<CertificateReq version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id> <!-- req, xs:string --> </id>
<SubjectDN/> <!-- req, isapi:DN>
<validity> <!--opt, xs:int,1-5000 --> </validity>
<passwd> <!-- opt, xs:string --> </passwd>
</CertificateReq>
```

### 8.9.19 /ISAPI/Security/serverCertificate/certSignReq

| /ISAPI/Security/serverCertificate/certSignReq |                                                                                             | General Resource v2.0 |
|-----------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------|
| <b>GET</b>                                    |                                                                                             | <b>Administrator</b>  |
| <b>Description</b>                            | This function is used to get the certificate sinagure request information.                  |                       |
| <b>Query</b>                                  | None                                                                                        |                       |
| <b>Inbound Data</b>                           | None                                                                                        |                       |
| <b>Success Return</b>                         | <b>certificateReqInfo</b>                                                                   |                       |
| <b>PUT</b>                                    |                                                                                             | <b>Administrator</b>  |
| <b>Description</b>                            | This function is used to Create a new PKCS #10 certificate signature request of the device. |                       |
| <b>Query</b>                                  | None                                                                                        |                       |
| <b>Inbound Data</b>                           | <b>certificateReq</b>                                                                       |                       |
| <b>Success Return</b>                         | <b>ResponseStatus</b>                                                                       |                       |
| <b>DELETE</b>                                 |                                                                                             | <b>Administrator</b>  |
| <b>Description</b>                            | This function is used to delete the PKCS #10 certificate signature.                         |                       |

|                |                       |
|----------------|-----------------------|
| Query          | None                  |
| Inbound Data   | None                  |
| Success Return | <b>ResponseStatus</b> |
| Notes:         |                       |

#### CertificateReqInfo XML Block

```
<CertificateReqInfo version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string -->    </id>
  <SubjectDN/> <!-- req, isapi:DN -->
  <version><!-- opt, xs:string -->    </version>
  <keyAlgorithm>    <!-- opt, xs:string -->    </keyAlgorithm>
  <passwd> <!-- opt, xs:string --> </passwd>
</CertificateReqInfo>
```

## 8.9.20 /ISAPI/Security/serverCertificate/downloadCertSignReq

| /ISAPI/Security/serverCertificate/downloadCertSignReq                                                          |                                                                      | General Resource |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------|
| GET                                                                                                            |                                                                      | Administrator    |
| Description                                                                                                    | This function is used to request download the certificate signature. |                  |
| Query                                                                                                          | None                                                                 |                  |
| Inbound Data                                                                                                   | None                                                                 |                  |
| Success Return                                                                                                 | Data                                                                 |                  |
| Notes:                                                                                                         |                                                                      |                  |
| The returned data shall be either formatted exactly as specified in [PKCS#10] or PEM encoded [PKCS#10] format. |                                                                      |                  |

## 8.9.21 /ISAPI/Security/previewLinkNum

| /ISAPI/Security/previewLinkNum |                                                                       | General Resource v2.0 |
|--------------------------------|-----------------------------------------------------------------------|-----------------------|
| <b>GET</b>                     |                                                                       | <b>Viewer</b>         |
| Description                    | It is used to get the maximum number of connections of the device.    |                       |
| Query                          | None                                                                  |                       |
| Inbound Data                   | None                                                                  |                       |
| Success Return                 | PreviewLinkNum                                                        |                       |
| <b>PUT</b>                     |                                                                       | <b>Administrator</b>  |
| Description                    | It is used to update the maximum number of connections of the device. |                       |
| Query                          | None                                                                  |                       |
| Inbound Data                   | PreviewLinkNum                                                        |                       |

|                |                |
|----------------|----------------|
| Success Return | ResponseStatus |
| Notes:         |                |

#### PreviewLinkNum XML Block

```
<PreviewLinkNum version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <maxLinkNum>          <!-- req, xs:integer -->          </maxLinkNum>
</PreviewLinkNum>
```

## 8.9.22 /ISAPI/Security/illegalLoginLock

| /ISAPI/Security/illegalLoginLock |                                                                   | General Resource | v2.0 |
|----------------------------------|-------------------------------------------------------------------|------------------|------|
| GET                              |                                                                   |                  |      |
| Description                      | It is used to get the configurations of <b>illegalLoginLock</b> . |                  |      |
| Query                            | None                                                              |                  |      |
| Inbound Data                     | None                                                              |                  |      |
| Success Return                   | IllegalLoginLock                                                  |                  |      |
| PUT                              |                                                                   |                  |      |
| Description                      | It is used to set the configurations of <b>illegalLoginLock</b>   |                  |      |
| Query                            | None                                                              |                  |      |
| Inbound Data                     | IllegalLoginLock                                                  |                  |      |
| Success Return                   | <b>ResponseStatus</b>                                             |                  |      |
| Notes:                           |                                                                   |                  |      |

#### IllegalLoginLock XML Block

```
<IllegalLoginLock version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled opt="true,false" def="true">true</enabled>
</IllegalLoginLock>
```

## 8.9.23 /ISAPI/Security/onlineUser

| /ISAPI/Security/onlineUser |                                     | General Resource | v2.0 |
|----------------------------|-------------------------------------|------------------|------|
| GET                        |                                     | Viewer           |      |
| Description                | It is used to get Online User Info. |                  |      |
| Query                      | None                                |                  |      |
| Inbound Data               | None                                |                  |      |
| Success Return             | OnlineUser                          |                  |      |
| Notes:                     |                                     |                  |      |

### OnlineUser XML Block

```
<OnlineUserList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <OnlineUser>
    <id><!-- req, xs:string --></id>
    <name><!--opt,xs:string,--></name>
    <type><!--opt,xs:string,"admin,operator,viewer"--></type>
    <loginTime><!--opt,xs:time, ISO8601 time --></loginTime>
    <clientAddress>
      <ipAddress>    <!-- opt, xs:string -->    </ipAddress>
      <ipv6Address>  <!-- opt, xs:string -->    </ipv6Address>
    </clientAddress>
  </OnlineUser>
</OnlineUserList>
```

## 8.10 /ISAPI/Streaming

|                  |         |      |
|------------------|---------|------|
| /ISAPI/Streaming | Service | v2.0 |
| Notes:           |         |      |

### 8.10.1 /ISAPI/Streaming/status

|                                                                    |                                              |                  |      |
|--------------------------------------------------------------------|----------------------------------------------|------------------|------|
| /ISAPI/Streaming/status                                            |                                              | General Resource | v2.0 |
| GET                                                                |                                              |                  |      |
| Description                                                        | It is used to get a device streaming status. |                  |      |
| Query                                                              | None                                         |                  |      |
| Inbound Data                                                       | None                                         |                  |      |
| Success Return                                                     | StreamingStatus                              |                  |      |
| Notes:                                                             |                                              |                  |      |
| This command accesses the status of all device streaming sessions. |                                              |                  |      |

### StreamingStatus XML Block

```
<StreamingStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <totalStreamingSessions>    <!-- req, xs:integer -->    </totalStreamingSessions>
  <StreamingSessionStatusList/>    <!-- dep, only if there are sessions -->
</StreamingStatus>
```



## 8.10.2 /ISAPI/Streaming/channels

| /ISAPI/Streaming/channels                                                                                                                                                                                                                                                                    |                                                                           | General Resource | v2.0 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                          |                                                                           |                  |      |
| Description                                                                                                                                                                                                                                                                                  | It is used to get the properties of streaming channels for the device.    |                  |      |
| Query                                                                                                                                                                                                                                                                                        | None                                                                      |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                 | None                                                                      |                  |      |
| Success Return                                                                                                                                                                                                                                                                               | StreamingChannelList                                                      |                  |      |
| PUT                                                                                                                                                                                                                                                                                          |                                                                           |                  |      |
| Description                                                                                                                                                                                                                                                                                  | It is used to update the properties of streaming channels for the device. |                  |      |
| Query                                                                                                                                                                                                                                                                                        | None                                                                      |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                 | StreamingChannelList                                                      |                  |      |
| Success Return                                                                                                                                                                                                                                                                               | ResponseStatus                                                            |                  |      |
| POST                                                                                                                                                                                                                                                                                         |                                                                           |                  |      |
| Description                                                                                                                                                                                                                                                                                  | It is used to add a streaming channel for the device.                     |                  |      |
| Query                                                                                                                                                                                                                                                                                        | None                                                                      |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                 | StreamingChannel                                                          |                  |      |
| Success Return                                                                                                                                                                                                                                                                               | ResponseStatus                                                            |                  |      |
| DELETE                                                                                                                                                                                                                                                                                       |                                                                           |                  |      |
| Description                                                                                                                                                                                                                                                                                  | It is used to delete the list of streaming channels for the device.       |                  |      |
| Query                                                                                                                                                                                                                                                                                        | None                                                                      |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                 | None                                                                      |                  |      |
| Success Return                                                                                                                                                                                                                                                                               | ResponseStatus                                                            |                  |      |
| Notes:                                                                                                                                                                                                                                                                                       |                                                                           |                  |      |
| Streaming channels may be hardwired, or it may be possible to create multiple streaming channels per input if the device supports it. To determine whether it is possible to dynamically create streaming channels, check the defined HTTP methods in /ISAPI/Streaming/channels/description. |                                                                           |                  |      |

### StreamingChannelList XML Block

```
<StreamingChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <StreamingChannel/>  <!-- opt -->
</StreamingChannelList>
```

## 8.10.3 /ISAPI/Streaming/channels/<ID>

| /ISAPI/Streaming/channels/ID | General Resource v2.0 |
|------------------------------|-----------------------|
|------------------------------|-----------------------|

| GET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | It is used to get the properties of a particular streaming channel for the device.    |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | None                                                                                  |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | None                                                                                  |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>StreamingChannel</b>                                                               |
| PUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                       |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | It is used to update the properties of a particular streaming channel for the device. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | None                                                                                  |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>StreamingChannel</b>                                                               |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>ResponseStatus</b>                                                                 |
| DELETE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                       |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | It is used to delete a particular streaming channel for the device.                   |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | None                                                                                  |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | None                                                                                  |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>ResponseStatus</b>                                                                 |
| <p><b>Notes:</b></p> <p>To support multi video input devices , the streaming ID in URL should be indicate video input channel number , so it is defined as : straming-Id + video-input-Id *100, for example :<br/>           /Streaming/channels/101 indicates the first streaming from the first video input<br/>           /Streaming/channels/202 indicates the second streaming from the second video input</p> <p>For IPC, becouse of only one video input, case is simeple, it can accecpt 1 as the main stream id , 2 as the sub-stream.</p> <p>&lt;ControlProtocolList&gt; identifies the control protocols that are valid for this type of streaming.<br/>           &lt;Unicast&gt; is for direct unicast streaming.<br/>           &lt;Multicast&gt; is for direct multicast streaming.<br/>           &lt;videoSourcePortNo&gt; and &lt;audioSourcePortNo&gt; are the source port numbers for the outbound video or audio streams.<br/>           &lt;videoInputChannelID&gt; refers to /ISAPI/System/Video/inputs/channel/ID.<br/>           &lt;audioInputChannelID&gt; refers to /ISAPI/System/Audio/channels/ID. It must be configured as an input channel.</p> <p>Use of IPv4 or IPv6 addresses depends on the value of the &lt;ipVersion&gt; field in /ISAPI/System/Network/interfaces/ID/ipAddress.</p> <p>&lt;Security&gt; determines whether SRTP is used for stream encryption.<br/>           &lt;audioResolution&gt; is the resolution for the outbound audio stream in bits.</p> <p>voiceChanger: voice change</p> |                                                                                       |

## StreamingChannel XML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <channelName> <!-- req, xs:string --> </channelName>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <Transport> <!-- req -->
    <maxPacketSize> <!-- opt, xs:integer --> </maxPacketSize>
    <audioPacketLength> <!-- opt, xs:integer --> </audioPacketLength>
    <audioInboundPacketLength> <!-- opt, xs:integer --> </audioInboundPacketLength>
    <audioInboundPortNo> <!-- opt, xs:integer --> </audioInboundPortNo>
    <videoSourcePortNo> <!-- opt, xs:integer --> </videoSourcePortNo>
    <audioSourcePortNo> <!-- opt, xs:integer --> </audioSourcePortNo>
    <ControlProtocolList> <!-- req -->
      <ControlProtocol>
        <!-- req -->
        <streamingTransport>
          <!-- req, xs:string, "HTTP,RTSP,SHTTP" -->
          </streamingTransport>
        </ControlProtocol>
      </ControlProtocolList>
    <Unicast> <!-- opt -->
      <enabled> <!-- req, xs:boolean --> </enabled>
      <interfaceID> <!-- opt, xs:string --> </interfaceID>
      <rtpTransportType>
        <!-- opt, xs:string, "RTP/UDP,RTP/TCP" -->
        </rtpTransportType>
      </Unicast>
    <Multicast> <!-- opt -->
      <enabled> <!-- req, xs:boolean --> </enabled>
      <userTriggerThreshold> <!-- opt, xs:integer --> </userTriggerThreshold>
      <destIPAddress> <!-- dep, xs:string --> </destIPAddress>
      <videoDestPortNo> <!-- opt, xs:integer --> </videoDestPortNo>
      <audioDestPortNo> <!-- opt, xs:integer --> </audioDestPortNo>
      <destIPv6Address> <!-- dep, xs:string --> </destIPv6Address>
      <ttl> <!-- opt, xs:integer --> </ttl>
    </Multicast>
    <Security>
      <!-- opt -->
      <enabled> <!-- req, xs:boolean --> </enabled>
    </Security>
  </Transport>
  <Video>
    <!-- opt -->
```

```

<enabled><!-- req, xs:boolean --></enabled>
<videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
<videoCodecType>
  <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,MPNG,SVAC" -->
</videoCodecType>
<videoScanType>
  <!-- opt, xs:string, "progressive,interlaced" -->
</videoScanType>
<videoResolutionWidth>    <!-- req, xs:integer -->    </videoResolutionWidth>
<videoResolutionHeight>    <!-- req, xs:integer -->    </videoResolutionHeight>
<videoResolutionName>
  <!-- opt, xs:string, "3MP,5MP,none" -->
</videoResolutionName>
<videoPositionX>    <!-- opt, xs:integer -->    </videoPositionX>
<videoPositionY>    <!-- opt, xs:integer -->    </videoPositionY>
<videoQualityControlType>
  <!-- opt, xs:string, "CBR,VBR" -->
</videoQualityControlType>
<constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
<fixedQuality><!-- opt, xs:integer, percentage, 0..100 -->    </fixedQuality>
<vbrUpperCap>    <!-- dep, xs:integer, in kbps -->    </vbrUpperCap>
<vbrLowerCap>    <!-- dep, xs:integer, in kbps -->    </vbrLowerCap>
<maxFrameRate>    <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
<keyFrameInterval> <!-- opt, xs:integer, milliseconds -->    </keyFrameInterval>
<rotationDegree>    <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
<mirrorEnabled>    <!-- opt, xs:boolean -->    </mirrorEnabled>
<snapshotImageType>
  <!-- opt, xs:string, "JPEG,GIF,PNG" -->
</snapshotImageType>
<Mpeg4Profile> <!-- dep, xs:string, "SP,ASP" --> </Mpeg4Profile>
<H264Profile>
  <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H264Profile>
<SVACProfile>
  <!-- dep, xs:string, "Baseline,Main,High,Extended" -->
</SVACProfile>
<GovLength> <!--opt, xs:integer --> </GovLength>
<SVC>
  <enabled>    <!-- req, xs:boolean -->    </enabled>
  <SVCMMode>    <!--dep, xs:string, "manual,auto" -->    </SVCMMode>
</SVC>
<smoothing>    <!-- opt, xs:integer -->    </smoothing>
<SmartCodec><!-- dep, -->

```

```

        <enabled> <!-- req, xs:boolean --> </enabled>
    </SmartCodec>
    <vbrAverageCap> <!-- dep, xs:integer, in kbps , --> </vbrAverageCap>
</Video>
<Audio>
    <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <audioInputChannelID> <!-- req, xs:string;id --> </audioInputChannelID>
    <audioCompressionType>
        <!-- req, xs:string,
        "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM, MP2L2"
        -->
    </audioCompressionType>
    <audioInboundCompressionType>
        <!-- opt, xs:string,
        "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"
        -->
    </audioInboundCompressionType>
    <audioBitRate> <!-- opt, xs:integer, in kbps --> </audioBitRate>
    <audioSamplingRate> <!-- opt, xs:float, in kHz --> </audioSamplingRate>
    <audioResolution> <!-- opt, xs:integer, in bits --> </audioResolution>
    <VoiceChanger><!--opt, xs:integer, -12..0..12, -->
        <enabled><!-- req, xs:boolean --></enabled>
        <level><!--req, xs:integer, "-12..12"--></level>
    </VoiceChanger>
</Audio>
<enableCABAC> <!-- opt, xs: boolean --> <enableCABAC>
<subStreamRecStatus> <!-- opt, xs: boolean --> </subStreamRecStatus>
</StreamingChannel>

```

### Example: Getting Streaming Channel Properties

The following is an example of a GET on the streaming parameters of a particular channel that has been preconfigured by the IP media device. Depending on the device, some streaming channels may be already preconfigured or the device while other may require that channels be manually configured before use.

```

GET /ISAPI/Streaming/channels/444 HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: ISAPI

<?xml version="1.0" encoding="UTF-8"?>

```

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>444</id>
  <channelName>Input 1 MPEG-4 ASP</channelName>
  <enabled>true</enabled>
  <Transport>
    <rtspPortNo>554</rtspPortNo>
    <maxPacketSize>1446</maxPacketSize>
    <ControlProtocolList>
      <ControlProtocol>
        <streamingTransport>RTSP</streamingTransport>
      </ControlProtocol>
      <ControlProtocol>
        <streamingTransport>HTTP</streamingTransport>
      </ControlProtocol>
    </Transport>
  <Video>
    <enabled>true</enabled>
    <videoInputChannelID>2</videoInputChannelID>
    <videoCodecType>MPEG4</videoCodecType>
    <videoScanType>progressive</videoScanType>
    <videoResolutionWidth> 640</videoResolutionWidth>
    <videoResolutionHeight>480</videoResolutionHeight>
    <videoPositionX>0</videoPositionX>
    <videoPositionY>0</videoPositionY>
    <videoQualityControlType>CBR</videoQualityControlType>
    <constantBitRate>2000</constantBitRate>
    <maxFrameRate>2500</maxFrameRate>
    <keyFrameInterval>1000</keyFrameInterval>
    <rotationDegree>0</rotationDegree>
    <mirrorEnabled>false</mirrorEnabled>
    <snapShotImageType>JPEG</snapShotImageType>
  </Video>
  <Audio>
    <enabled>false</enabled>
    <audioInputChannelID>2</audioInputChannelID>
    <audioCompressionType> G.726</audioCompressionType>
    <audioBitRate>24</audioBitRate>
    <audioSamplingRate>8</audioSamplingRate>
  </Audio>
</StreamingChannel>
```

**Example: Getting Streaming Capabilities**

GET /ISAPI/Streaming/channels/444/capabilities HTTP/1.1

...

HTTP/1.1 200 OK

Content-Type: application/xml; charset="UTF-8"

Content-Length: ISAPI

```
<?xml version="1.0" encoding="UTF-8"?>
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id opt="111,222,333,444">444</id>
  <channelName min="0" max="64">Input 1 MPEG-4 ASP</channelName>
  <enabled opt="true,false" def="true">true</enabled>
  <Transport>
    <rtspPortNo min="0" max="65535" def="554">554</rtspPortNo>
    <maxPacketSize min="0" max="1500">1446</maxPacketSize>
    <audioPacketLength min="0" max="5000"/>
    <audioInboundPacketLength min="0" max="5000"/>
    <audioInboundPortNo min="0" max="65535"/>
    <videoSourcePortNo min="0" max="65535"/>
    <audioSourcePortNo min="0" max="65535"/>
    <ControlProtocolList>
      <ControlProtocol>
        <streamingTransport opt="RTSP/RTP,HTTP">RTSP</streamingTransport>
      </ControlProtocol>
      <ControlProtocol>
        <streamingTransport opt="RTSP/RTP,HTTP">HTTP</streamingTransport>
      </ControlProtocol>
    </ControlProtocolList>
    <Unicast>
      <enabled opt="true,false" def="false"/>
      <rtspTransportType opt="RTP/UDP,RTP/TCP"/>
    </Unicast>
    <Multicast>
      <enabled opt="true,false" def="false"/>
      <userTriggerThreshold/>
      <videoDestPortNo min="0" max="65535"/>
      <audioDestPortNo min="0" max="65535"/>
      <destIPAddress min="8" max="16"/>
      <destIPv6Address min="15" max="39"/>
      <ttl min="0" max="127" def="1"/>
    </Multicast>
    <Security>
      <enabled opt="true,false" def="false"/>
    </Security>
  </Transport>
</StreamingChannel>
```

```

</Transport>
<Video>
  <enabled opt="true,false">true</enabled>
  <videoInputChannelID opt="1,2,3,4">2</videoInputChannelID>
  <videoCodecType opt="MJPEG,MPEG4">MPEG4</videoCodecType>
  <videoScanType opt="interlaced,progressive">progressive</videoScanType>
  <videoResolutionWidth min="0" max="640">640</videoResolutionWidth>
  <videoResolutionHeight min="0" max="480">480</videoResolutionHeight>
  <videoPositionX min="0" max="640">0</videoPositionX>
  <videoPositionY min="0" max="480">0</videoPositionY>
  <videoQualityControlType opt="CBR,VBR">CBR</videoQualityControlType>
  <constantBitRate min="50" max="4000" dynamic="true">2000</constantBitRate>
  <maxFrameRate opt="2500,1250,625,312,156,78" dynamic="true">2500</maxFrameRate>
  <keyFrameInterval min="0", max="10000">1000</keyFrameInterval>
  <rotationDegree opt="0,90,180,270" def="0">0</rotationDegree>
  <mirrorEnabled opt="true,false" def="false">false</mirrorEnabled>
  <snapshotImageType opt="JPEG" def="JPEG">JPEG</snapshotImageType>
</Video>
<Audio>
  <enabled opt="true,false" def="false">false</enabled>
  <audioInputChannelID opt="1,2,3,4">2</audioInputChannelID>
  <audioCompressionType                                     opt="G.726,G.711ulaw"
def="G.726">G.726</audioCompressionType>
  <audioBitRate opt="16,24,32,40" def="32" dynamic="true">24</audioBitRate>
  <audioSamplingRate opt="8" dynamic="true">8</audioSamplingRate>
  <audioResolution opt="3,4,5,6" dynamic="true"/>
</Audio>
</StreamingChannel>

```

## 8.10.4 /ISAPI/Streaming/channels/<ID>/dynamicCap

| /ISAPI/Streaming/channels/ID/dynamicCap |                                                                                                                                              | General Resource | v2.0 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------|------|
| GET                                     |                                                                                                                                              |                  |      |
| Description                             | Get dynamic capabilities, different resolutions have different frame rates; different audio compression types have different audio bit rate. |                  |      |
| Query                                   | None                                                                                                                                         |                  |      |
| Inbound Data                            | None                                                                                                                                         |                  |      |
| Success Return                          | DynamicCap                                                                                                                                   |                  |      |
| Notes:                                  |                                                                                                                                              |                  |      |

### DynamicCap XML Block



```

<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ResolutionAvailableDescriptorList>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
      <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
      <videoResolutionName>
        <!-- opt, xs:string, "3MP,5MP,none" -->
      </videoResolutionName>
      <supportedFrameRate> <!-- req, xs:string --> </supportedFrameRate>
    </ResolutionAvailableDescriptor>
  </ResolutionAvailableDescriptorList>
  <CodecParamDescriptorList>
    <CodecParamDescriptor>
      <videoCodecType>
        <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,H.265" --></videoCodecType>
      <isSupportProfile> <!--dep, xs:boolean,""--> </isSupportProfile>
      <CBRCap>
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
      </CBRCap>
      <VBRCap>
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
      </VBRCap>
      <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
      <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
      <SmartCodecCap><!--opt-->
        <readOnlyParams opt="keyFrameInterval,Profile,SVC,fixedQuality"><!-- opt, ro,
xs:string, --></readOnlyParams>
        <BitrateType>
          <Constant><!--opt, -->
            <support
              opt="videoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></support>
            <hiddenAbility
              opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></hiddenAbility>
          </Constant>
          <Variable><!--opt, -->
            <support
              opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></support>
            <readOnlyAbility
              opt="videoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></readOnlyAbility>
          </Variable>
        </BitrateType>
        <vbrAverageDefault><!--dep,xs:integer in kbps --></vbrAverageDefault>
        <smart264EnabledPrompt opt="prompt1,prompt2, prompt3"><!--opt,wo,xs:string,

```

```
--></smart264EnabledPrompt>
    <smart265EnabledPrompt    opt="prompt1,prompt2,    prompt3"><!--opt,wo,xs:string,
--></smart265EnabledPrompt>
    </SmartCodecCap>
</CodecParamDescriptor>
</CodecParamDescriptorList>
<AudioDescriptorList>
    <audioCompressionType>
        <!-- req, xs:string,
        "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM    ,
MP2L2"-->
    </audioCompressionType>
</AudioDescriptorList>
</DynamicCap>
```

### Example: Getting the Dynamic Capabilities

```
GET /ISAPI/Streaming/Channels/101/dynamicCap HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <ResolutionAvailableDescriptorList>
        <ResolutionAvailableDescriptor>
            <videoResolutionWidth>176</videoResolutionWidth>
            <videoResolutionHeight>144</videoResolutionHeight>
            <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
        </ResolutionAvailableDescriptor>
        <ResolutionAvailableDescriptor>
            <videoResolutionWidth>352</videoResolutionWidth>
            <videoResolutionHeight>288</videoResolutionHeight>
            <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
        </ResolutionAvailableDescriptor>
        <ResolutionAvailableDescriptor>
            <videoResolutionWidth>704</videoResolutionWidth>
            <videoResolutionHeight>576</videoResolutionHeight>
            <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
```

```

    </ResolutionAvailableDescriptor>
  </ResolutionAvailableDescriptorList>
  <CodecParamDescriptorList>
    <CodecParamDescriptor>
      <videoCodecType>
        <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,H.265" --></videoCodecType>
        <isSupportProfile> <!--dep, xs:boolean,""--> </isSupportProfile>
        <CBRCap>
          <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
        </CBRCap>
        <VBRcap>
          <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
        </VBRcap>
        <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
        <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
        <SmartCodecCap><!--opt-->
          <readOnlyParams opt="keyFrameInterval,Profile,SVC,fixedQuality"><!-- req, ro,
xs:string, --></readOnlyParams>
          <smart264EnabledPrompt
opt="prompt1,prompt2"><!--opt,wo,xs:string,--></smart264EnabledPrompt>
          <smart265EnabledPrompt
opt="prompt1,prompt2"><!--opt,wo,xs:string,--></smart265EnabledPrompt>
        </SmartCodecCap>
      </CodecParamDescriptor>
    </CodecParamDescriptorList>
    <AudioDescriptorList>
      <audioCompressionType
SupportedAudioBitRate="32,64,128">MP2L2</audioCompressionType>
    </AudioDescriptorList>
  </DynamicCap>

```

### 8.10.5 /ISAPI/Streaming/channels/<ID>/status

| /ISAPI/Streaming/channels/ID/status |                                                                                        | General Resource | v2.0 |
|-------------------------------------|----------------------------------------------------------------------------------------|------------------|------|
| GET                                 |                                                                                        |                  |      |
| Description                         | It is used to get the list of streaming sessions associated with a particular channel. |                  |      |
| Query                               | None                                                                                   |                  |      |
| Inbound Data                        | None                                                                                   |                  |      |
| Success Return                      | StreamingSessionStatusList                                                             |                  |      |
| Notes:                              |                                                                                        |                  |      |

### StreamingSessionStatusList XML Block

```
<StreamingSessionStatusList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <StreamingSessionStatus>
    <clientAddress>    <!-- req -->
      <ipAddress>      <!-- dep, xs:string -->      </ipAddress>
      <ipv6Address>    <!-- dep, xs:string -->      </ipv6Address>
    </clientAddress>
  </StreamingSessionStatus>
</StreamingSessionStatusList>
```

## 8.10.6 /ISAPI/Streaming/channels/<ID>/picture

| /ISAPI/Streaming/channels/ID/picture                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                    | General Resource | v2.0 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                    |                  |      |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | It is used to get a snapshot of the current image.                 |                  |      |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | videoResolutionWidth<br>videoResolutionHeight<br>snapShotImageType |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | None                                                               |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Picture over HTTP                                                  |                  |      |
| Notes:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                    |                  |      |
| <p>All devices must support &lt;snapShotImageType&gt; of “JPEG”.</p> <p>Only support the main stream channel snapshot.</p> <p>To determine the format of the picture returned either the parameters in &lt;Video&gt; or the query string values are used, or, if the Accept: header field is present in the request and the server supports it, the picture is returned in that format.</p> <p>For supported values, query /Streaming/channels/ID/picture/capabilities.</p> <p>Examples:</p> <p>GET /ISAPI/Streaming/channels/101/picture?snapShotImageType=JPEG</p> <p>...</p> <p>GET /ISAPI/Streaming/channels/101/picture</p> <p>Accept: image/jpeg</p> <p>...</p> |                                                                    |                  |      |

## 8.10.7 /ISAPI/Streaming/channels/<ID>/requestKeyFrame

| /ISAPI/Streaming/channels/ID/requestKeyFrame                                                                                                     |                                                                                  | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------|------|
| PUT                                                                                                                                              |                                                                                  | Operator         |      |
| Description                                                                                                                                      | It is used to request that the device issue a key frame on a particular channel. |                  |      |
| Query                                                                                                                                            | None                                                                             |                  |      |
| Inbound Data                                                                                                                                     | None                                                                             |                  |      |
| Success Return                                                                                                                                   | ResponseStatus                                                                   |                  |      |
| Notes:                                                                                                                                           |                                                                                  |                  |      |
| The key frame that is issued should include everything necessary to initialize a video decoder, i.e. parameter sets for H.264 or VOS for MPEG-4. |                                                                                  |                  |      |

## 8.10.8 /ISAPI/Streaming/channels/ID/dualVCA

| /ISAPI/Streaming/channels/ID/dualVCA |                                                                        | General Resource | v2.0 |
|--------------------------------------|------------------------------------------------------------------------|------------------|------|
| GET                                  |                                                                        |                  |      |
| Description                          | It is used to get the configuration of intelligence back retrieval.    |                  |      |
| Query                                | None                                                                   |                  |      |
| Inbound Data                         | None                                                                   |                  |      |
| Success Return                       | DualVCA                                                                |                  |      |
| PUT                                  |                                                                        |                  |      |
| Description                          | It is used to update the configuration of intelligence back retrieval. |                  |      |
| Query                                | None                                                                   |                  |      |
| Inbound Data                         | DualVCA                                                                |                  |      |
| Success Return                       | ResponseStatus                                                         |                  |      |
| Notes:                               |                                                                        |                  |      |

### DualVCA XML Block

```
<DualVCA version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</DualVCA>
```

## 8.10.9 /ISAPI/Streaming/channels/<ID>/regionClip/capabilities

| /ISAPI/Streaming/channels/<ID>/regionClip/capabilities |  | General Resource v2.0 |
|--------------------------------------------------------|--|-----------------------|
| GET                                                    |  |                       |

|                                                                                                                                                                                                                                                                                                 |                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b>Description</b>                                                                                                                                                                                                                                                                              | It is used to get Region Clip capability. |
| <b>Query</b>                                                                                                                                                                                                                                                                                    | None                                      |
| <b>Inbound Data</b>                                                                                                                                                                                                                                                                             | None                                      |
| <b>Success Return</b>                                                                                                                                                                                                                                                                           | <RegionClip>                              |
| <b>Notes:</b><br><br>The ID in “/Streaming/channels/ID” is defined as following declaration:<br>101: Region Clip of video input channel “video1-main stream”.<br>102: Region Clip of video input channel “video1-sub stream”.<br>103: Region Clip of video input channel “video1-third stream”. |                                           |

#### RegionClip XML Block

```
<RegionClip version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string -->    </id>
  <enabled>    <!-- req, xs:boolean -->    </enabled>
  <normalizedScreenSize> <!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <regionType opt="rectangle,convexPolygon,concavePolygon"><!--req, ro, xs:string-->
  </regionType>
  <videoResolutionWidth opt="704">704</videoResolutionWidth>
  <videoResolutionHeight opt="576">576</videoResolutionHeight>
  <ClipRegionList>
    <ClipRegion>
      <RegionCoordinatesList size="1">
        <RegionCoordinates>    <!-- req, -->
          <positionX>    <!-- req, xs:integer;coordinate -->    </positionX>
          <positionY>    <!-- req, xs:integer;coordinate -->    </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </ClipRegion>
  </ClipRegionList>
</RegionClip>
```

### 8.10.10 /ISAPI/Streaming/channels/<ID>/regionClip

| /ISAPI/Streaming/channels/<ID>/regionClip |                                                       | General Resource v2.0 |
|-------------------------------------------|-------------------------------------------------------|-----------------------|
| <b>GET</b>                                |                                                       |                       |
| <b>Description</b>                        | Region Clip configuration for a video input channels. |                       |
| <b>Query</b>                              | None                                                  |                       |
| <b>Inbound Data</b>                       | None                                                  |                       |

|                                                                                                                                                                                                                                                                                             |                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Success Return                                                                                                                                                                                                                                                                              | RegionClip                                            |
| <b>PUT</b>                                                                                                                                                                                                                                                                                  |                                                       |
| Description                                                                                                                                                                                                                                                                                 | Region Clip configuration for a video input channels. |
| Query                                                                                                                                                                                                                                                                                       | None                                                  |
| Inbound Data                                                                                                                                                                                                                                                                                | RegionClip                                            |
| Success Return                                                                                                                                                                                                                                                                              | ResponseStatus                                        |
| <b>Notes:</b><br>The ID in “/Streaming/channels/ID” is defined as following declaration:<br>101: Region Clip of video input channel “video1-main stream”.<br>102: Region Clip of video input channel “video1-sub stream”.<br>103: Region Clip of video input channel “video1-third stream”. |                                                       |

#### RegionClip XML Block

```
<RegionClip version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string -->    </id>
  <enabled>    <!-- req, xs:boolean -->    </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- ro, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- ro, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <regionType><!--req, ro, xs:string--> </regionType>
  <videoResolutionWidth>704</videoResolutionWidth>
  <videoResolutionHeight>576</videoResolutionHeight>
  <ClipRegionList>
    <ClipRegion>
      <RegionCoordinatesList>
        <RegionCoordinates>    <!-- req, size=4-->
          <positionX>          <!-- req, xs:integer;coordinate -->    </positionX>
          <positionY>          <!-- req, xs:integer;coordinate -->    </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </ClipRegion>
  </ClipRegionList>
</RegionClip>
```

### 8.10.11 /ISAPI/Streaming/channels/<ID>/httppreview

|                                            |                                |                          |
|--------------------------------------------|--------------------------------|--------------------------|
| /ISAPI/Streaming/channels/<ID>/httppreview |                                | General Resource<br>v2.0 |
| <b>GET</b>                                 |                                |                          |
| Description                                | Access a live stream via http. |                          |

|                                                                                                                                                                                                                             |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Query                                                                                                                                                                                                                       | None             |
| Inbound Data                                                                                                                                                                                                                | None             |
| Success Return                                                                                                                                                                                                              | Stream over HTTP |
| <b>Notes:</b><br>This function is used to request a stream from the device using HTTP or HTTPS. This API uses HTTP server-push with the MIME type multipart/x-mixed-replace. HTTP streaming must be enabled on the channel. |                  |

#### Example

```
GET /ISAPI/Streaming/channels/102/httppreview HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: multipart/x-mixed-replace; boundary=<boundary>
--<boundary>
Content-Type: image/jpeg
Content-Length: xxx
Image data for a single frame
--<boundary>
...
```

## 8.10.12 /ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition

|                                                        |                                          |                  |      |
|--------------------------------------------------------|------------------------------------------|------------------|------|
| /ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition |                                          | General Resource | v2.0 |
| GET                                                    |                                          |                  |      |
| Description                                            | Get Video Streaming dynamic capabilities |                  |      |
| Query                                                  | None                                     |                  |      |
| Inbound Data                                           | StreamingDescriptor                      |                  |      |
| Success Return                                         | StreamingDynamicCap                      |                  |      |
| Notes:                                                 |                                          |                  |      |
| VBR    variable bit rate                               |                                          |                  |      |
| CBR    Constant bit rate                               |                                          |                  |      |

#### StreamingDescriptor XML Block

```
<StreamingDescriptor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VbrAverageCapDynamicLinkTo><!--opt, -->
    <streamType><!--opt,xs:string, "mainstream,substream,stream3 "--></streamType>
```



```
<codeType><!-- opt, xs:string, "smart264,smart265" --></codeType>
<videoQualityControlType><!-- opt, xs:string, "CBR,VBR" --></videoQualityControlType>
<vbrUpperCap><!-- opt, xs:integer, in kbps --></vbrUpperCap>
</VbrAverageCapDynamicLinkTo>
</StreamingDescriptor>
```

#### StreamingDynamicCap XML Block

```
<StreamingDynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <vbrAverageCap> <!-- opt, xs:integer, in kbps, dep VbrAverageCapDynamicLinkTo-->
  </vbrAverageCap>
</StreamingDynamicCap>
```

### 8.10.13 /ISAPI/Streaming/channels/<ID>/RTMPCfg

| /ISAPI/Streaming/channels/<ID>/RTMPCfg |                | General Resource | v2.0 |
|----------------------------------------|----------------|------------------|------|
| GET                                    |                |                  |      |
| Description                            | Get RTMP param |                  |      |
| Query                                  | None           |                  |      |
| Inbound Data                           | None           |                  |      |
| Success Return                         | RTMPCfg        |                  |      |
| PUT                                    |                |                  |      |
| Description                            | Set RTMP param |                  |      |
| Query                                  | None           |                  |      |
| Inbound Data                           | RTMPCfg        |                  |      |
| Success Return                         | ResponseStatus |                  |      |

#### RTMPCfg XML Block

```
<RTMPCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string, channel+ streamType,use"101"mode --> </id>
  <enabled><!--req, xs: boolean--></enabled>
  <url><!--req, xs:string--></url>
  <packetLen><!--opt, xs:integer--></packetLen>
</RTMPCfg>
```

### 8.10.14 /ISAPI/Streaming/channels/<ID>/RTMPCfg/capabilities

| /ISAPI/Streaming/channels/<ID>/RTMPCfg/capabilities | General Resource | v2.0 |
|-----------------------------------------------------|------------------|------|
|-----------------------------------------------------|------------------|------|

| GET            |                             |
|----------------|-----------------------------|
| Description    | Get RTMP param capabilities |
| Query          | None                        |
| Inbound Data   | None                        |
| Success Return | VGAParam                    |

#### RTMPCfg XML Block

```
<RTMPCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string, channel+ streamType,use"101"mode--> </id>
<enabled><!--req, xs: boolean,--></enabled>
  <url><!--req, xs:string,--></url>
<packetLen><!--opt, xs:integer,--></packetLen>
</RTMPCfg>
```

### 8.10.15 /ISAPI/Streaming/channels/<ID>/capabilities

| /ISAPI/Streaming/channels/<ID>/capabilities                                |                                         | General Resource | v2.0 |
|----------------------------------------------------------------------------|-----------------------------------------|------------------|------|
| GET                                                                        |                                         |                  |      |
| Description                                                                | It is used to get Streaming capability. |                  |      |
| Query                                                                      | None                                    |                  |      |
| Inbound Data                                                               | None                                    |                  |      |
| Success Return                                                             | <StreamingChannel>                      |                  |      |
| Notes:                                                                     |                                         |                  |      |
| isSupportRefreshFrame: whether support refresh frame when Smart264 enabled |                                         |                  |      |

#### StreamingChannel XML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <channelName> <!-- req, xs:string --> </channelName>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <Transport> <!-- req -->
    <maxPacketSize> <!-- opt, xs:integer --> </maxPacketSize>
    <audioPacketLength> <!-- opt, xs:integer --> </audioPacketLength>
    <audioInboundPacketLength><!-- opt, xs:integer --> </audioInboundPacketLength>
    <audioInboundPortNo> <!-- opt, xs:integer --> </audioInboundPortNo>
    <videoSourcePortNo> <!-- opt, xs:integer --> </videoSourcePortNo>
    <audioSourcePortNo> <!-- opt, xs:integer --> </audioSourcePortNo>
    <ControlProtocolList> <!-- req -->
      <ControlProtocol>
        <!-- req -->
        <streamingTransport>
          <!-- req, xs:string, "HTTP,RTSP,SHTTP" -->
```

```

    </streamingTransport>
  </ControlProtocol>
</ControlProtocolList>
<Unicast><!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <interfaceID> <!-- opt, xs:string --> </interfaceID>
  <rtpTransportType>
    <!-- opt, xs:string, "RTP/UDP,RTP/TCP" -->
  </rtpTransportType>
</Unicast>
<Multicast> <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <userTriggerThreshold> <!-- opt, xs:integer --> </userTriggerThreshold>
  <destIPAddress> <!-- dep, xs:string --> </destIPAddress>
  <videoDestPortNo><!-- opt, xs:integer --></videoDestPortNo>
  <audioDestPortNo><!-- opt, xs:integer --></audioDestPortNo>
  <destIPv6Address><!-- dep, xs:string --></destIPv6Address>
  <tTl><!-- opt, xs:integer --></tTl>
</Multicast>
<Security>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
</Security>
</Transport>
<Video>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
  <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
  <videoCodecType>
    <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,MPNG,SVAC" -->
  </videoCodecType>
  <videoScanType>
    <!-- opt, xs:string, "progressive,interlaced" -->
  </videoScanType>
  <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
  <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
  <videoPositionX> <!-- opt, xs:integer --> </videoPositionX>
  <videoPositionY> <!-- opt, xs:integer --> </videoPositionY>
  <videoQualityControlType>
    <!-- opt, xs:string, "CBR,VBR" -->
  </videoQualityControlType>
  <constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
  <fixedQuality><!-- opt, xs:integer, percentage, 0..100 --> </fixedQuality>

```

```

<vbrUpperCap>    <!-- dep, xs:integer, in kbps -->    </vbrUpperCap>
<vbrLowerCap>    <!-- dep, xs:integer, in kbps -->    </vbrLowerCap>
<maxFrameRate>    <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
<keyFrameInterval> <!-- opt, xs:integer, milliseconds -->    </keyFrameInterval>
<rotationDegree>  <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
<mirrorEnabled>    <!-- opt, xs:boolean -->    </mirrorEnabled>
<snapshotImageType>
    <!-- opt, xs:string, "JPEG,GIF,PNG" -->
</snapshotImageType>
<Mpeg4Profile> <!--dep, xs:string, "SP,ASP"--> </Mpeg4Profile>
<H264Profile>
    <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H264Profile>
<SVACProfile>
    <!-- dep, xs:string, "Baseline,Main,High,Extended" -->
</SVACProfile>
<GovLength> <!--opt, xs:integer --> </GovLength>
<SVC>
    <enabled>    <!-- req, xs:boolean -->    </enabled>
    <SVCMODE>    <!--dep, xs:string, "manual,auto" -->    </SVCMODE>
</SVC>
    <smoothing>    <!-- opt, xs:integer-->    </smoothing>
</Video>
<Audio>
    <!-- opt -->
    <enabled>    <!-- req, xs:boolean -->    </enabled>
    <audioInputChannelID> <!-- req, xs:string;id -->    </audioInputChannelID>
    <audioCompressionType>
        <!-- req, xs:string,
            "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM, MP2L2"
        -->
    </audioCompressionType>
    <audioInboundCompressionType>
        <!-- opt, xs:string,
            "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"
        -->
    </audioInboundCompressionType>
    <audioBitRate>    <!-- opt, xs:integer, in kbps -->    </audioBitRate>
    <audioSamplingRate>    <!-- opt, xs:float, in kHz -->    </audioSamplingRate>
    <audioResolution> <!-- opt, xs:integer, in bits --> </audioResolution>
</Audio>
<enableCABAC>    <!-- opt, xs: boolean --> <enableCABAC>
<subStreamRecStatus>    <!-- opt, xs: boolean --> </subStreamRecStatus>

```

```
<isSupportRefreshFrame> <!-- opt, xs:boolean --> </isSupportRefreshFrame>
</StreamingChannel>
```

## 8.10.16 Smart264

/ISAPI/Streaming/channels/ID

General Resource v2.0

|                |                                                                                       |
|----------------|---------------------------------------------------------------------------------------|
| GET            |                                                                                       |
| Description    | It is used to get the properties of a particular streaming channel for the device.    |
| Query          | None                                                                                  |
| Inbound Data   | None                                                                                  |
| Success Return | StreamingChannel                                                                      |
| PUT            |                                                                                       |
| Description    | It is used to update the properties of a particular streaming channel for the device. |
| Query          | None                                                                                  |
| Inbound Data   | StreamingChannel                                                                      |
| Success Return | ResponseStatus                                                                        |
| DELETE         |                                                                                       |
| Description    | It is used to delete a particular streaming channel for the device.                   |
| Query          | None                                                                                  |
| Inbound Data   | None                                                                                  |
| Success Return | ResponseStatus                                                                        |

Notes:

To support multi video input devices , the streaming ID in URL should be indicate video input channel number , so it is defined as : straming-Id + video-input-Id \*100, for example :  
/Streaming/channels/101 indicates the first streaming from the first video input  
/Streaming/channels/202 indicates the second streaming from the second video input

For IPC, becouse of only one video input, case is simeple, it can accecpt 1 as the main stream id , 2 as the sub-stream.

<ControlProtocolList> identifies the control protocols that are valid for this type of streaming.  
<Unicast> is for direct unicast streaming.  
<Multicast> is for direct multicast streaming.  
<videoSourcePortNo> and <audioSourcePortNo> are the source port numbers for the outbound video or audio streams.  
<videoInputChannelID> refers to /ISAPI/System/Video/inputs/channel/ID.  
<audioInputChannelID> refers to /ISAPI/System/Audio/channels/ID. It must be configured as an input channel.

Use of IPv4 or IPv6 addresses depends on the value of the <ipVersion> field in /ISAPI/System/Network/interfaces/ID/ipAddress.

<Security> determines whether SRTP is used for stream encryption.

<audioResolution> is the resolution for the outbound audio stream in bits.

### StreamingChannel XML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <channelName> <!-- req, xs:string --> </channelName>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <Transport> <!-- req -->
</Transport>
  <Video>
    <!-- opt -->
    <enabled><!-- req, xs:boolean --></enabled>
    <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
    <videoCodecType>
      <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,MPNG,SVAC" -->
    </videoCodecType>
    <videoScanType>
      <!-- opt, xs:string, "progressive,interlaced" -->
    </videoScanType>
    <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
    <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
    <videoPositionX> <!-- opt, xs:integer --> </videoPositionX>
    <videoPositionY> <!-- opt, xs:integer --> </videoPositionY>
    <videoQualityControlType>
      <!-- opt, xs:string, "CBR,VBR" -->
    </videoQualityControlType>
    <constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
    <fixedQuality><!-- opt, xs:integer, percentage, 0..100 --> </fixedQuality>
    <vbrUpperCap> <!-- dep, xs:integer, in kbps --> </vbrUpperCap>
    <vbrLowerCap> <!-- dep, xs:integer, in kbps --> </vbrLowerCap>
    <maxFrameRate> <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
    <keyFrameInterval> <!-- opt, xs:integer, milliseconds --> </keyFrameInterval>
    <rotationDegree> <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
    <mirrorEnabled> <!-- opt, xs:boolean --> </mirrorEnabled>
    <snapshotImageType>
      <!-- opt, xs:string, "JPEG,GIF,PNG" -->
    </snapshotImageType>
    <Mpeg4Profile> <!--dep, xs:string, "SP,ASP"--> </Mpeg4Profile>
    <H264Profile>
      <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
    </H264Profile>
  </Video>
</StreamingChannel>
```

```

</H264Profile>
<SVACProfile>
  <!-- dep, xs:string, "Baseline,Main,High,Extended" -->
</SVACProfile>
<GovLength> <!--opt, xs:integer --> </GovLength>
<SVC>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <SVCMODE> <!--dep, xs:string, "manual,auto" --> </SVCMODE>
</SVC>
<smoothing> <!-- opt, xs:integer--> </smoothing>
<SmartCodec><!-- dep, ncode type: H.264 H.265 -->
  <enabled> <!-- req, xs:boolean --> </enabled>
</SmartCodec>
  <vbrAverageCap> <!-- dep, xs:integer, in kbps , "average bitrate, depends on whether
SmartCodec is enabled or not"--> </vbrAverageCap>
</Video>
<Audio>
  <!-- opt -->
</Audio>
<enableCABAC> <!-- opt, xs: boolean --> <enableCABAC>
<subStreamRecStatus> <!-- opt, xs: boolean --> </subStreamRecStatus>
</StreamingChannel>

```

### 8.10.16.1 Smart264 Function Configuration and Cue words

#### Ability

| /ISAPI/Streaming/channels/ID/dynamicCap                                                                                                                                                                                                                                                                       |                                                                                                                                                          | General Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                                           |                                                                                                                                                          |                  |      |
| Description                                                                                                                                                                                                                                                                                                   | Get dynamic capabilities, different resolutions have different frame rates; different video/audio compression types have different video/audio bit rate. |                  |      |
| Query                                                                                                                                                                                                                                                                                                         | None                                                                                                                                                     |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                  | None                                                                                                                                                     |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                | DynamicCap                                                                                                                                               |                  |      |
| Notes:                                                                                                                                                                                                                                                                                                        |                                                                                                                                                          |                  |      |
| <p>&lt;profile&gt;:When the &lt;videoCodecType&gt; is assigned to “H.264”,the valid values of &lt;profile&gt; are: Baseline,Main,High, Extended,while “SP,ASP” for “MPEG4”.</p> <p><i>prompt1:</i></p> <p>H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.</p> |                                                                                                                                                          |                  |      |

Notice:

1. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
2. H264+ is not supported simultaneously with third stream, SVC, smoothing, target cropping, high frame rate.

Do you want to reboot the unit?

*prompt2:*

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

1. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
2. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, target cropping, high frame rate, WDR, HLC, 4000\*3000 resolution, 3840\*2160 resolution, counting, vehicle detection etc.

Do you want to reboot the unit?

*prompt3:*

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

3. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
4. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, target cropping, high frame rate, WDR, HLC, 4000\*3000 resolution, 3840\*2160 resolution, counting, vehicle detection etc.

Do you want to reboot the unit?

*prompt4: Available for back-end products*

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

1. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
2. H264+ is not supported simultaneously with SVC etc.

Do you want to reboot the unit?

*prompt5:*

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

5. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
6. H265 is not supported simultaneously with ROI, SVC, main stream smoothing, high frame rate, electronic stabilization.

Do you want to reboot the unit?



***prompt6:***

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

3. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
4. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing.

Do you want to reboot the unit?

***prompt7:***

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

5. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
6. H264+ is not supported simultaneously with ROI, SVC, main stream smoothing.

Do you want to reboot the unit?

***prompt8:***

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

7. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
8. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, target cropping.

Do you want to reboot the unit?

***prompt9:***

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

9. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
10. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, high frame rate, target cropping, 2048\*1536 resolution, vehicle detection, HVT detection, Violation Forensic, heatmap,.

Do you want to reboot the unit?

***prompt10:***

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

7. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
8. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream

smoothing, target cropping, high frame rate, vehicle detection.

Do you want to reboot the unit?

**prompt11:**

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

9. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
10. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, high frame rate, electronic stabilization, vehicle detection.

Do you want to reboot the unit?

<smart264EnabledPrompt>: Smart264

<smart265EnabledPrompt>: Smart265

### DynamicCap XML Block

```
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ResolutionAvailableDescriptorList>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
      <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
      <supportedFrameRate> <!-- req, xs:string --> </supportedFrameRate>
    </ResolutionAvailableDescriptor>
  </ResolutionAvailableDescriptorList>
  <CodecParamDescriptorList>
    <CodecParamDescriptor>
      <videoCodecType>
        <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264" --></videoCodecType>
      <isSupportProfile> <!--dep, xs: boolean,""--> </isSupportProfile>
      <CBRCap>
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
      </CBRCap>
      <VBRCap>
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
      </VBRCap>
      <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
      <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
      <SmartCodecCap><!--opt-->
        <readOnlyParams opt="keyFrameInterval,Profile,SVC,fixedQuality"><!-- opt, ro,
xs:string, "The following functions option are read only :keyFrameInterva,Profile,SVC,
fixedQuality"--></readOnlyParams>
        <BitrateType>
          <Constant><!--opt, Constant bitrate-->
```

```

        <support                                opt="videoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></support>
        <hiddenAbility                          opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></hiddenAbility>
    </Constant>
    <Variable><!--opt, Variable bitrate-->
        <support                                opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></support>
        <readOnlyAbility                      opt="videoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></readOnlyAbility>
    </Variable>
</BitrateType>
<vbrAverageDefault><!--dep,xs:integer in kbps "default value of average video
bitrate"--></vbrAverageDefault>
    <smart264EnabledPrompt    opt="prompt1,prompt2,prompt3"><!--opt,wo,xs:string,"
Smart264 enabled prompt"--></smart264EnabledPrompt>
    <smart265EnabledPrompt    opt="prompt1,prompt2,    prompt3"><!--opt,wo,xs:string,"
Smart265 enabled prompt"--></smart265EnabledPrompt>
</SmartCodecCap>
</CodecParamDescriptor>
</CodecParamDescriptorList>
</DynamicCap>

```

### Example: Getting the Dynamic Capabilities

```

GET /ISAPI/Streaming/Channels/101/dynamicCap HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <ResolutionAvailableDescriptorList>
        <ResolutionAvailableDescriptor>
            <videoResolutionWidth>176</videoResolutionWidth>
            <videoResolutionHeight>144</videoResolutionHeight>
            <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
        </ResolutionAvailableDescriptor>
        <ResolutionAvailableDescriptor>
            <videoResolutionWidth>352</videoResolutionWidth>
            <videoResolutionHeight>288</videoResolutionHeight>

```

```

    <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
    2000,2200</supportedFrameRate>
  </ResolutionAvailableDescriptor>
</ResolutionAvailableDescriptorList>
<CodecParamDescriptorList>
  <CodecParamDescriptor>
    <videoCodecType>
      <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264" --></videoCodecType>
      <isSupportProfile> <!-- dep, xs:boolean,"" --> </isSupportProfile>
      <CBRCap> 定码率
        <isSupportSmooth><!-- dep, xs:boolean --></isSupportSmooth>
      </CBRCap>
      <VBRCap> 变码率
        <isSupportSmooth><!-- dep, xs:boolean --></isSupportSmooth>
      </VBRCap>
      <isSupportSVC> <!-- opt, xs:boolean --> </isSupportSVC>
      <isSupportCABAC> <!-- opt, xs:boolean --> </isSupportCABAC>
      <SmartCodecCap><!-- opt -->
        <readOnlyParams opt="keyFrameInterval,Profile,SVC"><!-- req, ro, xs:string, "
        keyFrameInterval,Profile. SVC" --></readOnlyParams>
        <smart264EnabledPrompt
        opt="prompt1,prompt2,prompt3"><!-- opt,wo,xs:string, --></smart264EnabledPrompt>
        <smart265EnabledPrompt
        opt="prompt1,prompt2"><!-- opt,wo,xs:string, --></smart265EnabledPrompt>
      </SmartCodecCap>
    </CodecParamDescriptor>
  </CodecParamDescriptorList>
<AudioDescriptorList>
  <audioCompressionType
  SupportedAudioBitRate="32,64,128">MP2L2</audioCompressionType>
</AudioDescriptorList>
</DynamicCap>

```

## 8.10.16.2/ISAPI/Streaming/channels/<ID>/dynamicCapWithC

### ondition

|                                                    |                                          |                  |      |
|----------------------------------------------------|------------------------------------------|------------------|------|
| /ISAPI/Streaming/channels/<ID>/dynamicCapWithCondi |                                          | General Resource | v2.0 |
| on                                                 |                                          |                  |      |
| GET                                                |                                          |                  |      |
| Description                                        | Get Video Streaming dynamic capabilities |                  |      |

|                                                                       |                            |
|-----------------------------------------------------------------------|----------------------------|
| Query                                                                 | None                       |
| Inbound Data                                                          | <b>StreamingDescriptor</b> |
| Success Return                                                        | <b>StreamingDynamicCap</b> |
| <b>Notes:</b><br>VBR    variable bit rate<br>CBR    Constant bit rate |                            |

#### StreamingDescriptor XML Block

```
<StreamingDescriptor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VbrAverageCapDynamicLinkTo><!-- opt, " Get Video Streaming dynamic capabilities"-->
    <vbrUpperCap><!-- opt, xs:integer, in kbps --></vbrUpperCap>
    <streamType><!--opt,xs:string, stream type "mainstream,substream,stream3
"--></streamType>
    <codeType><!-- opt, xs:string, encode type "smart264,smart265" --></codeType>
    <videoQualityControlType><!-- opt, xs:string, "CBR,VBR" --></videoQualityControlType>
  </VbrAverageCapDynamicLinkTo>
</StreamingDescriptor>
```

#### StreamingDynamicCap XML Block

```
<StreamingDynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <vbrAverageCap> <!-- opt, xs:integer, in kbps, VbrAverageCapDynamicLinkTo-->
  </vbrAverageCap>
</StreamingDynamicCap>
```

| /ISAPI/Streaming/channels/<ID>/capabilities                                               |                                                                                                 | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------|------|
| GET                                                                                       |                                                                                                 |                  |      |
| Description                                                                               | It is used to get the properties of a particular streaming channel for the device capabilities. |                  |      |
| Query                                                                                     | None                                                                                            |                  |      |
| Inbound Data                                                                              | None                                                                                            |                  |      |
| Success Return                                                                            | StreamingChannel                                                                                |                  |      |
| Notes:                                                                                    |                                                                                                 |                  |      |
| isSpportDynamicCapWithCondition : whether support the dynamic capabilities with condition |                                                                                                 |                  |      |

#### StreamingChannel XML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <channelName> <!-- req, xs:string --> </channelName>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <Transport> <!-- req -->
```

```

<maxPacketSize> <!-- opt, xs:integer --> </maxPacketSize>
<audioPacketLength> <!-- opt, xs:integer --> </audioPacketLength>
<audioInboundPacketLength><!-- opt, xs:integer --> </audioInboundPacketLength>
<audioInboundPortNo> <!-- opt, xs:integer --> </audioInboundPortNo>
<videoSourcePortNo> <!-- opt, xs:integer --> </videoSourcePortNo>
<audioSourcePortNo> <!-- opt, xs:integer --> </audioSourcePortNo>
<ControlProtocolList> <!-- req -->
  <ControlProtocol>
    <!-- req -->
    <streamingTransport>
      <!-- req, xs:string, "HTTP,RTSP,SHTTP" -->
    </streamingTransport>
  </ControlProtocol>
</ControlProtocolList>
<Unicast><!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <interfaceID> <!-- opt, xs:string --> </interfaceID>
  <rtpTransportType>
    <!-- opt, xs:string, "RTP/UDP,RTP/TCP" -->
  </rtpTransportType>
</Unicast>
<Multicast> <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <userTriggerThreshold> <!-- opt, xs:integer --> </userTriggerThreshold>
  <destIPAddress> <!-- dep, xs:string --> </destIPAddress>
  <videoDestPortNo><!-- opt, xs:integer --></videoDestPortNo>
  <audioDestPortNo><!-- opt, xs:integer --></audioDestPortNo>
  <destIPv6Address><!-- dep, xs:string --></destIPv6Address>
  <ttl><!-- opt, xs:integer --></ttl>
</Multicast>
<Security>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
</Security>
</Transport>
<Video>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
  <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
  <videoCodecType>
    <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,MPNG,SVAC" -->
  </videoCodecType>
  <videoScanType>

```

```

    <!-- opt, xs:string, "progressive,interlaced" -->
</videoScanType>
<videoResolutionWidth>    <!-- req, xs:integer -->    </videoResolutionWidth>
<videoResolutionHeight>    <!-- req, xs:integer -->    </videoResolutionHeight>
<videoPositionX>    <!-- opt, xs:integer -->    </videoPositionX>
<videoPositionY>    <!-- opt, xs:integer -->    </videoPositionY>
<videoQualityControlType>
    <!-- opt, xs:string, "CBR,VBR" -->
</videoQualityControlType>
<constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
<fixedQuality><!-- opt, xs:integer, percentage, 0..100 -->    </fixedQuality>
<vbrUpperCap>    <!-- dep, xs:integer, in kbps -->    </vbrUpperCap>
<vbrLowerCap>    <!-- dep, xs:integer, in kbps -->    </vbrLowerCap>
<maxFrameRate>    <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
<keyFrameInterval> <!-- opt, xs:integer, milliseconds -->    </keyFrameInterval>
<rotationDegree>    <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
<mirrorEnabled>    <!-- opt, xs:boolean -->    </mirrorEnabled>
<snapShotImageType>
    <!-- opt, xs:string, "JPEG,GIF,PNG" -->
</snapShotImageType>
<Mpeg4Profile> <!--dep, xs:string, "SP,ASP"--> </Mpeg4Profile>
<H264Profile>
    <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H264Profile>
<SVACProfile>
    <!-- dep, xs:string, "Baseline,Main,High,Extended" -->
</SVACProfile>
<GovLength> <!--opt, xs:integer --> </GovLength>
<SVC>
    <enabled>    <!-- req, xs:boolean -->    </enabled>
    <SVCMode>    <!--dep, xs:string, "manual,auto" -->    </SVCMode>
</SVC>
<smoothing>    <!-- opt, xs:integer-->    </smoothing>
<H265Profile>
    <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H265Profile>
</Video>
<Audio>
    <!-- opt -->
    <enabled>    <!-- req, xs:boolean -->    </enabled>
    <audioInputChannelID> <!-- req, xs:string;id -->    </audioInputChannelID>
    <audioCompressionType>
        <!-- req, xs:string,

```

```

"G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM, MP2L2"
-->
</audioCompressionType>
<audioInboundCompressionType>
  <!-- opt, xs:string,
  "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"
  -->
</audioInboundCompressionType>
<audioBitRate>    <!-- opt, xs:integer, in kbps -->    </audioBitRate>
<audioSamplingRate>    <!-- opt, xs:float, in kHz -->    </audioSamplingRate>
<audioResolution> <!-- opt, xs:integer, in bits --> </audioResolution>
</Audio>
<enableCABAC>    <!-- opt, xs: boolean --> <enableCABAC>
<subStreamRecStatus>    <!-- opt, xs: boolean --> </subStreamRecStatus>
<isSupportDynamicCapWithCondition><!--opt, xs:boolean," whether support the dynamic
capabilities with condition "--></isSupportDynamicCapWithCondition>
<isSupportRefreshFrame> <!-- opt, xs:boolean --> </isSupportRefreshFrame>
</StreamingChannel>

```

### 8.10.16.3 Smart264 Refresh Frame Function

#### /ISAPI/Streaming/channels/<ID>/refreshFrame

| /ISAPI/Streaming/channels/ID/refreshFrame                                                                                                 |                                                                                                                                                                             | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------|
| PUT                                                                                                                                       |                                                                                                                                                                             | Operator         |      |
| Description                                                                                                                               | Provide forced to refresh the frame control interface, just for streaming media server using; By calling the SDK interface, to sends the server refresh frame (big P frame) |                  |      |
| Inbound Data                                                                                                                              | None                                                                                                                                                                        |                  |      |
| Success Return                                                                                                                            | ResponseStatus                                                                                                                                                              |                  |      |
| <b>Notes:</b><br>The Smart264 need to be enabled at first.<br><ID><br>101---channel 1 with main stream;<br>102—channel 1 with sub stream; |                                                                                                                                                                             |                  |      |

#### /ISAPI/Streaming/channels/<ID>/refreshFrame/capabilities

| /ISAPI/Streaming/channels/ID/refreshFrame/capabilities | General Resource | v2.0 |
|--------------------------------------------------------|------------------|------|
|--------------------------------------------------------|------------------|------|



| GET                                       |                                         | Operator |
|-------------------------------------------|-----------------------------------------|----------|
| Description                               | It is used to get Streaming capability. |          |
| Inbound Data                              | None                                    |          |
| Success Return                            | <RefreshFrame>                          |          |
| Notes:                                    |                                         |          |
| The Smart264 need to be enabled at first. |                                         |          |

#### RefreshFrame XML Block

```
<RefreshFrame version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <streamType opt="mainStream,subStream,stream3"><!--req, xs:string --></streamType>
</RefreshFrame>
```

## 8.11 /ISAPI/Snapshot

|                         |              |
|-------------------------|--------------|
| /ISAPI/Snapshot         | Service v2.0 |
| Notes: snapshot service |              |

### 8.11.1 /ISAPI/Snapshot/channels

| /ISAPI/Snapshot/channels |                                                                          | General Resource | v2.0 |
|--------------------------|--------------------------------------------------------------------------|------------------|------|
| GET                      |                                                                          |                  |      |
| Description              | It is used to get the properties of snapshot channels for the device.    |                  |      |
| Query                    | None                                                                     |                  |      |
| Inbound Data             | None                                                                     |                  |      |
| Success Return           | SnapshotChannelList                                                      |                  |      |
| PUT                      |                                                                          |                  |      |
| Description              | It is used to update the properties of snapshot channels for the device. |                  |      |
| Query                    | None                                                                     |                  |      |
| Inbound Data             | SnapshotChannelList                                                      |                  |      |
| Success Return           | ResponseStatus                                                           |                  |      |
| Notes:                   |                                                                          |                  |      |

#### SnapshotChannelList XML Block

```
<SnapshotChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SnapshotChannel/> <!-- opt -->
</SnapshotChannelList>
```

## 8.11.2 /ISAPI/Snapshot/channels/<ID>

| /ISAPI/Snapshot/channel/ID |                                                                       | General Resource | v2.0 |
|----------------------------|-----------------------------------------------------------------------|------------------|------|
| GET                        |                                                                       |                  |      |
| Description                | It is used to get the properties of a particular snapshot channel.    |                  |      |
| Query                      | None                                                                  |                  |      |
| Inbound Data               | None                                                                  |                  |      |
| Success Return             | SnapshotChannel                                                       |                  |      |
| PUT                        |                                                                       |                  |      |
| Description                | It is used to update the properties of a particular snapshot channel. |                  |      |
| Query                      | None                                                                  |                  |      |
| Inbound Data               | SnapshotChannel                                                       |                  |      |
| Success Return             | ResponseStatus                                                        |                  |      |
| Notes:                     |                                                                       |                  |      |

### SnapshotChannel XML Block

```
<SnapshotChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
  <timingCapture> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <supportSchedule> <!-- opt, ro, xs:boolean> </supportSchedule>
    <compress>
      <pictureCodecType>
        <!-- req, xs:string, "JPEG,BMP,GIF,PNG" -->
      </pictureCodecType>
      <pictureWidth> <!-- req, xs:integer --> </pictureWidth>
      <pictureHeight> <!-- req, xs:integer --> </pictureHeight>
      <quality> <!-- opt, xs:integer, percentage, 0..100 --> </quality>
      <captureInterval> <!-- opt, xs:integer, milliseconds --> </captureInterval>
    </compress>
  </timingCapture>
  <eventCapture> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <supportSchedule> <!-- opt, ro, xs:boolean> </supportSchedule>
    <compress>
      <pictureCodecType>
        <!-- req, xs:string, "JPEG,BMP,GIF,PNG" -->
      </pictureCodecType>
      <pictureWidth> <!-- req, xs:integer --> </pictureWidth>
      <pictureHeight> <!-- req, xs:integer --> </pictureHeight>
      <quality> <!-- opt, xs:integer, percentage, 0..100 --> </quality>
    </compress>
  </eventCapture>
</SnapshotChannel>
```

```

    <captureInterval> <!-- opt, xs:integer, milliseconds --> </captureInterval>
  </compress>
</eventCapture>
</SnapshotChannel>

```

### 8.11.3 /ISAPI/Snapshot/channels/<ID>/capabilities

| /ISAPI/Snapshot/channels/<ID>/capabilities |                                          | General Resource | v2.0 |
|--------------------------------------------|------------------------------------------|------------------|------|
| <b>GET</b>                                 |                                          |                  |      |
| <b>Description</b>                         | It is used to get snapshot capabilities. |                  |      |
| <b>Query</b>                               | None                                     |                  |      |
| <b>Inbound Data</b>                        | None                                     |                  |      |
| <b>Success Return</b>                      | <b>SnapshotChannelCapabilities</b>       |                  |      |

#### SnapshotChannel XML Block

```

<?xml version="1.0" encoding="UTF-8"?>
<SnapshotChannel version="2.0" xmlns="http://www.hikvision.com/ver20/XMLSchema">
  <id opt="1">1</id>
  <videoInputChannelID opt="1">1</videoInputChannelID>
  <timingCapture>
    <enabled opt="true,false">>false</enabled>
    <supportSchedule opt="true,false">>true</supportSchedule>
    <compress>
      <pictureCodecType opt="JPEG">JPEG</pictureCodecType>
      <pictureWidth opt="1280">1280</pictureWidth>
      <pictureHeight opt="720">720</pictureHeight>
      <quality opt="40,60,80">80</quality>
      <captureInterval min="1000" max="604800000">0</captureInterval>
      <captureNumber min="1" max="120" def="4">0</captureNumber>
    </compress>
  </timingCapture>
  <eventCapture>
    <enabled opt="true,false">>false</enabled>
    <supportSchedule opt="false">>false</supportSchedule>
    <compress>
      <pictureCodecType opt="JPEG">JPEG</pictureCodecType>
      <pictureWidth opt="1280">1280</pictureWidth>
      <pictureHeight opt="720">720</pictureHeight>
      <quality opt="40,60,80">80</quality>
      <captureInterval min="1000" max="65535">0</captureInterval>
      <captureNumber min="1" max="120" def="4">4</captureNumber>
    </compress>
  </eventCapture>

```

```

</eventCapture>
<PromptDescription>
  <prompt1>true<prompt1><!--opt, just return successfully when supported. If it doesn't
support, the upper note still exists.-->
</PromptDescription>
</SnapshotChannel>

```

## 8.4 /ISAPI/Event

| /ISAPI/Event                                                                             |                                                                                                    | Service v2.0 |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------|
| GET                                                                                      |                                                                                                    | Viewer       |
| Description                                                                              | It is used to get the configuration of the device event behavior, scheduling and notifications.    |              |
| Query                                                                                    | None                                                                                               |              |
| Inbound Data                                                                             | None                                                                                               |              |
| Success Return                                                                           | EventNotification                                                                                  |              |
| PUT                                                                                      |                                                                                                    | Operator     |
| Description                                                                              | It is used to update the configuration of the device event behavior, scheduling and notifications. |              |
| Query                                                                                    | None                                                                                               |              |
| Inbound Data                                                                             | EventNotification                                                                                  |              |
| Success Return                                                                           | ResponseStatus                                                                                     |              |
| Notes:                                                                                   |                                                                                                    |              |
| The event trigger list defines the set of device behaviors that trigger events.          |                                                                                                    |              |
| The event schedule defines when event notifications are active.                          |                                                                                                    |              |
| The event notification methods define what types of notification (e-mail) are supported. |                                                                                                    |              |

### EventNotification XML Block

```

<EventNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTriggerList/>      <!-- opt -->
  <EventNotificationMethods/>  <!-- opt -->
</EventNotification>

```

### 8.4.1 /ISAPI/Event/capabilities

| /ISAPI/Event/capabilities | General Resource v2.0 |
|---------------------------|-----------------------|
| <b>GET</b>                |                       |

|                       |                                       |
|-----------------------|---------------------------------------|
| <b>Description</b>    | It is used to get network capability. |
| <b>Query</b>          | None                                  |
| <b>Inbound Data</b>   | None                                  |
| <b>Success Return</b> | <b>&lt; EventCap&gt;</b>              |
| <b>Notes:</b>         |                                       |

#### EventCap XML Block

```
<EventCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportHDFull><!-- opt, xs:boolean --></isSupportHDFull>
  <isSupportHDError><!-- opt, xs:boolean --></isSupportHDError>
  <isSupportNicBroken><!-- opt, xs:boolean --></isSupportNicBroken>
  <isSupportIpConflict><!-- opt, xs:boolean --></isSupportIpConflict>
  <isSupportIllaAccess><!-- opt, xs:boolean --></isSupportIllaAccess>
  <isSupportViException><!-- opt, xs:boolean --></isSupportViException>
  <isSupportViMismatch><!-- opt, xs:boolean --></isSupportViMismatch>
  <isSupportRecordException><!-- opt, xs:boolean --></isSupportRecordException>
  <isSupportRaidException><!-- opt, xs:boolean --></isSupportRaidException>
  <isSupportSpareException><!-- opt, xs:boolean --></isSupportSpareException>
  <isSupportPoePowerException><!--opt, xs:boolean--></isSupportPoePowerException>
</EventCap>
```

## 8.4.2 /ISAPI/Event/triggersCap

| /ISAPI/Event/triggersCap                                                                                             |                                                           | General Resource | v2.0 |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------|------|
| GET                                                                                                                  |                                                           |                  |      |
| Description                                                                                                          | It is used to get the triggers capabilities of all event. |                  |      |
| Query                                                                                                                | None                                                      |                  |      |
| Inbound Data                                                                                                         | None                                                      |                  |      |
| Success Return                                                                                                       | EventTriggersCap                                          |                  |      |
| Notes:                                                                                                               |                                                           |                  |      |
| <maxPresetActionNum>,<maxPatrolActionNum> and <maxPatternActionNum> are only required if the <isSupportPTZ> is true; |                                                           |                  |      |

#### EventTriggerCap XML Block

```
<EventTriggersCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DiskfullTriggerCap><!--opt,xs: EventTriggerCapType --></DiskfullTriggerCap>
  <DiskerrorTriggerCap><!--opt,xs: EventTriggerCapType --></DiskerrorTriggerCap>
  <NicbrokenTriggerCap><!--opt,xs: EventTriggerCapType --></NicbrokenTriggerCap>
```

```

<IpconflictTriggerCap><!--opt,xs: EventTriggerCapType --></IpconflictTriggerCap>
<IllaccesTriggerCap><!--opt,xs: EventTriggerCapType --></IllaccesTriggerCap>
<BadvideoTriggerCap><!--opt,xs: EventTriggerCapType --></BadvideoTriggerCap>
<VideomismatchTriggerCap><!--opt,xs: EventTriggerCapType -->
</VideomismatchTriggerCap>
<IOTriggerCap><!--opt,xs: EventTriggerCapType --></IOTriggerCap>
<RegionEntranceTriggerCap><!--opt,xs: EventTriggerCapType --></RegionEntranceTriggerCap>
<RegionExitingTriggerCap><!--opt,xs: EventTriggerCapType --></RegionExitingTriggerCap>
<LoiteringTriggerCap><!--opt,xs: EventTriggerCapType --></LoiteringTriggerCap>
<GroupDetectionTriggerCap><!--opt,xs: EventTriggerCapType --></GroupDetectionTriggerCap>
<RapidMoveTriggerCap><!--opt,xs: EventTriggerCapType --></RapidMoveTriggerCap>
<ParkingTriggerCap><!--opt,xs: EventTriggerCapType --></ParkingTriggerCap>
<UnattendedBaggageTriggerCap><!--opt,xs: EventTriggerCapType --></UnattendedBaggageTrigg
erCap>
<AttendedBaggageTriggerCap><!--opt,xs: EventTriggerCapType --></AttendedBaggageTriggerCa
p>
<BlackListTriggerCap><!--opt,xs: EventTriggerCapType --></BlackListTriggerCap>
<WhiteListTriggerCap><!--opt,xs: EventTriggerCapType --></WhiteListTriggerCap>
<AllVehicleListTriggerCap><!--opt,xs: EventTriggerCapType --></AllVehicleListTriggerCap>
<OtherVehicleListTriggerCap><!--opt,xs: EventTriggerCapType --></OtherVehicleListTriggerCap>
<PeopleDetectionTriggerCap><!--opt,xs: EventTriggerCapType --></PeopleDetectionTriggerCap>
<StorageDetectionTriggerCap><!--opt,xs: EventTriggerCapType --></StorageDetectionTriggerCap
>
<MotionDetectionTriggerCap><!--opt,xs: EventTriggerCapType --></PeopleDetectionTriggerCap>
<VideoLostTriggerCap><!--opt,xs: EventTriggerCapType --></VideoLostTriggerCap>
<HideTriggerCap><!--opt,xs: EventTriggerCapType --></HideTriggerCap>
<AlarmInTriggerCap><!--opt,xs: EventTriggerCapType --></AlarmInTriggerCap>
<VehicleDetectionTriggerCap><!--opt,xs: EventTriggerCapType --></VehicleDetectionTriggerCap
>
<VCATriggerCap><!--opt,xs: EventTriggerCapType --></VCATriggerCap>
<AudioExceptionCap><!--opt,xs: EventTriggerCapType --></AudioExceptionCap>
</EventTriggersCap>

```

## EventTriggerCap XML Block

```

<EventTriggerCapType version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportCenter><!-- opt, xs:boolean --></isSupportCenter>
  <isSupportRecord><!-- opt, xs:boolean --></isSupportRecord>
  <isSupportMonitorAlarm><!-- opt, xs:boolean --></isSupportMonitorAlarm>
  <isSupportBeep><!-- opt, xs:boolean --></isSupportBeep>
  <isSupportIO><!-- opt, xs:boolean --></isSupportIO>
  <isSupportFTP><!-- opt, xs:boolean --></isSupportFTP>
  <isSupportEmail><!-- opt, xs:boolean --></isSupEmail>
  <isSupportLightAudioAlarm><!-- opt, xs:boolean --></isSupportLightAudioAlarm>

```

```
<isSupportFocus><!-- opt, xs:boolean --></isSupportFocus>
<isSupportPTZ><!-- opt, xs:boolean --></isSupportPTZ>
<maxPresetActionNum><!--dep,xs:integer></maxPresetActionNum>
<maxPatrolActionNum><!--dep,xs:integer></maxPatrolActionNum>
<maxPatternActionNum><!--dep,xs:integer></maxPatternActionNum>
<isSupportTrack><!-- opt, xs:boolean --></isSupportTrack>
<isSupportCloud><!-- opt, xs:boolean --></isSupportCloud>
</EventTriggerCapType>
```

### 8.4.3 /ISAPI/Event/triggers

| /ISAPI/Event/triggers                                                                                        |                                                  | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------|------|
| GET                                                                                                          |                                                  |                  |      |
| Description                                                                                                  | It is used to get the list of event triggers.    |                  |      |
| Query                                                                                                        | None                                             |                  |      |
| Inbound Data                                                                                                 | None                                             |                  |      |
| Success Return                                                                                               | EventTriggerList                                 |                  |      |
| PUT                                                                                                          |                                                  |                  |      |
| Description                                                                                                  | It is used to update the list of event triggers. |                  |      |
| Query                                                                                                        | None                                             |                  |      |
| Inbound Data                                                                                                 | EventTriggerList                                 |                  |      |
| Success Return                                                                                               | ResponseStatus                                   |                  |      |
| POST                                                                                                         |                                                  |                  |      |
| Description                                                                                                  | It is used to add an event trigger.              |                  |      |
| Query                                                                                                        | None                                             |                  |      |
| Inbound Data                                                                                                 | EventTrigger                                     |                  |      |
| Success Return                                                                                               | ResponseStatus                                   |                  |      |
| DELETE                                                                                                       |                                                  |                  |      |
| Description                                                                                                  | It is used to delete the list of event triggers. |                  |      |
| Query                                                                                                        | None                                             |                  |      |
| Inbound Data                                                                                                 | None                                             |                  |      |
| Success Return                                                                                               | ResponseStatus                                   |                  |      |
| Notes:                                                                                                       |                                                  |                  |      |
| Event triggering defines how the device reacts to particular events, such as video loss or motion detection. |                                                  |                  |      |

#### EventTriggerList XML Block

```
<EventTriggerList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTrigger/> <!-- opt -->
```





IO-1 :the first IO input port

If the event type is VMD, videoloss or tamperdetection, the ID style is VMD/videoloss/tamper/regionEntrance/regionExiting/loitering/group/rapidMove/parking/unattendedBaggage/attendedBaggage-InputChannelID.

Examples:

If video input channel id is "video1", the id is as follows:

VMD-1: Video Motion Detection of video input channel "video1".

videoloss-1: Video Loss Detection of video input channel "video1".

tamper-1: Tamper Detection of video input channel "video1".

regionEntrance-1: Region Entrance Detection of video input channel "video1".

regionExiting-1: Region Exiting Detection of video input channel "video1".

loitering-1: Loitering Detection of video input channel "video1".

group-1: Group Detection of video input channel "video1".

rapidMove-1: Rapid Move Detection of video input channel "video1".

parking-1: Parking Detection of video input channel "video1".

unattendedBaggage-1: Unattended Baggage Detection of video input channel "video1".

attendedBaggage-1: Attended Baggage Detection of video input channel "video1".

blackList-1:channel 1 black list

whiteList-1:channel1 white list

**allVehicleList-1: channel1 allVehicle list**

**otherVehicleList-1: channel1 otherVehicle list**

peopleDetection-1: People Detection of video input channel "video1".

### EventTrigger XML Block

```
<EventTrigger version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <eventType>
    <!-- req, xs:string,
      "IO,VMD,videoloss,raidfailure,recordingfailure,
      badvideo,POS,analytics,fanfailure,overheat, tamperdetection, diskfull, diskerror,
      nicbroken, ipconflict, illaccess, videomismatch, resolutionmismatch, radifailure,PIR,
      WLSensor, spareException, poePowerException,heatmap,
      counting,linedetection,fielddetection,regionEntrance,regionExiting,loitering,group,rapid
      Move,parking,unattendedBaggage,attendedBaggage,blackList,whitelist,peopleDetection,
      vehicledetection,HVTVehicleDetection,storageDetection,allVehicleList,otherVehicleList"
    -->
  </eventType>
  <eventDescription><!-- opt, xs:string --></eventDescription>
  <inputIOPortID> <!-- dep, xs:string; id --> </inputIOPortID>
  <dynInputIOPortID> <!-- dep, xs:string; id --> </dynInputIOPortID>
  <videoInputChannelID> <!-- dep, xs:string; id, if <eventType> is "VMD,videoloss,
  tamperdetection,regionEntrance,regionExiting,loitering,group,rapidMove,parking,unattendedBag
```

```

gage,attendedBaggage" --> </videoInputChannelID>
  <dynVideoInputChannelID> <!-- dep, xs:string; id --> </dynVideoInputChannelID>
  <intervalBetweenEvents> <!-- opt, xs:integer, seconds --> </intervalBetweenEvents>
  <WLSensorID> <!-- dep, xs:string; id --> </WLSensorID>
  <EventTriggerNotificationList/>    <!-- opt -->
</EventTrigger>

```

## 8.4.5 /ISAPI/Event/triggers/<ID>/notifications

| /ISAPI/Event/triggers/ID/notifications |                                                                                           | General Resource | v2.0 |
|----------------------------------------|-------------------------------------------------------------------------------------------|------------------|------|
| GET                                    |                                                                                           |                  |      |
| Description                            | It is used to get the list of notification methods and behaviors for an event trigger.    |                  |      |
| Query                                  | None                                                                                      |                  |      |
| Inbound Data                           | None                                                                                      |                  |      |
| Success Return                         | EventTriggerNotificationList                                                              |                  |      |
| PUT                                    |                                                                                           |                  |      |
| Description                            | It is used to update the list of notification methods and behaviors for an event trigger. |                  |      |
| Query                                  | None                                                                                      |                  |      |
| Inbound Data                           | EventTriggerNotificationList                                                              |                  |      |
| Success Return                         | ResponseStatus                                                                            |                  |      |
| DELETE                                 |                                                                                           |                  |      |
| Description                            | It is used to delete the list of notification method and behavior for an event trigger.   |                  |      |
| Query                                  | None                                                                                      |                  |      |
| Inbound Data                           | None                                                                                      |                  |      |
| Success Return                         | ResponseStatus                                                                            |                  |      |

**Notes:**

ptz: PTZ action

record: recording

monitorAlarm : monitor alarm

center:send alarm to center

LightAudioAlarm : light blink and sound the alarm

<outputIOPortID> or <dynOutputIOPortID> is only required if the <notificationMethod> is "IO".

<videoInputID> or <dynVideoInputID> is only required if the <notificationMethod> is "record".

<ptzAction> is only required if the <notificationMethod> is "ptz";

**EventTriggerNotificationList XML Block**

```
<EventTriggerNotificationList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTriggerNotification/> <!-- opt -->
</EventTriggerNotificationList>
```

**EventTriggerNotification XML Block**

```
<EventTriggerNotification> <!-- opt -->
  <id> <!-- req, xs:string;id --> </id>
  <notificationMethod>
    <!-- req, xs:string, "email,IM,IO,syslog,HTTP,FTP,beep, ptz, record
,    monitorAlarm, center, LightAudioAlarm,focus,trace,cloud" -->
  </notificationMethod>
  <notificationRecurrence>
    <!-- opt, xs:string, "beginning,beginningandend,recurring" -->
  </notificationRecurrence>
  <notificationInterval> <!-- dep, xs:integer, milliseconds --> </notificationInterval>
  <outputIOPortID> <!-- dep, xs:string;id --> </outputIOPortID>
  <dynOutputIOPortID> <!-- dep, xs:string;id --> </dynOutputIOPortID>
  <videoInputID> <!-- dep, xs:string;id --> </videoInputID>
  <dynVideoInputID> <!-- dep, xs:string;id --> </dynVideoInputID>
  <ptzAction> <!-- dep -->
    <ptzChannelID> <!--req, xs:string; id --> </ptzChannelID>
    <actionName> <!-- req, xs:string, "preset, pattern, patrol" --> </actionName>
    <actionNum> <!-- dep, xs:integer> </actionNum>
  </ptzAction>
</EventTriggerNotification>
```

## 8.4.6 /ISAPI/Event/schedules

/ISAPI/Event/schedules

General Resource v2.0

**Notes:**

## 8.4.7 /ISAPI/Event/schedules/inputs

| /ISAPI/Event/schedules/inputs |                                        | General Resource | v2.0 |
|-------------------------------|----------------------------------------|------------------|------|
| GET                           |                                        |                  |      |
| Description                   | It is used to get trigger schedule.    |                  |      |
| Query                         | None                                   |                  |      |
| Inbound Data                  | None                                   |                  |      |
| Success Return                | InputScheduleList                      |                  |      |
| PUT                           |                                        |                  |      |
| Description                   | It is used to update trigger schedule. |                  |      |
| Query                         | None                                   |                  |      |
| Inbound Data                  | InputScheduleList                      |                  |      |
| Success Return                | ResponseStatus                         |                  |      |
| Notes:                        |                                        |                  |      |

### InputScheduleList XML Block

```
< InputScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < Schedule/>    <!-- opt -->
</InputScheduleList>
```

## 8.4.8 /ISAPI/Event/schedules/inputs/<ID>

| /ISAPI/Event/schedules/inputs/ID |                                        | General Resource | v2.0 |
|----------------------------------|----------------------------------------|------------------|------|
| GET                              |                                        |                  |      |
| Description                      | It is used to get trigger schedule.    |                  |      |
| Query                            | None                                   |                  |      |
| Inbound Data                     | None                                   |                  |      |
| Success Return                   | Schedule                               |                  |      |
| PUT                              |                                        |                  |      |
| Description                      | It is used to update trigger schedule. |                  |      |
| Query                            | None                                   |                  |      |
| Inbound Data                     | Schedule                               |                  |      |
| Success Return                   | ResponseStatus                         |                  |      |
| Notes:                           |                                        |                  |      |

## 8.4.9 /ISAPI/Event/schedules/outputs

| /ISAPI/Event/schedules/outputs |                                        | General Resource | v2.0 |
|--------------------------------|----------------------------------------|------------------|------|
| GET                            |                                        |                  |      |
| Description                    | It is used to get trigger schedule.    |                  |      |
| Query                          | None                                   |                  |      |
| Inbound Data                   | None                                   |                  |      |
| Success Return                 | OutputScheduleList                     |                  |      |
| PUT                            |                                        |                  |      |
| Description                    | It is used to update trigger schedule. |                  |      |
| Query                          | None                                   |                  |      |
| Inbound Data                   | OutputScheduleList                     |                  |      |
| Success Return                 | ResponseStatus                         |                  |      |
| Notes:                         |                                        |                  |      |

### OutputScheduleList XML Block

```
<OutputScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</OutputScheduleList>
```

## 8.4.10 /ISAPI/Event/schedules/outputs/<ID>

| /ISAPI/Event/schedules/outputs/ID |                                        | General Resource | v2.0 |
|-----------------------------------|----------------------------------------|------------------|------|
| GET                               |                                        |                  |      |
| Description                       | It is used to get trigger schedule.    |                  |      |
| Query                             | None                                   |                  |      |
| Inbound Data                      | None                                   |                  |      |
| Success Return                    | Schedule                               |                  |      |
| PUT                               |                                        |                  |      |
| Description                       | It is used to update trigger schedule. |                  |      |
| Query                             | None                                   |                  |      |
| Inbound Data                      | Schedule                               |                  |      |
| Success Return                    | ResponseStatus                         |                  |      |
| Notes:                            |                                        |                  |      |

## 8.4.11 /ISAPI/Event/schedules/motionDetections

| /ISAPI/Event/schedules/motionDetections | General Resource | v2.0 |
|-----------------------------------------|------------------|------|
|-----------------------------------------|------------------|------|

| GET            |                                        |
|----------------|----------------------------------------|
| Description    | It is used to get trigger schedule.    |
| Query          | None                                   |
| Inbound Data   | None                                   |
| Success Return | <b>MotionDetectionScheduleList</b>     |
| PUT            |                                        |
| Description    | It is used to update trigger schedule. |
| Query          | None                                   |
| Inbound Data   | <b>MotionDetectionScheduleList</b>     |
| Success Return | <b>ResponseStatus</b>                  |
| Notes:         |                                        |

#### MotionDetectionScheduleList XML Block

```

<MotionDetectionScheduleList                                version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</MotionDetectionScheduleList>

```

### 8.4.12 /ISAPI/Event/schedules/motionDetections/<ID>

| /ISAPI/Event/schedule/motionDetections/ID |                                        | General Resource | v2.0 |
|-------------------------------------------|----------------------------------------|------------------|------|
| GET                                       |                                        |                  |      |
| Description                               | It is used to get trigger schedule.    |                  |      |
| Query                                     | None                                   |                  |      |
| Inbound Data                              | None                                   |                  |      |
| Success Return                            | Schedule                               |                  |      |
| PUT                                       |                                        |                  |      |
| Description                               | It is used to update trigger schedule. |                  |      |
| Query                                     | None                                   |                  |      |
| Inbound Data                              | Schedule                               |                  |      |
| Success Return                            | ResponseStatus                         |                  |      |
| Notes:                                    |                                        |                  |      |

### 8.4.13 /ISAPI/Event/schedules/tamperDetections

| /ISAPI/Event/schedules/tamperDetections |                                     | General Resource | v2.0 |
|-----------------------------------------|-------------------------------------|------------------|------|
| GET                                     |                                     |                  |      |
| Description                             | It is used to get trigger schedule. |                  |      |
| Query                                   | None                                |                  |      |
| Inbound Data                            | None                                |                  |      |

|                |                                        |
|----------------|----------------------------------------|
| Success Return | TamperDetectionScheduleList            |
| <b>PUT</b>     |                                        |
| Description    | It is used to update trigger schedule. |
| Query          | None                                   |
| Inbound Data   | TamperDetectionScheduleList            |
| Success Return | ResponseStatus                         |
| Notes:         |                                        |

#### TamperDetectionScheduleList XML Block

```
<TamperDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</ TamperDetectionScheduleList>
```

### 8.4.14 /ISAPI/Event/schedules/tamperDetections/<ID>

| /ISAPI/Event/schedule/tamperDetections/ID |                                        | General Resource | v2.0 |
|-------------------------------------------|----------------------------------------|------------------|------|
| GET                                       |                                        |                  |      |
| Description                               | It is used to get trigger schedule.    |                  |      |
| Query                                     | None                                   |                  |      |
| Inbound Data                              | None                                   |                  |      |
| Success Return                            | Schedule                               |                  |      |
| PUT                                       |                                        |                  |      |
| Description                               | It is used to update trigger schedule. |                  |      |
| Query                                     | None                                   |                  |      |
| Inbound Data                              | Schedule                               |                  |      |
| Success Return                            | ResponseStatus                         |                  |      |
| Notes:                                    |                                        |                  |      |

### 8.4.15 /ISAPI/Event/schedules/videolosses

| /ISAPI/Event/schedules/videolosses |                                        | General Resource | v2.0 |
|------------------------------------|----------------------------------------|------------------|------|
| GET                                |                                        |                  |      |
| Description                        | It is used to get trigger schedule.    |                  |      |
| Query                              | None                                   |                  |      |
| Inbound Data                       | None                                   |                  |      |
| Success Return                     | videolossScheduleList                  |                  |      |
| PUT                                |                                        |                  |      |
| Description                        | It is used to update trigger schedule. |                  |      |
| Query                              | None                                   |                  |      |
| Inbound Data                       | videolossScheduleList                  |                  |      |

|                |                |
|----------------|----------------|
| Success Return | ResponseStatus |
| Notes:         |                |

#### videolossScheduleList XML Block

```
<videolossScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</videolossScheduleList>
```

### 8.4.16 /ISAPI/Event/schedules/videolosses/<ID>

| /ISAPI/Event/schedule/videolosses/ID |                                        | General Resource | v2.0 |
|--------------------------------------|----------------------------------------|------------------|------|
| GET                                  |                                        |                  |      |
| Description                          | It is used to get trigger schedule.    |                  |      |
| Query                                | None                                   |                  |      |
| Inbound Data                         | None                                   |                  |      |
| Success Return                       | Schedule                               |                  |      |
| PUT                                  |                                        |                  |      |
| Description                          | It is used to update trigger schedule. |                  |      |
| Query                                | None                                   |                  |      |
| Inbound Data                         | Schedule                               |                  |      |
| Success Return                       | ResponseStatus                         |                  |      |
| Notes:                               |                                        |                  |      |

#### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID>          <!-- ro, dep, xs:string; id -->          </inputIOPortID>
  <outputIOPortID>         <!-- ro, dep, xs:string; id -->         </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>          <!-- req -->
        <beginTime>        <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>          <!-- req, xs:time, ISO8601 time -->    </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
```



```

<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time -->  </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time -->  </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

## 8.4.17 /ISAPI/Event/schedules/PIR

| /ISAPI/Event/schedules/PIR/ID |                                        | General Resource | v2.0 |
|-------------------------------|----------------------------------------|------------------|------|
| GET                           |                                        |                  |      |
| Description                   | It is used to get trigger schedule.    |                  |      |
| Query                         | None                                   |                  |      |
| Inbound Data                  | None                                   |                  |      |
| Success Return                | Schedule                               |                  |      |
| PUT                           |                                        |                  |      |
| Description                   | It is used to update trigger schedule. |                  |      |
| Query                         | None                                   |                  |      |
| Inbound Data                  | Schedule                               |                  |      |
| Success Return                | ResponseStatus                         |                  |      |
| Notes:                        |                                        |                  |      |

### Schedule XML Block

```

<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID>      <!-- ro, dep, xs:string; id -->      </inputIOPortID>
  <outputIOPortID>     <!-- ro, dep, xs:string; id -->     </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->  </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time -->  </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
</Schedule>

```

```

    </TimeRange>
  </TimeBlock>
</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

## 8.4.18 /ISAPI/Event/schedules/fieldDetections

| /ISAPI/Event/schedules/fieldDetections |                                        | General Resource | v2.0 |
|----------------------------------------|----------------------------------------|------------------|------|
| GET                                    |                                        |                  |      |
| Description                            | It is used to get trigger schedule.    |                  |      |
| Query                                  | None                                   |                  |      |
| Inbound Data                           | None                                   |                  |      |
| Success Return                         | FieldDetectionScheduleList             |                  |      |
| PUT                                    |                                        |                  |      |
| Description                            | It is used to update trigger schedule. |                  |      |
| Query                                  | None                                   |                  |      |
| Inbound Data                           | FieldDetectionScheduleList             |                  |      |
| Success Return                         | ResponseStatus                         |                  |      |
| Notes:                                 |                                        |                  |      |

### FieldDetectionScheduleList XML Block

```

<FieldDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>      <!-- opt -->
</FieldDetectionScheduleList>

```

## 8.4.19 /ISAPI/Event/schedules/fieldDetections/<ID>

| /ISAPI/Event/schedules/fieldDetections/ID |                                     | General Resource | v2.0 |
|-------------------------------------------|-------------------------------------|------------------|------|
| <b>GET</b>                                |                                     |                  |      |
| Description                               | It is used to get trigger schedule. |                  |      |
| Query                                     | None                                |                  |      |
| Inbound Data                              | None                                |                  |      |

|                |                                        |
|----------------|----------------------------------------|
| Success Return | Schedule                               |
| <b>PUT</b>     |                                        |
| Description    | It is used to update trigger schedule. |
| Query          | None                                   |
| Inbound Data   | Schedule                               |
| Success Return | ResponseStatus                         |
| Notes:         |                                        |

#### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

## 8.4.20 /ISAPI/Event/schedules/lineDetections

/ISAPI/Event/schedules/lineDetections

General Resource v2.0

GET

|                       |                                        |
|-----------------------|----------------------------------------|
| <b>Description</b>    | It is used to get trigger schedule.    |
| <b>Query</b>          | None                                   |
| <b>Inbound Data</b>   | None                                   |
| <b>Success Return</b> | <b>LineDetectionScheduleList</b>       |
| <b>PUT</b>            |                                        |
| <b>Description</b>    | It is used to update trigger schedule. |
| <b>Query</b>          | None                                   |
| <b>Inbound Data</b>   | <b>LineDetectionScheduleList</b>       |
| <b>Success Return</b> | <b>ResponseStatus</b>                  |
| <b>Notes:</b>         |                                        |

#### LineDetectionScheduleList XML Block

```
<LineDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</LineDetectionScheduleList>
```

## 8.4.21 /ISAPI/Event/schedules/lineDetections/<ID>

| /ISAPI/Event/schedule/lineDetections/ID |                                        | General Resource | v2.0 |
|-----------------------------------------|----------------------------------------|------------------|------|
| GET                                     |                                        |                  |      |
| Description                             | It is used to get trigger schedule.    |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | None                                   |                  |      |
| Success Return                          | Schedule                               |                  |      |
| PUT                                     |                                        |                  |      |
| Description                             | It is used to update trigger schedule. |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | Schedule                               |                  |      |
| Success Return                          | ResponseStatus                         |                  |      |
| Notes:                                  |                                        |                  |      |

#### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID>          <!-- ro, dep, xs:string; id -->          </inputIOPortID>
  <outputIOPortID>         <!-- ro, dep, xs:string; id -->         </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
```

```

<dayOfWeek>
  <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
</dayOfWeek>
<TimeRange>      <!-- req -->
  <beginTime>     <!-- req, xs:time, ISO8601 time -->  </beginTime>
  <endTime>       <!-- req, xs:time, ISO8601 time -->  </endTime>
</TimeRange>
</TimeBlock>
</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>     <!-- req, xs:time, ISO8601 time -->  </beginTime>
      <endTime>       <!-- req, xs:time, ISO8601 time -->  </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

## 8.4.22 /ISAPI/Event/schedules/sceneChangeDetections

| /ISAPI/Event/schedules/sceneChangeDetections |                                        | General Resource | v2.0 |
|----------------------------------------------|----------------------------------------|------------------|------|
| GET                                          |                                        |                  |      |
| Description                                  | It is used to get trigger schedule.    |                  |      |
| Query                                        | None                                   |                  |      |
| Inbound Data                                 | None                                   |                  |      |
| Success Return                               | SceneChangeDetectionScheduleList       |                  |      |
| PUT                                          |                                        |                  |      |
| Description                                  | It is used to update trigger schedule. |                  |      |
| Query                                        | None                                   |                  |      |
| Inbound Data                                 | SceneChangeDetectionScheduleList       |                  |      |
| Success Return                               | ResponseStatus                         |                  |      |
| Notes:                                       |                                        |                  |      |

### SceneChangeDetectionScheduleList XML Block

```

<SceneChangeDetectionScheduleList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>      <!-- opt -->
</SceneChangeDetectionScheduleList>

```

## 8.4.23 /ISAPI/Event/schedules/sceneChangeDetections/

<ID>

| /ISAPI/Event/schedule/sceneChangeDetections/ID |                                        | General Resource | v2.0 |
|------------------------------------------------|----------------------------------------|------------------|------|
| GET                                            |                                        |                  |      |
| Description                                    | It is used to get trigger schedule.    |                  |      |
| Query                                          | None                                   |                  |      |
| Inbound Data                                   | None                                   |                  |      |
| Success Return                                 | Schedule                               |                  |      |
| PUT                                            |                                        |                  |      |
| Description                                    | It is used to update trigger schedule. |                  |      |
| Query                                          | None                                   |                  |      |
| Inbound Data                                   | Schedule                               |                  |      |
| Success Return                                 | ResponseStatus                         |                  |      |
| Notes:                                         |                                        |                  |      |

### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID> <!-- ro, dep, xs:string; id --> </videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

```
</TimeBlock>
</HolidayBlockList>
</Schedule>
```

## 8.4.24 /ISAPI/Event/schedules/audioDetections

| /ISAPI/Event/schedules/audioDetections |                                        | General Resource | v2.0 |
|----------------------------------------|----------------------------------------|------------------|------|
| GET                                    |                                        |                  |      |
| Description                            | It is used to get trigger schedule.    |                  |      |
| Query                                  | None                                   |                  |      |
| Inbound Data                           | None                                   |                  |      |
| Success Return                         | AudioDetectionScheduleList             |                  |      |
| PUT                                    |                                        |                  |      |
| Description                            | It is used to update trigger schedule. |                  |      |
| Query                                  | None                                   |                  |      |
| Inbound Data                           | AudioDetectionScheduleList             |                  |      |
| Success Return                         | ResponseStatus                         |                  |      |
| Notes:                                 |                                        |                  |      |

### AudioDetectionScheduleList XML Block

```
<AudioDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</AudioDetectionScheduleList>
```

## 8.4.25 /ISAPI/Event/schedule/audioDetections/<ID>

| /ISAPI/Event/schedule/audioDetections/ID |                                        | General Resource | v2.0 |
|------------------------------------------|----------------------------------------|------------------|------|
| GET                                      |                                        |                  |      |
| Description                              | It is used to get trigger schedule.    |                  |      |
| Query                                    | None                                   |                  |      |
| Inbound Data                             | None                                   |                  |      |
| Success Return                           | Schedule                               |                  |      |
| PUT                                      |                                        |                  |      |
| Description                              | It is used to update trigger schedule. |                  |      |
| Query                                    | None                                   |                  |      |
| Inbound Data                             | Schedule                               |                  |      |
| Success Return                           | ResponseStatus                         |                  |      |
| Notes:                                   |                                        |                  |      |

### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID> <!-- ro, dep, xs:string; id --> </videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

## 8.4.26 /ISAPI/Event/schedules/faceDetections

| /ISAPI/Event/schedules/faceDetections |                                        | General Resource | v2.0 |
|---------------------------------------|----------------------------------------|------------------|------|
| GET                                   |                                        |                  |      |
| Description                           | It is used to get trigger schedule.    |                  |      |
| Query                                 | None                                   |                  |      |
| Inbound Data                          | None                                   |                  |      |
| Success Return                        | FaceDetectionScheduleList              |                  |      |
| PUT                                   |                                        |                  |      |
| Description                           | It is used to update trigger schedule. |                  |      |
| Query                                 | None                                   |                  |      |
| Inbound Data                          | FaceDetectionScheduleList              |                  |      |



|                |                |
|----------------|----------------|
| Success Return | ResponseStatus |
| Notes:         |                |

#### FaceDetectionScheduleList XML Block

```
<FaceDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</FaceDetectionScheduleList>
```

## 8.4.27 /ISAPI/Event/schedules/faceDetections/<ID>

| /ISAPI/Event/schedule/faceDetections/ID |                                        | General Resource | v2.0 |
|-----------------------------------------|----------------------------------------|------------------|------|
| GET                                     |                                        |                  |      |
| Description                             | It is used to get trigger schedule.    |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | None                                   |                  |      |
| Success Return                          | Schedule                               |                  |      |
| PUT                                     |                                        |                  |      |
| Description                             | It is used to update trigger schedule. |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | Schedule                               |                  |      |
| Success Return                          | ResponseStatus                         |                  |      |
| Notes:                                  |                                        |                  |      |

#### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID>          <!-- ro, dep, xs:string; id -->          </inputIOPortID>
  <outputIOPortID>         <!-- ro, dep, xs:string; id -->         </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>          <!-- req -->
        <beginTime>        <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>          <!-- req, xs:time, ISO8601 time -->    </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
```

```

</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

## 8.4.28 /ISAPI/Event/schedules/regionEntrances

| /ISAPI/Event/schedules/regionEntrances |                                        | General Resource | v2.0 |
|----------------------------------------|----------------------------------------|------------------|------|
| GET                                    |                                        |                  |      |
| Description                            | It is used to get trigger schedule.    |                  |      |
| Query                                  | None                                   |                  |      |
| Inbound Data                           | None                                   |                  |      |
| Success Return                         | RegionEntranceScheduleList             |                  |      |
| PUT                                    |                                        |                  |      |
| Description                            | It is used to update trigger schedule. |                  |      |
| Query                                  | None                                   |                  |      |
| Inbound Data                           | RegionEntranceScheduleList             |                  |      |
| Success Return                         | ResponseStatus                         |                  |      |
| Notes:                                 |                                        |                  |      |

RegionEntranceScheduleList XML Block

```

<RegionEntranceScheduleList                                version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>      <!-- opt -->
</RegionEntranceScheduleList>

```

## 8.4.29 /ISAPI/Event/schedules/regionEntrances/<ID>

| /ISAPI/Event/schedules/regionEntrances/ID |                                     | General Resource | v2.0 |
|-------------------------------------------|-------------------------------------|------------------|------|
| <b>GET</b>                                |                                     |                  |      |
| Description                               | It is used to get trigger schedule. |                  |      |
| Query                                     | None                                |                  |      |
| Inbound Data                              | None                                |                  |      |
| Success Return                            | <b>Schedule</b>                     |                  |      |

| PUT                                                                                                                                                           |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Description                                                                                                                                                   | It is used to update trigger schedule. |
| Query                                                                                                                                                         | None                                   |
| Inbound Data                                                                                                                                                  | Schedule                               |
| Success Return                                                                                                                                                | ResponseStatus                         |
| Notes:                                                                                                                                                        |                                        |
| <p>The ID in “/regionEntrances/ID” is defined as following declaration:<br/> regionEntrance-1: Region Entrance Detection of video input channel “video1”.</p> |                                        |

### 8.4.30 /ISAPI/Event/schedules/regionExitings

| /ISAPI/Event/schedules/regionExitings |                                        | General Resource | v2.0 |
|---------------------------------------|----------------------------------------|------------------|------|
| GET                                   |                                        |                  |      |
| Description                           | It is used to get trigger schedule.    |                  |      |
| Query                                 | None                                   |                  |      |
| Inbound Data                          | None                                   |                  |      |
| Success Return                        | RegionExitingScheduleList              |                  |      |
| PUT                                   |                                        |                  |      |
| Description                           | It is used to update trigger schedule. |                  |      |
| Query                                 | None                                   |                  |      |
| Inbound Data                          | RegionExitingScheduleList              |                  |      |
| Success Return                        | ResponseStatus                         |                  |      |
| Notes:                                |                                        |                  |      |

RegionExitingScheduleList XML Block

```
<RegionExitingScheduleList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</RegionExitingScheduleList>
```

### 8.4.31 /ISAPI/Event/schedules/regionExitings/<ID>

| /ISAPI/Event/schedules/regionExitings/ID |                                     | General Resource | v2.0 |
|------------------------------------------|-------------------------------------|------------------|------|
| GET                                      |                                     |                  |      |
| Description                              | It is used to get trigger schedule. |                  |      |
| Query                                    | None                                |                  |      |
| Inbound Data                             | None                                |                  |      |
| Success Return                           | Schedule                            |                  |      |

| PUT                                                                                                                                                              |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Description                                                                                                                                                      | It is used to update trigger schedule. |
| Query                                                                                                                                                            | None                                   |
| Inbound Data                                                                                                                                                     | <b>Schedule</b>                        |
| Success Return                                                                                                                                                   | <b>ResponseStatus</b>                  |
| Notes:                                                                                                                                                           |                                        |
| <p>The ID in “/regionExiting/<i>ID</i>” is defined as following declaration:<br/> regionExiting-1: Region Exiting Detection of video input channel “video1”.</p> |                                        |

### 8.4.32 /ISAPI/Event/schedules/loiterings

| /ISAPI/Event/schedules/loiterings |                                        | General Resource | v2.0 |
|-----------------------------------|----------------------------------------|------------------|------|
| GET                               |                                        |                  |      |
| Description                       | It is used to get trigger schedule.    |                  |      |
| Query                             | None                                   |                  |      |
| Inbound Data                      | None                                   |                  |      |
| Success Return                    | LoiteringScheduleList                  |                  |      |
| PUT                               |                                        |                  |      |
| Description                       | It is used to update trigger schedule. |                  |      |
| Query                             | None                                   |                  |      |
| Inbound Data                      | LoiteringScheduleList                  |                  |      |
| Success Return                    | ResponseStatus                         |                  |      |
| Notes:                            |                                        |                  |      |

LoiteringScheduleList XML Block

```
<LoiteringScheduleList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</LoiteringScheduleList>
```

### 8.4.33 /ISAPI/Event/schedules/loiterings/<ID>

| /ISAPI/Event/schedules/loiterings/ID |                                     | General Resource | v2.0 |
|--------------------------------------|-------------------------------------|------------------|------|
| GET                                  |                                     |                  |      |
| Description                          | It is used to get trigger schedule. |                  |      |
| Query                                | None                                |                  |      |
| Inbound Data                         | None                                |                  |      |
| Success Return                       | Schedule                            |                  |      |
| PUT                                  |                                     |                  |      |

|                                                                                                                                                                   |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>Description</b>                                                                                                                                                | It is used to update trigger schedule. |
| <b>Query</b>                                                                                                                                                      | None                                   |
| <b>Inbound Data</b>                                                                                                                                               | <b>Schedule</b>                        |
| <b>Success Return</b>                                                                                                                                             | <b>ResponseStatus</b>                  |
| <b>Notes:</b><br><br>The ID in “/loitering/ <i>ID</i> ” is defined as following declaration:<br>loitering-1: Loitering Detection of video input channel “video1”. |                                        |

### 8.4.34 /ISAPI/Event/schedules/groups

| /ISAPI/Event/schedules/groups |                                        | General Resource | v2.0 |
|-------------------------------|----------------------------------------|------------------|------|
| GET                           |                                        |                  |      |
| Description                   | It is used to get trigger schedule.    |                  |      |
| Query                         | None                                   |                  |      |
| Inbound Data                  | None                                   |                  |      |
| Success Return                | GroupScheduleList                      |                  |      |
| PUT                           |                                        |                  |      |
| Description                   | It is used to update trigger schedule. |                  |      |
| Query                         | None                                   |                  |      |
| Inbound Data                  | GroupScheduleList                      |                  |      |
| Success Return                | ResponseStatus                         |                  |      |
| Notes:                        |                                        |                  |      |

GroupScheduleList XML Block

```
<GroupDetectionScheduleList                                version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>      <!-- opt -->
</GroupScheduleList>
```

### 8.4.35 /ISAPI/Event/schedules/groups/<ID>

| /ISAPI/Event/schedules/groups/ <i>ID</i> |                                        | General Resource | v2.0 |
|------------------------------------------|----------------------------------------|------------------|------|
| GET                                      |                                        |                  |      |
| Description                              | It is used to get trigger schedule.    |                  |      |
| Query                                    | None                                   |                  |      |
| Inbound Data                             | None                                   |                  |      |
| Success Return                           | Schedule                               |                  |      |
| PUT                                      |                                        |                  |      |
| Description                              | It is used to update trigger schedule. |                  |      |

|                                                                                                                                   |                |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------|
| Query                                                                                                                             | None           |
| Inbound Data                                                                                                                      | Schedule       |
| Success Return                                                                                                                    | ResponseStatus |
| Notes:                                                                                                                            |                |
| The ID in “/groups/ <i>ID</i> ” is defined as following declaration:<br>group-1: Group Detection of video input channel “video1”. |                |

### 8.4.36 /ISAPI/Event/schedules/rapidMoves

| /ISAPI/Event/schedules/rapidMoves |                                        | General Resource | v2.0 |
|-----------------------------------|----------------------------------------|------------------|------|
| GET                               |                                        |                  |      |
| Description                       | It is used to get trigger schedule.    |                  |      |
| Query                             | None                                   |                  |      |
| Inbound Data                      | None                                   |                  |      |
| Success Return                    | RapidMoveScheduleList                  |                  |      |
| PUT                               |                                        |                  |      |
| Description                       | It is used to update trigger schedule. |                  |      |
| Query                             | None                                   |                  |      |
| Inbound Data                      | RapidMoveScheduleList                  |                  |      |
| Success Return                    | ResponseStatus                         |                  |      |
| Notes:                            |                                        |                  |      |

RapidMoveScheduleList XML Block

```
<RapidMoveScheduleList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</RapidMoveScheduleList>
```

### 8.4.37 /ISAPI/Event/schedules/rapidMoves/<ID>

| /ISAPI/Event/schedules/rapidMoves/ID |                                        | General Resource | v2.0 |
|--------------------------------------|----------------------------------------|------------------|------|
| GET                                  |                                        |                  |      |
| Description                          | It is used to get trigger schedule.    |                  |      |
| Query                                | None                                   |                  |      |
| Inbound Data                         | None                                   |                  |      |
| Success Return                       | Schedule                               |                  |      |
| PUT                                  |                                        |                  |      |
| Description                          | It is used to update trigger schedule. |                  |      |
| Query                                | None                                   |                  |      |

|                                                                                                                                                |                |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Inbound Data                                                                                                                                   | Schedule       |
| Success Return                                                                                                                                 | ResponseStatus |
| Notes:                                                                                                                                         |                |
| The ID in “/rapidMoves/ <i>ID</i> ” is defined as following declaration:<br>rapidMove-1: Rapid Move Detection of video input channel “video1”. |                |

### 8.4.38 /ISAPI/Event/schedules/parkings

| /ISAPI/Event/schedules/parkings |                                        | General Resource | v2.0 |
|---------------------------------|----------------------------------------|------------------|------|
| GET                             |                                        |                  |      |
| Description                     | It is used to get trigger schedule.    |                  |      |
| Query                           | None                                   |                  |      |
| Inbound Data                    | None                                   |                  |      |
| Success Return                  | ParkingScheduleList                    |                  |      |
| PUT                             |                                        |                  |      |
| Description                     | It is used to update trigger schedule. |                  |      |
| Query                           | None                                   |                  |      |
| Inbound Data                    | ParkingScheduleList                    |                  |      |
| Success Return                  | ResponseStatus                         |                  |      |
| Notes:                          |                                        |                  |      |

ParkingScheduleList XML Block

```
<ParkingScheduleList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</ParkingScheduleList>
```

### 8.4.39 /ISAPI/Event/schedules/parkings/<ID>

| /ISAPI/Event/schedules/parkings/ID |                                        | General Resource | v2.0 |
|------------------------------------|----------------------------------------|------------------|------|
| GET                                |                                        |                  |      |
| Description                        | It is used to get trigger schedule.    |                  |      |
| Query                              | None                                   |                  |      |
| Inbound Data                       | None                                   |                  |      |
| Success Return                     | Schedule                               |                  |      |
| PUT                                |                                        |                  |      |
| Description                        | It is used to update trigger schedule. |                  |      |
| Query                              | None                                   |                  |      |
| Inbound Data                       | Schedule                               |                  |      |

| Success Return                                                                                                                                           | ResponseStatus |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Notes:</b><br>The ID in “/parkings/ <i>ID</i> ” is defined as following declaration:<br>parking-1: Parking Detection of video input channel “video1”. |                |

## 8.4.40 /ISAPI/Event/schedules/unattendedBaggages

| /ISAPI/Event/schedules/unattendedBaggages |                                        | General Resource | v2.0 |
|-------------------------------------------|----------------------------------------|------------------|------|
| GET                                       |                                        |                  |      |
| Description                               | It is used to get trigger schedule.    |                  |      |
| Query                                     | None                                   |                  |      |
| Inbound Data                              | None                                   |                  |      |
| Success Return                            | UnattendedBaggageScheduleList          |                  |      |
| PUT                                       |                                        |                  |      |
| Description                               | It is used to update trigger schedule. |                  |      |
| Query                                     | None                                   |                  |      |
| Inbound Data                              | UnattendedBaggageScheduleList          |                  |      |
| Success Return                            | ResponseStatus                         |                  |      |
| Notes:                                    |                                        |                  |      |

UnattendedBaggageScheduleList XML Block

```
<UnattendBaggageScheduleList                                version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>                                <!-- opt -->
</UnattendBaggageScheduleList>
```

## 8.4.41 /ISAPI/Event/schedules/unattendedBaggages/<ID>

| /ISAPI/Event/schedules/unattendedBaggages/ID |                                        | General Resource | v2.0 |
|----------------------------------------------|----------------------------------------|------------------|------|
| GET                                          |                                        |                  |      |
| Description                                  | It is used to get trigger schedule.    |                  |      |
| Query                                        | None                                   |                  |      |
| Inbound Data                                 | None                                   |                  |      |
| Success Return                               | Schedule                               |                  |      |
| PUT                                          |                                        |                  |      |
| Description                                  | It is used to update trigger schedule. |                  |      |
| Query                                        | None                                   |                  |      |
| Inbound Data                                 | Schedule                               |                  |      |



| Success Return                                                                                                                                                                          | ResponseStatus |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Notes:</b><br>The ID in “/unattendedBaggages/ <i>ID</i> ” is defined as following declaration:<br>unattendedBaggage-1: Unattended Baggage Detection of video input channel “video1”. |                |

## 8.4.42 /ISAPI/Event/schedules/attendedBaggages

| /ISAPI/Event/schedules/attendedBaggages |                                        | General Resource | v2.0 |
|-----------------------------------------|----------------------------------------|------------------|------|
| GET                                     |                                        |                  |      |
| Description                             | It is used to get trigger schedule.    |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | None                                   |                  |      |
| Success Return                          | AttendBaggageScheduleList              |                  |      |
| PUT                                     |                                        |                  |      |
| Description                             | It is used to update trigger schedule. |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | AttendBaggageScheduleList              |                  |      |
| Success Return                          | ResponseStatus                         |                  |      |
| Notes:                                  |                                        |                  |      |

AttendBaggageScheduleList XML Block

```
<AttendBaggageScheduleList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</AttendBaggageScheduleList>
```

## 8.4.43 /ISAPI/Event/schedules/attendedBaggages/<ID>

| /ISAPI/Event/schedules/attendedBaggages/ID |                                        | General Resource | v2.0 |
|--------------------------------------------|----------------------------------------|------------------|------|
| GET                                        |                                        |                  |      |
| Description                                | It is used to get trigger schedule.    |                  |      |
| Query                                      | None                                   |                  |      |
| Inbound Data                               | None                                   |                  |      |
| Success Return                             | Schedule                               |                  |      |
| PUT                                        |                                        |                  |      |
| Description                                | It is used to update trigger schedule. |                  |      |
| Query                                      | None                                   |                  |      |
| Inbound Data                               | Schedule                               |                  |      |
| Success Return                             | ResponseStatus                         |                  |      |
| Notes:                                     |                                        |                  |      |

The ID in “/attendedBaggages/*ID*” is defined as following declaration:  
attendedBaggage-1: Unattended Baggage Detection of video input channel “video1”.

## 8.4.44 /ISAPI/Event/schedules/blackList

| /ISAPI/Event/schedules/blackList |                                        | General Resource | v2.0 |
|----------------------------------|----------------------------------------|------------------|------|
| GET                              |                                        |                  |      |
| Description                      | It is used to get trigger schedule.    |                  |      |
| Query                            | None                                   |                  |      |
| Inbound Data                     | None                                   |                  |      |
| Success Return                   | BlackListScheduleList                  |                  |      |
| PUT                              |                                        |                  |      |
| Description                      | It is used to update trigger schedule. |                  |      |
| Query                            | None                                   |                  |      |
| Inbound Data                     | BlackListScheduleList                  |                  |      |
| Success Return                   | ResponseStatus                         |                  |      |
| Notes:                           |                                        |                  |      |

### BlackListScheduleList XML Block

```
<BlackListScheduleList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</BlackListScheduleList>
```

| /ISAPI/Event/schedules/ blackList/ID |                                        | General Resource | v2.0 |
|--------------------------------------|----------------------------------------|------------------|------|
| GET                                  |                                        |                  |      |
| Description                          | It is used to get trigger schedule.    |                  |      |
| Query                                | None                                   |                  |      |
| Inbound Data                         | None                                   |                  |      |
| Success Return                       | Schedule                               |                  |      |
| PUT                                  |                                        |                  |      |
| Description                          | It is used to update trigger schedule. |                  |      |
| Query                                | None                                   |                  |      |
| Inbound Data                         | Schedule                               |                  |      |
| Success Return                       | ResponseStatus                         |                  |      |
| Notes:                               |                                        |                  |      |
| ID: blackList-1                      |                                        |                  |      |

### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
```

```

<inputIOPortID>      <!-- ro, dep, xs:string; id -->      </inputIOPortID>
<outputIOPortID>     <!-- ro, dep, xs:string; id -->      </inputIOPortID>
<videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
<TimeBlockList> <!-- req -->
  <TimeBlock>
    <dayOfWeek>
      <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
    </dayOfWeek>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time -->  </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time -->  </endTime>
    </TimeRange>
  </TimeBlock>
</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time -->  </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time -->  </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

#### 8.4.45 /ISAPI/Event/schedules/whiteList

| /ISAPI/Event/schedules/whiteList |                                        | General Resource | v2.0 |
|----------------------------------|----------------------------------------|------------------|------|
| GET                              |                                        |                  |      |
| Description                      | It is used to get trigger schedule.    |                  |      |
| Query                            | None                                   |                  |      |
| Inbound Data                     | None                                   |                  |      |
| Success Return                   | WhiteListScheduleList                  |                  |      |
| PUT                              |                                        |                  |      |
| Description                      | It is used to update trigger schedule. |                  |      |
| Query                            | None                                   |                  |      |
| Inbound Data                     | WhiteListScheduleList                  |                  |      |
| Success Return                   | ResponseStatus                         |                  |      |
| Notes:                           |                                        |                  |      |

##### WhiteListScheduleList XML Block

```
<WhiteListScheduleList                                version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>                                <!-- opt -->
</WhiteListScheduleList>
```

| /ISAPI/Event/schedules/ whiteList/ID |                                        | General Resource | v2.0 |
|--------------------------------------|----------------------------------------|------------------|------|
| GET                                  |                                        |                  |      |
| Description                          | It is used to get trigger schedule.    |                  |      |
| Query                                | None                                   |                  |      |
| Inbound Data                         | None                                   |                  |      |
| Success Return                       | Schedule                               |                  |      |
| PUT                                  |                                        |                  |      |
| Description                          | It is used to update trigger schedule. |                  |      |
| Query                                | None                                   |                  |      |
| Inbound Data                         | Schedule                               |                  |      |
| Success Return                       | ResponseStatus                         |                  |      |
| Notes:                               |                                        |                  |      |
| ID:whiteList-1                       |                                        |                  |      |

### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

```
</TimeBlock>
</HolidayBlockList>
</Schedule>
```

## 8.4.46 /ISAPI/Event/schedules/peopleDetections

| /ISAPI/Event/schedules/peopleDetections |                                        | General Resource | v2.0 |
|-----------------------------------------|----------------------------------------|------------------|------|
| GET                                     |                                        |                  |      |
| Description                             | It is used to get trigger schedule.    |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | None                                   |                  |      |
| Success Return                          | PeopleDetectionScheduleList            |                  |      |
| PUT                                     |                                        |                  |      |
| Description                             | It is used to update trigger schedule. |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | PeopleDetectionScheduleList            |                  |      |
| Success Return                          | ResponseStatus                         |                  |      |
| Notes:                                  |                                        |                  |      |

PeopleDetectionScheduleList XML Block

```
<PeopleDetectionScheduleList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</PeopleDetectionScheduleList>
```

## 8.4.47 /ISAPI/Event/schedules/peopleDetections/<ID>

| /ISAPI/Event/schedules/peopleDetections/ID |                                        | General Resource | v2.0 |
|--------------------------------------------|----------------------------------------|------------------|------|
| GET                                        |                                        |                  |      |
| Description                                | It is used to get trigger schedule.    |                  |      |
| Query                                      | None                                   |                  |      |
| Inbound Data                               | None                                   |                  |      |
| Success Return                             | Schedule                               |                  |      |
| PUT                                        |                                        |                  |      |
| Description                                | It is used to update trigger schedule. |                  |      |
| Query                                      | None                                   |                  |      |
| Inbound Data                               | Schedule                               |                  |      |
| Success Return                             | ResponseStatus                         |                  |      |
| Notes:                                     |                                        |                  |      |

The ID in “/peopleDetections/ID” is defined as following declaration:  
peopleDetection-1: People Detection of video input channel “video1”.

#### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType>
    <!-- opt, xs:string,"IO,VMD,videoloss, PIR,linedetection,fielddetection,
audioexception,facedetection,RegionPeopleDetection,regionExiting,loitering,group,rapidMove,pa
rking,unattendedBaggage,attendedBaggage,peopleDetection"-->
  </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

## 8.4.48 /ISAPI/Event/schedules/HVTVehicleDetects

| /ISAPI/Event/schedules/HVTVehicleDetects |                                     | General Resource | v2.0 |
|------------------------------------------|-------------------------------------|------------------|------|
| GET                                      |                                     |                  |      |
| Description                              | It is used to get trigger schedule. |                  |      |
| Query                                    | None                                |                  |      |

|                |                                        |
|----------------|----------------------------------------|
| Inbound Data   | None                                   |
| Success Return | <b>HVTVehicleDetectScheduleList</b>    |
| <b>PUT</b>     |                                        |
| Description    | It is used to update trigger schedule. |
| Query          | None                                   |
| Inbound Data   | <b>HVTVehicleDetectScheduleList</b>    |
| Success Return | <b>ResponseStatus</b>                  |
| Notes:         |                                        |

#### HVTVehicleDetectScheduleList XML Block

```
<HVTVehicleDetectScheduleList xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Schedule/>
  <!-- opt -->
</HVTVehicleDetectScheduleList>
```

## 8.4.49 /ISAPI/Event/schedules/HVTVehicleDetects/ID

| /ISAPI/Event/schedules/HVTVehicleDetects/ID |                                        | General Resource | v2.0 |
|---------------------------------------------|----------------------------------------|------------------|------|
| GET                                         |                                        |                  |      |
| Description                                 | It is used to get trigger schedule.    |                  |      |
| Query                                       | None                                   |                  |      |
| Inbound Data                                | None                                   |                  |      |
| Success Return                              | Schedule                               |                  |      |
| PUT                                         |                                        |                  |      |
| Description                                 | It is used to update trigger schedule. |                  |      |
| Query                                       | None                                   |                  |      |
| Inbound Data                                | Schedule                               |                  |      |
| Success Return                              | ResponseStatus                         |                  |      |
| Notes: ID: HVTVehicleDetects_video1         |                                        |                  |      |

#### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
```

```

    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
    <ScheduleProperty>
      <vehicleDetectSceneID><!-- req, xs:interger --></vehicleDetectSceneID>
    </ScheduleProperty>
  </TimeBlock>
</TimeBlockList>
</Schedule>

```

### 8.4.50 /ISAPI/Event/schedules/storageDetection

| /ISAPI/Event/schedules/storageDetection |                                        | General Resource | v2.0 |
|-----------------------------------------|----------------------------------------|------------------|------|
| GET                                     |                                        |                  |      |
| Description                             | It is used to get trigger schedule.    |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | None                                   |                  |      |
| Success Return                          | StorageDetectionScheduleList           |                  |      |
| PUT                                     |                                        |                  |      |
| Description                             | It is used to update trigger schedule. |                  |      |
| Query                                   | None                                   |                  |      |
| Inbound Data                            | StorageDetectionScheduleList           |                  |      |
| Success Return                          | ResponseStatus                         |                  |      |
| Notes:                                  |                                        |                  |      |

StorageDetectionScheduleList XML Block

```

<StorageDetectionScheduleList                                     version="2.0"
  xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Schedule/>           <!-- opt -->
</StorageDetectionScheduleList>

```

### 8.4.51 /ISAPI/Event/schedules/storageDetections/<ID>

| /ISAPI/Event/schedules/storageDetections/ID |                                     | General Resource | v2.0 |
|---------------------------------------------|-------------------------------------|------------------|------|
| <b>GET</b>                                  |                                     |                  |      |
| Description                                 | It is used to get trigger schedule. |                  |      |
| Query                                       | None                                |                  |      |
| Inbound Data                                | None                                |                  |      |
| Success Return                              | Schedule                            |                  |      |



| PUT                                                                                                                                                                                 |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Description                                                                                                                                                                         | It is used to update trigger schedule. |
| Query                                                                                                                                                                               | None                                   |
| Inbound Data                                                                                                                                                                        | Schedule                               |
| Success Return                                                                                                                                                                      | ResponseStatus                         |
| <b>Notes:</b><br>The ID in “/storageDetections/ID” is defined as following declaration:<br>storageDetection-1: Face Capture of video input channel “video1”.<br>布防时间段个数的能力在获取协议中给出。 |                                        |

#### Schedule XML Block

```

<Schedule version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType>
    <!-- opt, xs:string, "IO,VMD,videoloss, PIR,linedetection,fielddetection,
    audioexception,facedetection,regionEntrance,regionExiting,loitering,group,rapidMove,parking,un
    attendedBaggage,attendedBaggage,storageDetection"-->
  </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID> <!-- ro, dep, xs:string; id --> </videoInputChannelID>
  <TimeBlockList size="8"> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>

```

## 8.4.52 /ISAPI/Event/notification

| /ISAPI/Event/notification                                                                                    |                                                       | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------|------|
| GET                                                                                                          |                                                       |                  |      |
| Description                                                                                                  | It is used to get the configuration of notifications. |                  |      |
| Query                                                                                                        | None                                                  |                  |      |
| Inbound Data                                                                                                 | None                                                  |                  |      |
| Success Return                                                                                               | EventNotificationMethods                              |                  |      |
| PUT                                                                                                          |                                                       |                  |      |
| Description                                                                                                  | It is used to set the configuration of notifications. |                  |      |
| Query                                                                                                        | None                                                  |                  |      |
| Inbound Data                                                                                                 | EventNotificationMethods                              |                  |      |
| Success Return                                                                                               | ResponseStatus                                        |                  |      |
| Notes:                                                                                                       |                                                       |                  |      |
| The following notification types are supported:                                                              |                                                       |                  |      |
| HTTP: the device connects to a given address and port and issues an HTTP GET/POST with the given parameters. |                                                       |                  |      |
| FTP: a video clip or snapshot is uploaded to an FTP server.                                                  |                                                       |                  |      |
| E-mail: a mail with the video clip or snapshot is sent in an e-mail to a list of servers.                    |                                                       |                  |      |
| <MediaFormat> determines the type of snapshot, video clip and the video clip pre and post recording times.   |                                                       |                  |      |

### EventNotificationMethods XML Block

```
<EventNotificationMethods version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <MailingNotificationList/><!-- opt -->
  <FTPNotificationList/><!-- opt -->
  <HttpHostNotificationList/><!-- opt -->
  <FTPFormat><!-- opt -->
    <uploadSnapShotEnabled><!-- req, xs:boolean --></uploadSnapShotEnabled>
    <uploadVideoClipEnabled><!-- req, xs:boolean --></uploadVideoClipEnabled>
  </FTPFormat>
  <EmailFormat><!-- opt -->
    <senderEmailAddress><!-- req, xs:string --></senderEmailAddress>
    <receiverEmailAddress><!-- req, xs:string --></receiverEmailAddress>
    <subject><!-- req, xs:string --></subject>
    <BodySetting><!-- opt -->
      <attachedVideoURLEnabled><!-- req, xs:boolean --> </attachedVideoURLEnabled>
      <attachedSnapShotEnabled><!-- req, xs:boolean --> </attachedSnapShotEnabled>
    </BodySetting>
  </EmailFormat>
</EventNotificationMethods>
```

```

    <attachedVideoClipEnabled><!-- req, xs:boolean --> </attachedVideoClipEnabled>
  </BodySetting>
</EmailFormat>
<MediaFormat> <!-- opt -->
  <snapShotImageType> <!-- opt, xs:string, "JPEG,GIF,PNG" --> </snapShotImageType>
  <videoClipFormatType> <!-- opt, xs:string, "ASF,MP4,3GP,264" --> </videoClipFormatType>
  <preCaptureLength> <!-- opt, xs:integer, milliseconds --> </preCaptureLength>
  <postCaptureLength> <!-- opt, xs:integer, milliseconds --> </postCaptureLength>
</MediaFormat>
<EventNotificationMethods>

```

### 8.4.53 /ISAPI/Event/notification/httpHosts

| /ISAPI/Event/notification/httpHosts |                                                | General Resource | v2.0 |
|-------------------------------------|------------------------------------------------|------------------|------|
| GET                                 |                                                |                  |      |
| Description                         | It is used to get the configuration of e-mail. |                  |      |
| Query                               | None                                           |                  |      |
| Inbound Data                        | None                                           |                  |      |
| Success Return                      | HttpHostNotificationList                       |                  |      |
| PUT                                 |                                                |                  |      |
| Description                         | It is used to set the configuration of e-mail. |                  |      |
| Query                               | None                                           |                  |      |
| Inbound Data                        | HttpHostNotificationList                       |                  |      |
| Success Return                      | ResponseStatus                                 |                  |      |
| Notes:                              |                                                |                  |      |

#### HttpHostNotificationList XML Block

```

<HttpHostNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <HttpHostNotification/> <!-- opt -->
</HttpHostNotificationList>

```

### 8.4.54 /ISAPI/Event/notification/httpHosts/<ID>

| /ISAPI/Event/notification/httpHosts/ID |                                                             | General Resource | v2.0 |
|----------------------------------------|-------------------------------------------------------------|------------------|------|
| GET                                    |                                                             |                  |      |
| Description                            | It is used to get the configuration of a particular e-mail. |                  |      |
| Query                                  | None                                                        |                  |      |
| Inbound Data                           | None                                                        |                  |      |
| Success Return                         | HttpHostNotification                                        |                  |      |
| PUT                                    |                                                             |                  |      |

|                       |                                                             |
|-----------------------|-------------------------------------------------------------|
| <b>Description</b>    | It is used to set the configuration of a particular e-mail. |
| <b>Query</b>          | None                                                        |
| <b>Inbound Data</b>   | <b>HttpHostNotification</b>                                 |
| <b>Success Return</b> | <b>ResponseStatus</b>                                       |
| <b>Notes:</b>         |                                                             |

#### HttpHostNotification XML Block

```
<HttpHostNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string;id -->    </id>
  <url>    <!-- req, xs:string -->    </url>
  <protocolType>    <!-- req, xs:string, "HTTP,HTTPS" -->    </protocolType>
  <parameterFormatType>
    <!-- req, xs:string, "XML,querystring" -->
  </parameterFormatType>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName>    <!-- dep, xs:string -->    </hostName>
  <ipAddress><!-- dep, xs:string -->    </ipAddress>
  <ipv6Address>    <!-- dep, xs:string -->    </ipv6Address>
  <portNo>    <!-- opt, xs:integer -->    </portNo>
  <userName>    <!-- dep, xs:string -->    </userName>
  <password><!-- dep, xs:string -->    </password>
  <httpAuthenticationMethod>
    <!-- req, xs:string, "MD5digest,none" -->
  </httpAuthenticationMethod>
</HttpHostNotification>
```

## 8.4.55 /ISAPI/Event/notification/streaming

| /ISAPI/Event/notification/streaming |                                                        | General Resource | v2.0 |
|-------------------------------------|--------------------------------------------------------|------------------|------|
| GET                                 |                                                        |                  |      |
| Description                         | It is used to get the list of recording notifications. |                  |      |
| Query                               | None                                                   |                  |      |
| Inbound Data                        | None                                                   |                  |      |
| Success Return                      | StreamingNotificationList                              |                  |      |
| PUT                                 |                                                        |                  |      |
| Description                         | It is used to update the list of E-mail notifications. |                  |      |
| Query                               | None                                                   |                  |      |
| Inbound Data                        | StreamingNotificationList                              |                  |      |

|                                                                              |                                                        |
|------------------------------------------------------------------------------|--------------------------------------------------------|
| Success Return                                                               | ResponseStatus                                         |
| <b>POST</b>                                                                  |                                                        |
| Description                                                                  | It is used to add an E-mail notification.              |
| Query                                                                        | None                                                   |
| Inbound Data                                                                 | StreamingNotification                                  |
| Success Return                                                               | ResponseStatus                                         |
| <b>DELETE</b>                                                                |                                                        |
| Description                                                                  | It is used to delete the list of E-mail notifications. |
| Query                                                                        | None                                                   |
| Inbound Data                                                                 | None                                                   |
| Success Return                                                               | ResponseStatus                                         |
| Notes:                                                                       |                                                        |
| When an event occurs, modifying the compression parameters of a video stream |                                                        |

#### StreamingNotificationList XML Block

```
<StreamingNotificationList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <StreamingNotification/>    <!-- opt -->
</StreamingNotificationList>
```

## 8.4.56 /ISAPI/Event/notification/streaming/<ID>

| /ISAPI/Event/notification/Streaming/ID |                                                                      | General Resource | v2.0 |
|----------------------------------------|----------------------------------------------------------------------|------------------|------|
| GET                                    |                                                                      |                  |      |
| Description                            | It is used to get a particular E-mail notification configuration.    |                  |      |
| Query                                  | None                                                                 |                  |      |
| Inbound Data                           | None                                                                 |                  |      |
| Success Return                         | StreamingNotification                                                |                  |      |
| PUT                                    |                                                                      |                  |      |
| Description                            | It is used to update a particular E-mail notification configuration. |                  |      |
| Query                                  | None                                                                 |                  |      |
| Inbound Data                           | StreamingNotification                                                |                  |      |
| Success Return                         | ResponseStatus                                                       |                  |      |
| DELETE                                 |                                                                      |                  |      |
| Description                            | It is used to delete a particular E-mail notification.               |                  |      |
| Query                                  | None                                                                 |                  |      |
| Inbound Data                           | None                                                                 |                  |      |
| Success Return                         | ResponseStatus                                                       |                  |      |
| Notes:                                 |                                                                      |                  |      |

## StreamingNotification XML Block

```
<StreamingNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id> //101 201 301
  <streamingId> <!-- req, xs:string;id --> <streamingId>
  <Video>
    <!-- opt -->
    <enabled><!-- req, xs:boolean --></enabled>
    <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
    <videoCodecType>
      <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,MPNG" -->
    </videoCodecType>
    <videoScanType>
      <!-- opt, xs:string, "progressive,interlaced" -->
    </videoScanType>
    <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
    <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
    <videoResolutionName>
      <!-- opt, xs:string, "3MP,5MP,none" -->
    </videoResolutionName>
    <videoPositionX> <!-- opt, xs:integer --> </videoPositionX>
    <videoPositionY> <!-- opt, xs:integer --> </videoPositionY>
    <videoQualityControlType>
      <!-- opt, xs:string, "CBR,VBR" -->
    </videoQualityControlType>
    <constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
    <fixedQuality><!-- opt, xs:integer, percentage, 0..100 --> </fixedQuality>
    <vbrUpperCap> <!-- dep, xs:integer, in kbps --> </vbrUpperCap>
    <vbrLowerCap> <!-- dep, xs:integer, in kbps --> </vbrLowerCap>
    <maxFrameRate> <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
    <keyFrameInterval> <!-- opt, xs:integer, milliseconds --> </keyFrameInterval>
    <rotationDegree> <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
    <mirrorEnabled> <!-- opt, xs:boolean --> </mirrorEnabled>
    <snapshotImageType>
      <!-- opt, xs:string, "JPEG,GIF,PNG" -->
    </snapshotImageType>
    <Mpeg4Profile> <!-- dep, xs:string, "SP,ASP" --> </Mpeg4Profile>
    <H264Profile>
      <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
    </H264Profile>
    <GovLength> <!--opt, xs:integer --> </GovLength>
  </Video>
  <Audio>
```

```

<!-- opt -->
<enabled>    <!-- req, xs:boolean --> </enabled>
<audioInputChannelID> <!-- req, xs:string;id --> </audioInputChannelID>
<audioCompressionType>
    <!-- req, xs:string,
        "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM"
    -->
</audioCompressionType>
<audioInboundCompressionType>
    <!-- opt, xs:string,
        "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM"
    -->
</audioInboundCompressionType>
<audioBitRate>    <!-- opt, xs:integer, in kbps -->    </audioBitRate>
<audioSamplingRate>    <!-- opt, xs:float, in kHz -->    </audioSamplingRate>
<audioResolution> <!-- opt, xs:integer, in bits --> </audioResolution>
</Audio>
</StreamingNotification>

```

## 8.4.57 /ISAPI/Event/notification/alarmCenter

| URI      | /ISAPI/Event/notification/alarmCenter                                                                                                                  |                               | Type                          | Resource |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|----------|
| Function | Access the list of alarm center notification hosts.                                                                                                    |                               |                               |          |
| Methods  | Query String(s)                                                                                                                                        | Inbound Data                  | Return Result                 |          |
| GET      |                                                                                                                                                        |                               | <alarmCenterNotificationList> |          |
| PUT      |                                                                                                                                                        | <alarmCenterNotificationList> | <ResponseStatus>              |          |
| POST     |                                                                                                                                                        | <alarmCenterNotification>     | <ResponseStatus>              |          |
| DELETE   |                                                                                                                                                        |                               | <ResponseStatus>              |          |
| Notes    | Alarm center notification involves the device connecting to a particular alarm center delivering an privacy event message whenever the event triggers. |                               |                               |          |

### alarmCenterNotificationList XML Block

```

<alarmCenterNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <alarmCenterNotification/>    <!-- opt -->
</alarmCenterNotificationList>

```

## 8.4.58 /ISAPI/Event/notification/alarmCenter/<ID>

| URI      | /ISAPI/Event/notification/alarmCenter/ID                                                                                                 |                           | Type                      | Resource |
|----------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|----------|
| Function | Access a particular HTTP notification host.                                                                                              |                           |                           |          |
| Methods  | Query String(s)                                                                                                                          | Inbound Data              | Return Result             |          |
| GET      |                                                                                                                                          |                           | <alarmCenterNotification> |          |
| PUT      |                                                                                                                                          | <alarmCenterNotification> | <ResponseStatus>          |          |
| DELETE   |                                                                                                                                          |                           | <ResponseStatus>          |          |
| Notes    | Depending on the value of <addressingFormatType>, either the <hostName> or the IP address fields will be used to locate the alarm center |                           |                           |          |

### alarmCenterNotification XML Block

```
<alarmCenterNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                                <!-- req, xs:string;id -->                                </id>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName>                          <!-- dep, xs:string -->                          </hostName>
  <ipAddress>                         <!-- dep, xs:string -->                         </ipAddress>
  <ipv6Address>                       <!-- dep, xs:string -->                       </ipv6Address>
  <portNo>                           <!-- req, xs:integer -->                           </portNo>
</alarmCenterNotification>
```

## 8.4.59 /ISAPI/Event/notification/alertStream

| /ISAPI/Event/notification/alertStream                                                                                                                                                                                                                                                     |                                                                                | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                       |                                                                                | Viewer           |      |
| Description                                                                                                                                                                                                                                                                               | It is used to get the event notification data stream through HTTP server push. |                  |      |
| Query                                                                                                                                                                                                                                                                                     | None                                                                           |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                              | None                                                                           |                  |      |
| Success Return                                                                                                                                                                                                                                                                            | Stream of <EventNotificationAlert>                                             |                  |      |
| Notes:                                                                                                                                                                                                                                                                                    |                                                                                |                  |      |
| This function is used to get an event notification alert stream from the media device via HTTP or HTTPS. This function does not require that a client/VMS system be added as an HTTP(S) destination on the media device. Instead, the client/VMS system can call this API to initialize a |                                                                                |                  |      |



stream of event information from the device. In other words, a connection is established with the device when this function is called, and stays open to constantly receive event notifications. This API uses HTTP server-push with the MIME type multipart/mixed defined in RFC 2046. <protocol> is the protocol name, i.e. "HTTP" or "HTTPS". <channelID> is present for video and analytics events. <activePostCount> is the sequence number of current notification for this particular event. It starts at 1. Useful for recurring notifications of an event. Each event maintains a separate post count.

### EventNotificationAlert XML Block

```
<EventNotificationAlert version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipAddress>      <!-- dep, xs:string -->    </ipAddress>
  <ipv6Address><!-- dep, xs:string --></ipv6Address>
  <portNo>         <!-- opt, xs:integer -->    </portNo>
  <protocol>       <!-- opt, xs:string -->     </protocol>
  <macAddress>     <!-- opt, xs:string;MAC -->  </macAddress>
  <channelID>      <!-- dep, xs:string -->     </channelID>
  <dateTime>       <!-- req, xs:datetime -->   </dateTime>
  <activePostCount> <!-- req, xs:integer -->    </activePostCount>
  <eventType>      <!-- req, xs:string, "IO,VMD,videoloss, shelteralarm, facedetection, defocus,
audioexception, scenechangedetection, fieldddetection, linedetection, regionEntrance,
regionExiting, loitering, group, rapidMove, parking, unattendedBaggage, attendedBaggage,
PIR,peopleDetection" --> </eventType>
  <eventState>     <!-- req, xs:string, "active,inactive" --> </eventState>
  <eventDescription> <!-- req, xs:string -->      </eventDescription>
  <inputIOPortID>  <!-- dep, xs:integer, if <eventType> is "IO" --> </inputIOPortID>
  <dynInputIOPortID> <!-- dep, xs:string, if <eventType> is "IO" --> </dynInputIOPortID>
  <DetectionRegionList> <!-- dep, if <eventType> is "VMD" -->
    <DetectionRegionEntry> <!-- req -->
      <regionID>          <!-- req, xs:string -->      </regionID>
      <sensitivityLevel>   <!-- req, xs:integer, 0..100 --> </sensitivityLevel>
    </DetectionRegionEntry>
  </DetectionRegionList>
</EventNotificationAlert>
```

### Example

The following is an example of an HTTP event stream that pushes a VMD event from video channel 1.

```
GET /Event/notification/alertStream HTTP/1.1
...
HTTP/1.1 200 OK
```

```
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary="<boundary>"
--<boundary>
Content-Type: application/xml; charset="UTF-8"
Content-Length: ISAPI

<?xml version="1.0" encoding="UTF-8"?>
<EventNotificationAlert version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipAddress>172.6.64.7</ipAddress>
  <portNo>80</portNo>
  <protocol>HTTP</protocol>
  <macAddress>01:17:24:45:D9:F4</macAddress>
  <channelID>1</channelID>
  <dateTime>2009-11-14T15:27Z</dateTime>
  <activePostCount>1</activePostCount>
  <eventType>VMD</eventType>
  <eventState>active</eventState>
  <eventDescription>Motion alarm</eventDescription>
  <DetectionRegionList>
    <DetectionRegionEntry>
      <regionID>2</regionID>
      <sensitivityLevel>4</sensitivityLevel>
    </DetectionRegionEntry>
  </DetectionRegionList>
</EventNotificationAlert>
--<boundary>
...
```

## 8.4.60 HTTP Notification Alert

**http://<ipAddress>:<portNo>/<url>**

### POST

|                       |                                                      |
|-----------------------|------------------------------------------------------|
| <b>Description</b>    | Send alert info to alarm center by HTTP POST method. |
| <b>Query</b>          | None                                                 |
| <b>Inbound Data</b>   | None                                                 |
| <b>Success Return</b> | <b>Notification Alert</b>                            |

### Notes:

Either GET or POST can be used. If GET is used, the corresponding query string parameters are provided in place of the inbound XML. If Post is used, the inbound XML is provided in place of the

corresponding query string parameters.

The “DeviceID=” and “DeviceName=” fields are taken from the <DeviceInfo> settings for the device.

The <parameterFormatType> tag indicates whether XML or query string parameters should be used for this API.

The <protocolType> tag under <HttpHostList> determines whether HTTP or HTTPS is used for this API.

The <portNo> tag under <HttpHostList> determines the port number to be used for the notification alert.

The <portNo> and <protocolType> tags in the alert are provided for a client application to connect/manage the device after it sends out this notification.

The <addressingFormatType> tag under <HttpHostList> determines whether <ipAddress>/IPAddress or <ipv6Address>/IPv6Address is used.

The <url> tag under <HttpHostList> indicates the URL base to be used for the alert.

If <eventType>/EventType refers to an input-port-related event, the <inputIOPortID> tag or InputIOPortID parameter must be provided.

If <eventType>/EventType refers to a motion-related event, the <DetectionRegionList> block or RegionIndexX parameter(s) must be provided if detection regions have been defined. If the motion event is for a full-screen configuration, these region indexes should not be provided.

The <sensitivityLevel>/SensitivityLevelX and <detectionThreshold>/DetectionThresholdX parameters are used to indicate the current values of the activity detection at the time that the notification is sent out.

If the alert is for a motion-related event, multiple region indexes may be provided per single API. If query string parameters are used, the format “RegionIndexX” is used where “X” is a number starting with “1” and incrementing by one for every subsequent region index provided.

If the <httpAuthenticationMethod> tag under <HttpHostList> is configured for “MD5 Digest Authentication”, the corresponding security values must be stored in the header fields of the HTTP(S) request.

The <activePostCount>/ActivePostCount parameter is a sequence number starting at 1 and incrementing by one for every event notification sent.

## Notification Alert

```
version=1.0
DeviceID=
DeviceName=
IPAddress=
IPv6Address=
PortNo=
Protocol=
MacAddress=
version=1.0
DeviceID=
DeviceName=
IPAddress=
IPv6Address=
```

```

PortNo=
Protocol=
MacAddress=
ChannelID=
DateTime=
ActivePostCount=
EventType=
EventState=
EventDescription=
InputIOPortID=
RegionIndex1=
SensitivityLevel1=
DetectionThreshold1=
RegionIndex2=
SensitivityLevel2=
DetectionThreshold2=
...

```

### 8.11.32 Event Triggering Examples

#### Example: Trigger Events on IO Port

The command below enables detection for input port 1. When the input signal is detected according to <inputIOPortID>, two event notification responses are used – output port 1 will be triggered for the duration of the input signal detection, and an SMTP server will be notified with the “E-mail Event Notification Alert”. The behavior of this notification is as follows:

- A SMTP notification is sent at detection time, and every some seconds after while the signal is present. This is denoted by the <notificationRecurrence> tags. These APIs will have an <eventState> of “active”.
- When the input port 1 signal detection stops, one last E-mail notification is sent to the server with an <eventState> of “active”.
- After the signal detection stops for input port 1, the device will wait some seconds before starting to detect the signal again for this port.

```

PUT /ISAPI/Event/triggers/IO-1 HTTP/1.1
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<EventTrigger version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>IO-1</id> <!-- "eventType: IO" -->
  <EventTriggerNotificationList>
    <EventTriggerNotification>

```

```

<id>1</id>
<notificationMethod>email</notificationMethod>
</EventTriggerNotification>
<EventTriggerNotification>
  <id>2</id>
  <notificationMethod> IO</notificationMethod>
  <outputIOPortID>1</outputIOPortID>
</EventTriggerNotification>
</EventTriggerNotificationList>
</EventTrigger>

```

### Example: Schedule event detection and triggering

The command below schedules event detection and triggering from 7:00 am to 5:00 pm. every Tuesday.

```

PUT /ISAPI/Event/schedule/IO-IN-1 HTTP/1.1
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<EventSchedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>IO-IN-1</id>
  <eventType>IO</eventType>
  <inputIOPortID>1</inputIOPortID>
  <TimeBlockList>
    <TimeBlock>
      <dayOfWeek>2</dayOfWeek>
      <TimeRange>
        <beginTime>07:00:00</beginTime>
        <endTime>17:00:00</endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
</EventSchedule>

```

## 8.5 /ISAPI/Smart

|                      |              |
|----------------------|--------------|
| /ISAPI/Smart         | Service v2.0 |
| Notes: Smart service |              |

## 8.5.1 /ISAPI/Smart/capabilities

| /ISAPI/Smart/capabilities |                                     | General Resource | v2.0 |
|---------------------------|-------------------------------------|------------------|------|
| GET                       |                                     |                  |      |
| Description               | It is used to get Smart capability. |                  |      |
| Query                     | None                                |                  |      |
| Inbound Data              | None                                |                  |      |
| Success Return            | < SmartCap>                         |                  |      |
| Notes:                    |                                     |                  |      |

### SmartCap XML Block

```
<SmartCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportROI> <!-- opt, xs:boolean --> </isSupportROI>
  <isSupportFaceDetect> <!-- opt, xs:boolean --> </isSupportFaceDetect>
  <isSupportIntelliTrace> <!-- opt, xs:boolean --> </isSupportIntelliTrace>
  <isSupportFieldDetection> <!-- opt, xs:boolean --> </isSupportFieldDetection>
  <isSupportDefocusDetection> <!-- opt, xs:boolean --> </isSupportDefocusDetection>
  <isSupportAudioDetection> <!-- opt, xs:boolean --> </isSupportAudioDetection>
  <isSupportSceneChangeDetection> <!-- opt, xs:boolean --> </isSupportSceneChangeDetection>
  <isSupportLineDetection> <!-- opt, xs:boolean --> </isSupportLineDetection>
  <isSupportRegionEntrance> <!-- opt, xs:boolean --> </isSupportRegionEntrance>
  <isSupportRegionExiting> <!-- opt, xs:boolean --> </isSupportRegionExiting>
  <isSupportLoitering> <!-- opt, xs:boolean --> </isSupportLoitering>
  <isSupportGroup> <!-- opt, xs:boolean --> </isSupportGroup>
  <isSupportRapidMove> <!-- opt, xs:boolean --> </isSupportRapidMove>
  <isSupportParking> <!-- opt, xs:boolean --> </isSupportParking>
  <isSupportUnattendedBaggage><!--opt, xs:boolean --></isSupportUnattendedBaggage>
  <isSupportAttendedBaggage><!-- opt, xs:boolean --></isSupportAttendedBaggage>
  <isSupportPeopleDetection><!-- opt, xs:boolean --></isSupportPeopleDetection>
  <isSupportStorageDetection><!-- opt, xs:boolean --></isSupportStorageDetection>
</SmartCap>
```

## 8.5.2 /ISAPI/Smart/ROI/channels

| /ISAPI/Smart/ROI/channels |                               | General Resource | v2.0 |
|---------------------------|-------------------------------|------------------|------|
| <b>GET</b>                |                               |                  |      |
| Description               | Access and configure the ROI. |                  |      |

|                |                               |
|----------------|-------------------------------|
| Query          | None                          |
| Inbound Data   | None                          |
| Success Return | <b>ROIList</b>                |
| <b>PUT</b>     |                               |
| Description    | Access and configure the ROI. |
| Query          | None                          |
| Inbound Data   | <b>ROIList</b>                |
| Success Return | <b>ResponseStatus</b>         |
| Notes:         |                               |

#### ROIList XML Block

```
<ROIList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ROI/> <!-- opt -->
</ROIList>
```

### 8.5.3 /ISAPI/Smart/ROI/channels/<ID>

/ISAPI/Smart/ROI/channels/ID

General Resource v2.0

|                |                                                     |
|----------------|-----------------------------------------------------|
| GET            |                                                     |
| Description    | Access and configure the ROI for a special channel. |
| Query          | None                                                |
| Inbound Data   | None                                                |
| Success Return | ROI                                                 |
| PUT            |                                                     |
| Description    | Access and configure the ROI for a special channel. |
| Query          | None                                                |
| Inbound Data   | ROI                                                 |
| Success Return | ResponseStatus                                      |
| DELETE         |                                                     |
| Description    | Access and configure the ROI for a special channel. |
| Query          | None                                                |
| Inbound Data   | None                                                |
| Success Return | ResponseStatus                                      |

Notes:

normalizedScreenSize: the size of normalized screen
ROIRegionList:the list of ROI region
<ID> should be consistent with <ID> of streaming.
<enabled/> <!-- req, xs:string --> if the value of this tag is “disable”, all of regions are invalid.

### ROI XML Block

```
<ROI version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <enabled/> <!-- req, xs:string -->
  <normalizedScreenSize> <!--req-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <ROIRegionList/> <!--dep-->
  <FaceTrace/> <!--dep-->
  <ObjectTrace/> <!--dep-->
</ROI>
```

## 8.5.4 /ISAPI/Smart/ROI/channels/<ID>/regions

| /ISAPI/Smart/ROI/channels/ID/regions |                                                             | General Resource | v2.0 |
|--------------------------------------|-------------------------------------------------------------|------------------|------|
| GET                                  |                                                             |                  |      |
| Description                          | Access and configure the ROI regions for a special channel. |                  |      |
| Query                                | None                                                        |                  |      |
| Inbound Data                         | None                                                        |                  |      |
| Success Return                       | ROIRegionsList                                              |                  |      |
| PUT                                  |                                                             |                  |      |
| Description                          | Access and configure the ROI regions for a special channel  |                  |      |
| Query                                | None                                                        |                  |      |
| Inbound Data                         | ROIRegionsList                                              |                  |      |
| Success Return                       | ResponseStatus                                              |                  |      |
| Notes:                               |                                                             |                  |      |

### ROIRegionsList XML Block

```
<ROIRegionsList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" size=>
  <ROIRegion/> <!-- opt -->
</ROIRegionsList>
```

## 8.5.5 /ISAPI/Smart/ROI/channels/<ID>/regions/<ID>

| /ISAPI/Smart/ROI/channels/ID/regions/ID | General Resource | v2.0 |
|-----------------------------------------|------------------|------|
|-----------------------------------------|------------------|------|



| GET                                                                                                    |                                                            |
|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Description                                                                                            | Access and configure one ROI region for a special channel. |
| Query                                                                                                  | None                                                       |
| Inbound Data                                                                                           | None                                                       |
| Success Return                                                                                         | <b>ROIRegion</b>                                           |
| PUT                                                                                                    |                                                            |
| Description                                                                                            | Access and configure one ROI region for a special channel  |
| Query                                                                                                  | None                                                       |
| Inbound Data                                                                                           | <b>ROIRegion</b>                                           |
| Success Return                                                                                         | <b>ResponseStatus</b>                                      |
| DELETE                                                                                                 |                                                            |
| Description                                                                                            | Access and configure one ROI region for a special channel  |
| Query                                                                                                  | None                                                       |
| Inbound Data                                                                                           | None                                                       |
| Success Return                                                                                         | <b>ResponseStatus</b>                                      |
| <b>Notes:</b><br><br>qualityLevel:quality level of a region<br>RegionCoordinatesList:coordinate of ROI |                                                            |

#### ROIRegion XML Block

```
<ROIRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer--> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <name> <!-- opt, xs:string --> </name>
  <qualityLevelOfROI> <!-- req, xs:integer "1-6"--> </qualityLevelOfROI>
  <RegionCoordinatesList/>
</ROIRegion>
```

## 8.5.6 /ISAPI/Smart/ROI/channels/<ID>/facettrace

| /ISAPI/Smart/ROI/channels/ID/facettrace |                                                             | General Resource | v2.0 |
|-----------------------------------------|-------------------------------------------------------------|------------------|------|
| GET                                     |                                                             |                  |      |
| Description                             | Access and configure the ROI regions for a special channel. |                  |      |
| Query                                   | None                                                        |                  |      |
| Inbound Data                            | None                                                        |                  |      |
| Success Return                          | FaceTrace                                                   |                  |      |
| PUT                                     |                                                             |                  |      |
| Description                             | Access and configure the ROI regions for a special channel  |                  |      |

|                |                |
|----------------|----------------|
| Query          | None           |
| Inbound Data   | FaceTrace      |
| Success Return | ResponseStatus |
| Notes:         |                |

#### FaceTrace XML Block

```
<FaceTrace version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <name> <!-- opt, xs:string --> </name>
  <qualityLevelOfROI> <!-- req, xs:integer--> </qualityLevelOfROI>
</FaceTrace>
```

### 8.5.7 /ISAPI/Smart/ROI/channels/<ID>/objecttrace

| /ISAPI/Smart/ROI/channels/ID/objecttrace |                                                             | General Resource | v2.0 |
|------------------------------------------|-------------------------------------------------------------|------------------|------|
| GET                                      |                                                             |                  |      |
| Description                              | Access and configure the ROI regions for a special channel. |                  |      |
| Query                                    | None                                                        |                  |      |
| Inbound Data                             | None                                                        |                  |      |
| Success Return                           | ObjectTrace                                                 |                  |      |
| PUT                                      |                                                             |                  |      |
| Description                              | Access and configure the ROI regions for a special channel  |                  |      |
| Query                                    | None                                                        |                  |      |
| Inbound Data                             | ObjectTrace                                                 |                  |      |
| Success Return                           | ResponseStatus                                              |                  |      |
| Notes:                                   |                                                             |                  |      |

#### ObjectTrace XML Block

```
<ObjectTrace version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <qualityLevelOfROI> <!-- req, xs:integer--> </qualityLevelOfROI>
</ObjectTrace>
```

### 8.5.8 /ISAPI/Smart/ROI/channels/<ID>/platetrace

| /ISAPI/Smart/ROI/channels/<ID>/platetrace |                                                             | General Resource | v2.0 |
|-------------------------------------------|-------------------------------------------------------------|------------------|------|
| <b>GET</b>                                |                                                             |                  |      |
| Description                               | Access and configure the ROI regions for a special channel. |                  |      |
| Query                                     | None                                                        |                  |      |

|                                                                                                                                                                                                                                                                                            |                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Inbound Data                                                                                                                                                                                                                                                                               | None                                                       |
| Success Return                                                                                                                                                                                                                                                                             | <b>PlateTrace</b>                                          |
| <b>PUT</b>                                                                                                                                                                                                                                                                                 |                                                            |
| Description                                                                                                                                                                                                                                                                                | Access and configure the ROI regions for a special channel |
| Query                                                                                                                                                                                                                                                                                      | None                                                       |
| Inbound Data                                                                                                                                                                                                                                                                               | <b>PlateTrace</b>                                          |
| Success Return                                                                                                                                                                                                                                                                             | <b>ResponseStatus</b>                                      |
| <b>Notes:</b><br>The ID in “/channels/ <i>ID</i> ” is defined as following declaration:<br>101: Region Clip of video input channel “video1-main stream”.<br>102: Region Clip of video input channel “video1-sub stream”.<br>103: Region Clip of video input channel “video1-third stream”. |                                                            |

#### PlateTrace XML Block

```
<PlateTrace version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <qualityLevelOfROI> <!-- req, xs:integer, "1-6"--> </qualityLevelOfROI>
</PlateTrace>
```

## 8.5.9 /ISAPI/Smart/FaceDetect/<ID>

| /ISAPI/Smart/FaceDetect/ID     |                                      | General Resource | v2.0 |
|--------------------------------|--------------------------------------|------------------|------|
| GET                            |                                      |                  |      |
| Description                    | Access and configure the FaceDetect. |                  |      |
| Query                          | None                                 |                  |      |
| Inbound Data                   | None                                 |                  |      |
| Success Return                 | FaceDetect                           |                  |      |
| PUT                            |                                      |                  |      |
| Description                    | Access and configure the FaceDetect. |                  |      |
| Query                          | None                                 |                  |      |
| Inbound Data                   | FaceDetect                           |                  |      |
| Success Return                 | ResponseStatus                       |                  |      |
| Notes:                         |                                      |                  |      |
| <ID> stands for channel number |                                      |                  |      |

#### FaceDetect XML Block

```
<FaceDetect version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <minObjectSize>
```

```

    <!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
    <!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<ROI> <!--opt-->
    <minHorizontalResolution> <!-- req, xs:integer --> </minHorizontalResolution>
    <minVerticalResolution><!-- req, xs:integer --> </minVerticalResolution>
</ROI>
<sensitivityLevel>          <!-- req -->
    <!-- req, xs:integer -->
</sensitivityLevel>
<detectionThreshold>          <!-- dep-->
    <!-- req, xs:integer-->
</detectionThreshold>
<highlightsenabled> <!-- req, xs:boolean --> </highlightsenabled>
</FaceDetect>

```

## 8.5.10 /ISAPI/Smart/IntelliTrace/<ID>

| /ISAPI/Smart/IntelliTrace/<ID> |                | General Resource | v2.0 |
|--------------------------------|----------------|------------------|------|
| GET                            |                |                  |      |
| Description                    |                |                  |      |
| Query                          | None           |                  |      |
| Inbound Data                   | None           |                  |      |
| Success Return                 | IntelliTrace   |                  |      |
| PUT                            |                |                  |      |
| Description                    |                |                  |      |
| Query                          | None           |                  |      |
| Inbound Data                   | IntelliTrace   |                  |      |
| Success Return                 | ResponseStatus |                  |      |
| Notes:                         |                |                  |      |

### IntelliTrace XML Block

```

<IntelliTrace version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <tracktime> <!-- opt, xs:integer, 0--300--> </tracktime>
</IntelliTrace>

```

### 8.5.11 /ISAPI/Smart/IntelliTrace/<ID>/ZoomRatIal

| /ISAPI/Smart/IntelliTrace/ID/ZoomRatIal |                | General Resource | v2.0 |
|-----------------------------------------|----------------|------------------|------|
| PUT                                     |                |                  |      |
| Description                             |                |                  |      |
| Query                                   | None           |                  |      |
| Inbound Data                            | None           |                  |      |
| Success Return                          | ResponseStatus |                  |      |
| Notes:                                  |                |                  |      |

### 8.5.12 /ISAPI/Smart/FieldDetection

| /ISAPI/Smart/FieldDetection |                                                             | General Resource | v2.0 |
|-----------------------------|-------------------------------------------------------------|------------------|------|
| GET                         |                                                             |                  |      |
| Description                 | Field detection configuration for all video input channels. |                  |      |
| Query                       | None                                                        |                  |      |
| Inbound Data                | None                                                        |                  |      |
| Success Return              | FieldDetectionList                                          |                  |      |
| PUT                         |                                                             |                  |      |
| Description                 | Field detection configuration for all video input channels. |                  |      |
| Query                       | None                                                        |                  |      |
| Inbound Data                | FieldDetectionList                                          |                  |      |
| Success Return              | ResponseStatus                                              |                  |      |
| Notes:                      |                                                             |                  |      |

#### FieldDetectionList XML Block

```
<FieldDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FieldDetection/>    <!-- opt -->
</FieldDetectionList>
```

### 8.5.13 /ISAPI/Smart/FieldDetection/<ID>

| /ISAPI/Smart/FieldDetection/ID |                                                           | General Resource | v2.0 |
|--------------------------------|-----------------------------------------------------------|------------------|------|
| <b>GET</b>                     |                                                           |                  |      |
| Description                    | Field detection configuration for a video input channels. |                  |      |
| Query                          | None                                                      |                  |      |
| Inbound Data                   | None                                                      |                  |      |

|                |                                                           |
|----------------|-----------------------------------------------------------|
| Success Return | FieldDetection                                            |
| <b>PUT</b>     |                                                           |
| Description    | Field detection configuration for a video input channels. |
| Query          | None                                                      |
| Inbound Data   | FieldDetection                                            |
| Success Return | ResponseStatus                                            |
| Notes:         |                                                           |

#### FieldDetection XML Block

```
<FieldDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <intelliBackSearch> <!-- opt, xs:boolean --> </intelliBackSearch>
  <startTriggerTime> <!-- req, xs:integer, milliseconds --> </startTriggerTime>
  <endTriggerTime> <!-- req, xs:integer, milliseconds --> </endTriggerTime>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <minObjectSize>
    <!-- opt, xs:integer, min number of pixels per object -->
  </minObjectSize>
  <maxObjectSize>
    <!-- opt, xs:integer, max number of pixels per object -->
  </maxObjectSize>
  <FieldDetectionRegionList size="4"/>
</FieldDetection>
```

### 8.5.14 /ISAPI/Smart/FieldDetection/<ID>/regions

| /ISAPI/Smart/FieldDetection/ID/regions |                                                                                     | General Resource | v2.0 |
|----------------------------------------|-------------------------------------------------------------------------------------|------------------|------|
| GET                                    |                                                                                     |                  |      |
| Description                            | Access the list of regions for Field detection on a particular video input channel. |                  |      |
| Query                                  | None                                                                                |                  |      |
| Inbound Data                           | None                                                                                |                  |      |
| Success Return                         | FieldDetectionRegionList                                                            |                  |      |
| PUT                                    |                                                                                     |                  |      |
| Description                            | Access the list of regions for Field detection on a particular video input channel. |                  |      |
| Query                                  | None                                                                                |                  |      |

|                |                                                                                     |
|----------------|-------------------------------------------------------------------------------------|
| Inbound Data   | FieldDetectionRegionList                                                            |
| Success Return | ResponseStatus                                                                      |
| <b>POST</b>    |                                                                                     |
| Description    | Access the list of regions for Field detection on a particular video input channel. |
| Query          | None                                                                                |
| Inbound Data   | None                                                                                |
| Success Return | FieldDetectionRegion                                                                |
| <b>DETELE</b>  |                                                                                     |
| Description    | Access the list of regions for Field detection on a particular video input channel. |
| Query          | None                                                                                |
| Inbound Data   | None                                                                                |
| Success Return | ResponseStatus                                                                      |
| Notes:         |                                                                                     |

#### FieldDetectionRegionsList XML Block

```
<FieldDetectionRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FieldDetectionRegion/>
</FieldDetectionRegionList>
```

### 8.5.15 /ISAPI/Smart/FieldDetection/<ID>/regions/<ID>

| /ISAPI/Smart/FieldDetection/ID/regions/ID |                                                 | General Resource | v2.0 |
|-------------------------------------------|-------------------------------------------------|------------------|------|
| GET                                       |                                                 |                  |      |
| Description                               | Access the list of regions for Field detection. |                  |      |
| Query                                     | None                                            |                  |      |
| Inbound Data                              | None                                            |                  |      |
| Success Return                            | FieldDetectionRegion                            |                  |      |
| PUT                                       |                                                 |                  |      |
| Description                               | Access the list of regions for Field detection. |                  |      |
| Query                                     | None                                            |                  |      |
| Inbound Data                              | FieldDetectionRegion                            |                  |      |
| Success Return                            | ResponseStatus                                  |                  |      |
| DELETE                                    |                                                 |                  |      |
| Description                               | Access the list of regions for Field detection. |                  |      |
| Query                                     | None                                            |                  |      |
| Inbound Data                              | None                                            |                  |      |
| Success Return                            | ResponseStatus                                  |                  |      |

**Notes:**

**FieldDetectionRegion XML Block**

```
<FieldDetectionRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <sensitivityLevel>
    <!--req, xs:integer-->
  </sensitivityLevel>
  <timeThreshold>
    <!--req, xs:integer -->
  </timeThreshold>
  <objectOccupation>
    <!--req, xs:integer-->
  </objectOccupation>
  <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
  <RegionCoordinatesList>
    <RegionCoordinates> <!-- req, -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</FieldDetectionRegion>
```

## 8.5.16 /ISAPI/Smart/LineDetection

| /ISAPI/Smart/LineDetection |                                                            | General Resource | v2.0 |
|----------------------------|------------------------------------------------------------|------------------|------|
| GET                        |                                                            |                  |      |
| Description                | Line detection configuration for all video input channels. |                  |      |
| Query                      | None                                                       |                  |      |
| Inbound Data               | None                                                       |                  |      |
| Success Return             | LineDetectionList                                          |                  |      |
| PUT                        |                                                            |                  |      |
| Description                | Line detection configuration for all video input channels. |                  |      |
| Query                      | None                                                       |                  |      |
| Inbound Data               | LineDetectionList                                          |                  |      |
| Success Return             | ResponseStatus                                             |                  |      |
| Notes:                     |                                                            |                  |      |

**LineDetectionList XML Block**

```
<LineDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
```



```
<LineDetection/>    <!-- opt -->
</LineDetectionList>
```

## 8.5.17 /ISAPI/Smart/LineDetection/<ID>

| /ISAPI/Smart/LineDetection/ID |                                                          | General Resource | v2.0 |
|-------------------------------|----------------------------------------------------------|------------------|------|
| GET                           |                                                          |                  |      |
| Description                   | Line detection configuration for a video input channels. |                  |      |
| Query                         | None                                                     |                  |      |
| Inbound Data                  | None                                                     |                  |      |
| Success Return                | LineDetection                                            |                  |      |
| PUT                           |                                                          |                  |      |
| Description                   | Line detection configuration for a video input channels. |                  |      |
| Query                         | None                                                     |                  |      |
| Inbound Data                  | LineDetection                                            |                  |      |
| Success Return                | ResponseStatus                                           |                  |      |
| Notes:                        |                                                          |                  |      |

### LineDetection XML Block

```
<LineDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string -->    </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <intelliBackSearch> <!-- opt, xs:boolean --> </intelliBackSearch>
  <duration> <!-- opt, xs:integer --></duration>
  <startTriggerTime> <!-- req, xs:integer, milliseconds -->    </startTriggerTime>
  <endTriggerTime>    <!-- req, xs:integer, milliseconds -->    </endTriggerTime>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <minObjectSize>
    <!-- opt, xs:integer, min number of pixels per object -->
  </minObjectSize>
  <maxObjectSize>
    <!-- opt, xs:integer, max number of pixels per object -->
  </maxObjectSize>
  <LineItem size="4"/>
</LineDetection>
```

## 8.5.18 /ISAPI/Smart/LineDetection/<ID>/lineItem

| /ISAPI/Smart/LineDetection/ID/lineltem |                                                                                     | General Resource | v2.0 |
|----------------------------------------|-------------------------------------------------------------------------------------|------------------|------|
| GET                                    |                                                                                     |                  |      |
| Description                            | Access the list of polyline for line detection on a particular video input channel. |                  |      |
| Query                                  | None                                                                                |                  |      |
| Inbound Data                           | None                                                                                |                  |      |
| Success Return                         | LineltemList                                                                        |                  |      |
| PUT                                    |                                                                                     |                  |      |
| Description                            | Access the list of polyline for line detection on a particular video input channel. |                  |      |
| Query                                  | None                                                                                |                  |      |
| Inbound Data                           | LineltemList                                                                        |                  |      |
| Success Return                         | ResponseStatus                                                                      |                  |      |
| POST                                   |                                                                                     |                  |      |
| Description                            | Access the list of polyline for line detection on a particular video input channel. |                  |      |
| Query                                  | None                                                                                |                  |      |
| Inbound Data                           | None                                                                                |                  |      |
| Success Return                         | LineltemList                                                                        |                  |      |
| DETELE                                 |                                                                                     |                  |      |
| Description                            | Access the list of polyline for line detection on a particular video input channel. |                  |      |
| Query                                  | None                                                                                |                  |      |
| Inbound Data                           | None                                                                                |                  |      |
| Success Return                         | ResponseStatus                                                                      |                  |      |
| Notes:                                 |                                                                                     |                  |      |

### LineItemList XML Block

```
<LineItemList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <LineItem/>
</LineItemList>
```

## 8.5.19 /ISAPI/Smart/LineDetection/<ID>/lineItem/<ID>

| /ISAPI/Smart/LineDetection/ID/lineItem/ID |                                                 | General Resource | v2.0 |
|-------------------------------------------|-------------------------------------------------|------------------|------|
| <b>GET</b>                                |                                                 |                  |      |
| Description                               | Access the list of polyline for line detection. |                  |      |

|                |                                                 |
|----------------|-------------------------------------------------|
| Query          | None                                            |
| Inbound Data   | None                                            |
| Success Return | <b>Lineltem</b>                                 |
| <b>PUT</b>     |                                                 |
| Description    | Access the list of polyline for line detection. |
| Query          | None                                            |
| Inbound Data   | <b>Lineltem</b>                                 |
| Success Return | <b>ResponseStatus</b>                           |
| <b>DELETE</b>  |                                                 |
| Description    | Access the list of polyline for line detection. |
| Query          | None                                            |
| Inbound Data   | None                                            |
| Success Return | <b>ResponseStatus</b>                           |
| Notes:         |                                                 |

#### Lineltem XML Block

```
<Lineltem version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <sensitivityLevel>
    <!--req, xs:integer-->
  </sensitivityLevel>
  <directionSensitivity>
    <!-- opt, xs:string, "left-right,right-left,any" -->
  </directionSensitivity>
  <CoordinatesList>
    <Coordinates> <!-- req, -->
      <positionX>    <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>    <!-- req, xs:integer;coordinate -->    </positionY>
    </Coordinates>
  </CoordinatesList>
  <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
</Lineltem>
```

## 8.5.20 /ISAPI/Smart/DefocusDetection

| /ISAPI/Smart/DefocusDetection |                                                               | General Resource | v2.0 |
|-------------------------------|---------------------------------------------------------------|------------------|------|
| <b>GET</b>                    |                                                               |                  |      |
| Description                   | Defocus detection configuration for all audio input channels. |                  |      |
| Query                         | None                                                          |                  |      |

|                |                                                               |
|----------------|---------------------------------------------------------------|
| Inbound Data   | None                                                          |
| Success Return | <b>DefocusDetectionList</b>                                   |
| <b>PUT</b>     |                                                               |
| Description    | Defocus detection configuration for all audio input channels. |
| Query          | None                                                          |
| Inbound Data   | <b>DefocusDetectionList</b>                                   |
| Success Return | <b>ResponseStatus</b>                                         |
| Notes:         |                                                               |

#### DefocusDetectionList XML Block

```
<DefocusDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DefocusDetection/> <!-- opt -->
</DefocusDetectionList>
```

## 8.5.21 /ISAPI/Smart/DefocusDetection/<ID>

| /ISAPI/Smart/ DefocusDetection/ID |                                                            | General Resource | v2.0 |
|-----------------------------------|------------------------------------------------------------|------------------|------|
| GET                               |                                                            |                  |      |
| Description                       | Defocus detection configuration for a audio input channel. |                  |      |
| Query                             | None                                                       |                  |      |
| Inbound Data                      | None                                                       |                  |      |
| Success Return                    | DefocusDetection                                           |                  |      |
| PUT                               |                                                            |                  |      |
| Description                       | Defocus detection configuration for a audio input channel. |                  |      |
| Query                             | None                                                       |                  |      |
| Inbound Data                      | DefocusDetection                                           |                  |      |
| Success Return                    | ResponseStatus                                             |                  |      |
| Notes:                            |                                                            |                  |      |

#### DefocusDetection XML Block

```
<DefocusDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <sensitivityLevel> <!--opt, xs:integer--> </sensitivityLevel>
</DefocusDetection>
```

## 8.5.22 /ISAPI/Smart/AudioDetection/channels

| /ISAPI/Smart/AudioDetection/channels |                                                             | General Resource | v2.0 |
|--------------------------------------|-------------------------------------------------------------|------------------|------|
| GET                                  |                                                             |                  |      |
| Description                          | Audio detection configuration for all audio input channels. |                  |      |
| Query                                | None                                                        |                  |      |
| Inbound Data                         | None                                                        |                  |      |
| Success Return                       | AudioDetectionList                                          |                  |      |
| PUT                                  |                                                             |                  |      |
| Description                          | Audio detection configuration for all audio input channels. |                  |      |
| Query                                | None                                                        |                  |      |
| Inbound Data                         | AudioDetectionList                                          |                  |      |
| Success Return                       | ResponseStatus                                              |                  |      |
| Notes:                               |                                                             |                  |      |

### AudioDetectionList XML Block

```
<AudioDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <AudioDetection/>  <!-- opt -->
</AudioDetectionList>
```

## 8.5.23 /ISAPI/Smart/AudioDetection/channels/<ID>

| /ISAPI/Smart/AudioDetection/channels/ID |                                                          | General Resource | v2.0 |
|-----------------------------------------|----------------------------------------------------------|------------------|------|
| GET                                     |                                                          |                  |      |
| Description                             | Audio detection configuration for a audio input channel. |                  |      |
| Query                                   | None                                                     |                  |      |
| Inbound Data                            | None                                                     |                  |      |
| Success Return                          | AudioDetection                                           |                  |      |
| PUT                                     |                                                          |                  |      |
| Description                             | Audio detection configuration for a audio input channel. |                  |      |
| Query                                   | None                                                     |                  |      |
| Inbound Data                            | AudioDetection                                           |                  |      |
| Success Return                          | ResponseStatus                                           |                  |      |
| Notes:                                  |                                                          |                  |      |

### AudioDetection XML Block

```
<AudioDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string;id -->  </id>
  <audioInputException>
```

```

    <enabled> <!-- req, xs:boolean --> </enabled>
  </audioInputException>
  <soundIntensityMutation> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <sensitivityLevel>
      <!--req, xs:integer-->
    </sensitivityLevel>
    <mutationThreshold>
      <!--req, xs:integer -->
    </mutationThreshold>
  </soundIntensityMutation>
  <SteepFall> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <sensitivityLevel>
      <!--req, xs:integer-->
    </sensitivityLevel>
  </SteepFall>
  <AudioLoss> <!-- opt -->
    <enabled><!-- req, xs:boolean --></enabled>
    <sensitivityLevel>
      <!--opt, xs:integer "1...100" def="50"-->
    </sensitivityLevel>
  </AudioLoss>
</AudioDetection>

```

## 8.5.24 /ISAPI/Smart/AudioDetection/channels/<ID>/capabilities

| /ISAPI/Smart/AudioDetection/channels/<ID>/capabilities                                                                           |                                               | General Resource | v2.0 |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------|------|
| GET                                                                                                                              |                                               |                  |      |
| Description                                                                                                                      | It is used to get Audio detection capability. |                  |      |
| Query                                                                                                                            | None                                          |                  |      |
| Inbound Data                                                                                                                     | None                                          |                  |      |
| Success Return                                                                                                                   | AudioDetection                                |                  |      |
| Notes:                                                                                                                           |                                               |                  |      |
| <mutexAbility opt="PDC"/><!-- opt indicates that audio exception detection and people counting functions are mutual exclusion--> |                                               |                  |      |
| <isSupportMultiScene>:Whether to support multiple scene(speed dome supports multiple scene area)                                 |                                               |                  |      |

### AudioDetection XML Block

```
<AudioDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <audioInputException>
    <enabled> <!-- req, xs:boolean --> </enabled>
  </audioInputException>
  <soundIntensityMutation>
    <enabled> <!-- req, xs:boolean --> </enabled>
    <sensitivityLevel>
      <!--req, xs:integer-->
    </sensitivityLevel>
  <mutationThreshold>
    <!--req, xs:integer -->
  </mutationThreshold>
</soundIntensityMutation>
  <SteepFall><!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <sensitivityLevel>
      <!--req, xs:integer-->
    </sensitivityLevel>
  </SteepFall>
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
  <AudioLoss> <!-- opt -->
    <enabled><!-- req, xs:boolean --></enabled>
    <sensitivityLevel min="" max="" def="">
      <!--opt, xs:integer "1...100" def="50"-->
    </sensitivityLevel>
  </AudioLoss>
</AudioDetection>
```

## 8.5.25 /ISAPI/Smart/AudioDetection/channels/<ID>/status

| /ISAPI/Smart/AudioDetection/channels/ID/status |                                   | General Resource | v2.0 |
|------------------------------------------------|-----------------------------------|------------------|------|
| <b>GET</b>                                     |                                   |                  |      |
| Description                                    | It is used to get audio strength. |                  |      |
| Query                                          | None                              |                  |      |
| Inbound Data                                   | None                              |                  |      |
| Success Return                                 | <b>AudioStrengthStatus</b>        |                  |      |

Notes:

#### AudioStrengthStatus XML Block

```
<AudioStrengthStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:string -->          </id>
  <audioStrength> <!--ro, req, xs:integer--> </audioStrength>
</AudioStrengthStatus>
```

## 8.5.26 /ISAPI/Smart/SceneChangeDetection

| /ISAPI/Smart/SceneChangeDetection |                                                                    | General Resource | v2.0 |
|-----------------------------------|--------------------------------------------------------------------|------------------|------|
| GET                               |                                                                    |                  |      |
| Description                       | Scene change detection configuration for all video input channels. |                  |      |
| Query                             | None                                                               |                  |      |
| Inbound Data                      | None                                                               |                  |      |
| Success Return                    | SceneChangeDetectionList                                           |                  |      |
| PUT                               |                                                                    |                  |      |
| Description                       | Scene change detection configuration for all video input channels. |                  |      |
| Query                             | None                                                               |                  |      |
| Inbound Data                      | SceneChangeDetectionList                                           |                  |      |
| Success Return                    | ResponseStatus                                                     |                  |      |
| Notes:                            |                                                                    |                  |      |

#### SceneChangeDetectionList XML Block

```
<SceneChangeDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SceneChangeDetection/> <!-- opt -->
</SceneChangeDetectionList>
```

## 8.5.27 /ISAPI/Smart/SceneChangeDetection/<ID>

| /ISAPI/Smart/SceneChangeDetection/ID |                                                                  | General Resource | v2.0 |
|--------------------------------------|------------------------------------------------------------------|------------------|------|
| GET                                  |                                                                  |                  |      |
| Description                          | Scene change detection configuration for a video input channels. |                  |      |
| Query                                | None                                                             |                  |      |
| Inbound Data                         | None                                                             |                  |      |
| Success Return                       | SceneChangeDetection                                             |                  |      |
| PUT                                  |                                                                  |                  |      |



|                       |                                                                  |
|-----------------------|------------------------------------------------------------------|
| <b>Description</b>    | Scene change detection configuration for a video input channels. |
| <b>Query</b>          | None                                                             |
| <b>Inbound Data</b>   | <b>SceneChangeDetection</b>                                      |
| <b>Success Return</b> | <b>ResponseStatus</b>                                            |
| <b>Notes:</b>         |                                                                  |

#### SceneChangeDetection XML Block

```
<SceneChangeDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <sensitivityLevel> <!-- req, xs:integer --> </sensitivityLevel>
</SceneChangeDetection>
```

## 8.5.28 /ISAPI/Smart/regionEntrance

/ISAPI/Smart/regionEntrance

General Resource v2.0

|                |                                                                       |
|----------------|-----------------------------------------------------------------------|
| GET            |                                                                       |
| Description    | Region Entrance detection configuration for all video input channels. |
| Query          | None                                                                  |
| Inbound Data   | None                                                                  |
| Success Return | RegionEntranceList                                                    |

|                |                                                                       |
|----------------|-----------------------------------------------------------------------|
| PUT            |                                                                       |
| Description    | Region Entrance detection configuration for all video input channels. |
| Query          | None                                                                  |
| Inbound Data   | RegionEntranceList                                                    |
| Success Return | ResponseStatus                                                        |

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <RegionEntranceRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <RegionEntranceRegionList> is listed, but <RegionEntranceRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/regionEntrance/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

#### RegionEntranceList XML Block

```
<RegionEntranceList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
```

```
<RegionEntrance/> <!-- opt -->
</RegionEntranceList>
```

## 8.5.29 /ISAPI/Smart/regionEntrance/<ID>/capabilities

| /ISAPI/Smart//regionEntrance/<ID>/capabilities                                                                                                                                                                                                                    |                                                         | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                               |                                                         |                  |      |
| Description                                                                                                                                                                                                                                                       | It is used to get Region Entrance Detection capability. |                  |      |
| Query                                                                                                                                                                                                                                                             | None                                                    |                  |      |
| Inbound Data                                                                                                                                                                                                                                                      | None                                                    |                  |      |
| Success Return                                                                                                                                                                                                                                                    | <RegionEntrance>                                        |                  |      |
| Notes:                                                                                                                                                                                                                                                            |                                                         |                  |      |
| <p>&lt;mutexAbility opt="PDC"/&gt;&lt;!-- opt it means the region entrance function is mutually exclusive to people counting statistics --&gt;</p> <p>&lt;isSupportMultiScene&gt;: whether or not support multiple scenes, speed dome supports this function.</p> |                                                         |                  |      |

### RegionEntrance XML Block

```
<RegionEntrance version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionEntranceRegionList size="4"> <!-- opt -->
    <RegionEntranceRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--opt, xs:integer, 1..100, 1 is the least
sensitive--></sensitivityLevel>
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
          <positionY> <!-- req, xs:integer;coordinate --> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
      <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
    </RegionEntranceRegion>
  </RegionEntranceRegionList>
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
```





|                                                                                                                                                                                                                                                                |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <b>Inbound Data</b>                                                                                                                                                                                                                                            | <b>RegionEntranceRegion</b> |
| <b>Success Return</b>                                                                                                                                                                                                                                          | <b>ResponseStatus</b>       |
| <b>Notes:</b><br><br>1. If <RegionCoordinatesList> doesn't exist, it means that this coordinates for this region remains unchanged.<br>2. If <RegionCoordinatesList> is listed, but <RegionCoordinates> is not, it means the region and sensitivity are empty. |                             |

#### RegionEntranceRegion XML Block

```
<RegionEntranceRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!--opt, xs:integer, 1..100, 0 is the least sensitive --></sensitivityLevel>
  <RegionCoordinatesList>  <!-- opt -->
    <RegionCoordinates>  <!-- opt, -->
      <positionX>          <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>          <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  <detectionTarget><!-- opt, xs:string,"all,human,vehicle" -->    </detectionTarget>
</RegionEntranceRegion>
```

## 8.5.33 /ISAPI/Smart/regionExiting

/ISAPI/Smart/regionExiting

General Resource

v2.0

|                |                                                                      |
|----------------|----------------------------------------------------------------------|
| GET            |                                                                      |
| Description    | Region Exiting detection configuration for all video input channels. |
| Query          | None                                                                 |
| Inbound Data   | None                                                                 |
| Success Return | RegionExitingList                                                    |

|                |                                                                      |
|----------------|----------------------------------------------------------------------|
| PUT            |                                                                      |
| Description    | Region Exiting detection configuration for all video input channels. |
| Query          | None                                                                 |
| Inbound Data   | RegionExitingList                                                    |
| Success Return | ResponseStatus                                                       |

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.

2. If <RegionExitingRegionList> doesn't exist, it means the region and sensitivity remain the same.

3. If <RegionExitingRegionList> is listed, but <RegionExitingRegion> is not, it means the region and sensitivity are empty.



```

    </RegionCoordinatesList>
    <DetectionTarget><!-- opt, xs:string, "all, human, vehicle" --> </DetectionTarget>
  </RegionExitingRegion>
</RegionExitingRegionList>
<MutexAbility opt="PDC"/><!-- opt, ro, xs:string, "PDC" -->
<IsSupportMultiScene><!-- opt, xs:boolean --> </IsSupportMultiScene>
</RegionExiting>

```

### 8.5.35 /ISAPI/Smart/regionExiting/<ID>

| /ISAPI/Smart/regionExiting/ID                                                                                                                                                                                                                                                                                                                                                                                 |                                                                    | General Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |                  |      |
| Description                                                                                                                                                                                                                                                                                                                                                                                                   | Region Exiting detection configuration for a video input channels. |                  |      |
| Query                                                                                                                                                                                                                                                                                                                                                                                                         | None                                                               |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                  | None                                                               |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                | RegionExiting                                                      |                  |      |
| PUT                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |                  |      |
| Description                                                                                                                                                                                                                                                                                                                                                                                                   | Region Exiting detection configuration for a video input channels. |                  |      |
| Query                                                                                                                                                                                                                                                                                                                                                                                                         | None                                                               |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                  | RegionExiting                                                      |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                | ResponseStatus                                                     |                  |      |
| Notes:                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |                  |      |
| <div>1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.</div> <div>2. If &lt;RegionExitingRegionList&gt; doesn't exist, it means the region and sensitivity remain the same.</div> <div>3. If &lt;RegionExitingRegionList&gt; is listed, but &lt;RegionExitingRegion&gt; is not, it means the region and sensitivity are empty.</div> |                                                                    |                  |      |
| Please refer to /ISAPI/Smart/regionExiting/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.                                                                                                                                                                                                                                                                                         |                                                                    |                  |      |

#### RegionExiting XML Block

```

<RegionExiting version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionExitingRegionList/> <!-- opt -->
  <mutexAbility opt="PDC"/><!-- opt, ro, xs:string, "PDC" -->

```





|                                                                                                                                                                                                                                                                |                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Inbound Data                                                                                                                                                                                                                                                   | None                                                     |
| Success Return                                                                                                                                                                                                                                                 | <b>RegionExitingRegion</b>                               |
| <b>PUT</b>                                                                                                                                                                                                                                                     |                                                          |
| Description                                                                                                                                                                                                                                                    | Access the list of regions for Region Exiting detection. |
| Query                                                                                                                                                                                                                                                          | None                                                     |
| Inbound Data                                                                                                                                                                                                                                                   | <b>RegionExitingRegion</b>                               |
| Success Return                                                                                                                                                                                                                                                 | <b>ResponseStatus</b>                                    |
| <b>Notes:</b><br><br>1. If <RegionCoordinatesList> doesn't exist, it means that this coordinates for this region remains unchanged.<br>2. If <RegionCoordinatesList> is listed, but <RegionCoordinates> is not, it means the region and sensitivity are empty. |                                                          |

#### RegionExitingRegion XML Block

```
<RegionExitingRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!-- opt, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt, -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
</RegionExitingRegion>
```

## 8.5.38 /ISAPI/Smart/loitering

| /ISAPI/Smart/loitering |                                                                 | General Resource v2.0 |
|------------------------|-----------------------------------------------------------------|-----------------------|
| GET                    |                                                                 |                       |
| Description            | Loitering detection configuration for all video input channels. |                       |
| Query                  | None                                                            |                       |
| Inbound Data           | None                                                            |                       |
| Success Return         | LoiteringList                                                   |                       |
| PUT                    |                                                                 |                       |
| Description            | Loitering detection configuration for all video input channels. |                       |
| Query                  | None                                                            |                       |
| Inbound Data           | LoiteringList                                                   |                       |
| Success Return         | ResponseStatus                                                  |                       |
| Notes:                 |                                                                 |                       |

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <LoiteringRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <LoiteringRegionList> is listed, but <LoiteringRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/regionEntrance/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

#### LoiteringList XML Block

```
<LoiteringList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Loitering/><!-- opt -->
</LoiteringList>
```

### 8.5.39 /ISAPI/Smart/loitering/<ID>/capabilities

| /ISAPI/Smart/loitering/<ID>/capabilities                                                                                                                                                                                                                            |                                                   | General Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                 |                                                   |                  |      |
| Description                                                                                                                                                                                                                                                         | It is used to get Loitering Detection capability. |                  |      |
| Query                                                                                                                                                                                                                                                               | None                                              |                  |      |
| Inbound Data                                                                                                                                                                                                                                                        | None                                              |                  |      |
| Success Return                                                                                                                                                                                                                                                      | <Loitering>                                       |                  |      |
| Notes:                                                                                                                                                                                                                                                              |                                                   |                  |      |
| <p>&lt;mutexAbility opt="PDC"/&gt;&lt;!-- opt it means the loitering detection function is mutually exclusive to people counting statistics--&gt;</p> <p>&lt;isSupportMultiScene&gt;: whether or not support multiple scenes, speed dome supports this function</p> |                                                   |                  |      |

#### Loitering XML Block

```
<Loitering version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <LoiteringRegionList size="4"> <!-- opt -->
    <LoiteringRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--opt, xs:integer, 1..100, 1 is the least
```

```

sensitive--></sensitivityLevel>
  <timeThreshold min="1" max="10"/> <!-- req, xs:integer,seconds -->
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt, -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</LoiteringRegion>
</LoiteringRegionList>
<mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Loitering>

```

## 8.5.40 /ISAPI/Smart/loitering/<ID>

| /ISAPI/Smart/loitering/ID                                                                                                                                                                                                                                                                                                                                                                         |                                                               | General Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                                                                                                                               |                                                               |                  |      |
| Description                                                                                                                                                                                                                                                                                                                                                                                       | Loitering detection configuration for a video input channels. |                  |      |
| Query                                                                                                                                                                                                                                                                                                                                                                                             | None                                                          |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                      | None                                                          |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                    | Loitering                                                     |                  |      |
| PUT                                                                                                                                                                                                                                                                                                                                                                                               |                                                               |                  |      |
| Description                                                                                                                                                                                                                                                                                                                                                                                       | Loitering detection configuration for a video input channels. |                  |      |
| Query                                                                                                                                                                                                                                                                                                                                                                                             | None                                                          |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                      | Loitering                                                     |                  |      |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                    | ResponseStatus                                                |                  |      |
| Notes:                                                                                                                                                                                                                                                                                                                                                                                            |                                                               |                  |      |
| <div>1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.</div> <div>2. If &lt;LoiteringRegionList&gt; doesn't exist, it means the region and sensitivity remain the same.</div> <div>3. If &lt;LoiteringRegionList&gt; is listed, but &lt;LoiteringRegion&gt; is not, it means the region and sensitivity are empty.</div> |                                                               |                  |      |
| Please refer to /ISAPI/Smart/loitering/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.                                                                                                                                                                                                                                                                                 |                                                               |                  |      |

Loitering XML Block

```
<Loitering version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
```





| PUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Group detection configuration for all video input channels. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | None                                                        |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | GroupList                                                   |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ResponseStatus                                              |
| <b>Notes:</b> <ol style="list-style-type: none"> <li>1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.</li> <li>2. If &lt;GroupRegionList&gt; doesn't exist, it means the region and sensitivity remain the same.</li> <li>3. If &lt;GroupRegionList&gt; is listed, but &lt;GroupRegion&gt; is not, it means the region and sensitivity are empty.</li> </ol> <p>Please refer to /ISAPI/Smart/group/&lt;ID&gt;/region/&lt;ID&gt; for detailed multiple scenes configuration on Speed Dome.</p> |                                                             |

GroupList XML Block

```
<GroupList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Group/>  <!-- opt -->
</GroupList>
```

## 8.5.44 /ISAPI/Smart/group/<ID>/capabilities

| /ISAPI/Smart/group/<ID>/capabilities                                                                                                                                                                                                                            |                                               | General Resource | v2.0 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                             |                                               |                  |      |
| Description                                                                                                                                                                                                                                                     | It is used to get Group Detection capability. |                  |      |
| Query                                                                                                                                                                                                                                                           | None                                          |                  |      |
| Inbound Data                                                                                                                                                                                                                                                    | None                                          |                  |      |
| Success Return                                                                                                                                                                                                                                                  | <Group>                                       |                  |      |
| <b>Notes:</b>                                                                                                                                                                                                                                                   |                                               |                  |      |
| <p>&lt;mutexAbility opt="PDC"/&gt;&lt;!-- opt it means the group detection function is mutually exclusive to people counting statistics--&gt;</p> <p>&lt;isSupportMultiScene&gt;: whether or not support multiple scenes, speed dome supports this function</p> |                                               |                  |      |

Group XML Block

```
<Group version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string -->  </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
```

```

    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
</normalizedScreenSize>
<GroupRegionList size="4"> <!-- opt -->
  <GroupRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <id> <!-- req, xs:string --> </id>
    <objectOccupation min="1" max="100"/> <!-- req, xs:integer -->
    <RegionCoordinatesList> <!-- opt -->
      <RegionCoordinates> <!-- opt -->
        <positionX> <!-- req, xs:integer;coordinate --> </positionX>
        <positionY> <!-- req, xs:integer;coordinate --> </positionY>
      </RegionCoordinates>
    </RegionCoordinatesList>
  </GroupRegion>
</GroupRegionList>
<mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Group>

```

## 8.5.45 /ISAPI/Smart/group/<ID>

/ISAPI/Smart/group/ID

General Resource

v2.0

|                |                                                           |
|----------------|-----------------------------------------------------------|
| GET            |                                                           |
| Description    | Group detection configuration for a video input channels. |
| Query          | None                                                      |
| Inbound Data   | None                                                      |
| Success Return | Group                                                     |
| PUT            |                                                           |
| Description    | Group detection configuration for a video input channels. |
| Query          | None                                                      |
| Inbound Data   | Group                                                     |
| Success Return | ResponseStatus                                            |

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <GroupRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <GroupRegionList> is listed, but <GroupRegion> is not, it means the region and sensitivity are empty.





#### GroupRegionList XML Block

```
<GroupRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <GroupRegion/>
</GroupRegionList>
```

### 8.5.47 /ISAPI/Smart/group/<ID>/regions/<ID>

| /ISAPI/Smart/group/ID/regions/ID                                                                                        |                                                 | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------|------|
| GET                                                                                                                     |                                                 |                  |      |
| Description                                                                                                             | Access the list of regions for Group detection. |                  |      |
| Query                                                                                                                   | None                                            |                  |      |
| Inbound Data                                                                                                            | None                                            |                  |      |
| Success Return                                                                                                          | GroupRegion                                     |                  |      |
| PUT                                                                                                                     |                                                 |                  |      |
| Description                                                                                                             | Access the list of regions for Group detection. |                  |      |
| Query                                                                                                                   | None                                            |                  |      |
| Inbound Data                                                                                                            | GroupRegion                                     |                  |      |
| Success Return                                                                                                          | ResponseStatus                                  |                  |      |
| Notes:                                                                                                                  |                                                 |                  |      |
| 1. If <RegionCoordinatesList> doesn't exist, it means that this coordinates for this region remains unchanged.          |                                                 |                  |      |
| 2. If <RegionCoordinatesList> is listed, but <RegionCoordinates> is not, it means the region and sensitivity are empty. |                                                 |                  |      |

#### GroupRegion XML Block

```
<GroupRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <objectOccupation>  <!--opt, xs:integer-->  </objectOccupation>
  <RegionCoordinatesList>  <!-- opt -->
    <RegionCoordinates>  <!-- opt -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</GroupRegion>
```

## 8.5.48 /ISAPI/Smart/rapidMove

/ISAPI/Smart/rapidMove

General Resource v2.0

| GET            |                                                                  |
|----------------|------------------------------------------------------------------|
| Description    | Rapid Move detection configuration for all video input channels. |
| Query          | None                                                             |
| Inbound Data   | None                                                             |
| Success Return | <b>RapidMoveList</b>                                             |

| PUT            |                                                                  |
|----------------|------------------------------------------------------------------|
| Description    | Rapid Move detection configuration for all video input channels. |
| Query          | None                                                             |
| Inbound Data   | <b>RapidMoveList</b>                                             |
| Success Return | <b>ResponseStatus</b>                                            |

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <RapidMoveRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <RapidMoveRegionList> is listed, but <RapidMoveRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/rapidMove/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

RapidMoveList XML Block

```
<RapidMoveList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <RapidMove/>  <!-- opt -->
</RapidMoveList>
```

## 8.5.49 /ISAPI/Smart/rapidMove/<ID>/capabilities

| /ISAPI/Smart/rapidMove/<ID>/capabilities                                                                                           |                                                    | General Resource | v2.0 |
|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------|------|
| GET                                                                                                                                |                                                    |                  |      |
| Description                                                                                                                        | It is used to get Rapid Move Detection capability. |                  |      |
| Query                                                                                                                              | None                                               |                  |      |
| Inbound Data                                                                                                                       | None                                               |                  |      |
| Success Return                                                                                                                     | <RapidMove>                                        |                  |      |
| Notes:                                                                                                                             |                                                    |                  |      |
| <mutexAbility opt="PDC"/><!-- opt it means the rapidMove detection function is mutually exclusive to people counting statistics--> |                                                    |                  |      |

<isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function

#### RapidMove XML Block

```
<RapidMove version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RapidMoveRegionList size="4"> <!-- opt -->
    <RapidMoveRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--req, xs:integer, 1..100, 1 is the least
sensitive--></sensitivityLevel>
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
          <positionY> <!-- req, xs:integer;coordinate --> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
      <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
    </RapidMoveRegion>
  </RapidMoveRegionList>
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</RapidMove>
```

### 8.5.50 /ISAPI/Smart/rapidMove/<ID>

| /ISAPI/Smart/rapidMove/ID |                                                                | General Resource | v2.0 |
|---------------------------|----------------------------------------------------------------|------------------|------|
| GET                       |                                                                |                  |      |
| Description               | Rapid Move Detection configuration for a video input channels. |                  |      |
| Query                     | None                                                           |                  |      |
| Inbound Data              | None                                                           |                  |      |
| Success Return            | RapidMove                                                      |                  |      |
| PUT                       |                                                                |                  |      |
| Description               | Rapid Move Detection configuration for a video input channels. |                  |      |
| Query                     | None                                                           |                  |      |
| Inbound Data              | RapidMove                                                      |                  |      |
| Success Return            | ResponseStatus                                                 |                  |      |

#### Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <RapidMoveRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <RapidMoveRegionList> is listed, but <RapidMoveRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/rapidMove/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

#### RapidMove XML Block

```
<RapidMove version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RapidMoveRegionList/> <!-- opt -->
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</RapidMove>
```

### 8.5.51 /ISAPI/Smart/rapidMove/<ID>/regions

| /ISAPI/Smart/rapidMove/ID/regions                                                          |                                                                                          | General Resource | v2.0 |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------|------|
| GET                                                                                        |                                                                                          |                  |      |
| Description                                                                                | Access the list of regions for Rapid Move Detection on a particular video input channel. |                  |      |
| Query                                                                                      | None                                                                                     |                  |      |
| Inbound Data                                                                               | None                                                                                     |                  |      |
| Success Return                                                                             | RapidMoveRegionList                                                                      |                  |      |
| PUT                                                                                        |                                                                                          |                  |      |
| Description                                                                                | Access the list of regions for Rapid Move Detection on a particular video input channel. |                  |      |
| Query                                                                                      | None                                                                                     |                  |      |
| Inbound Data                                                                               | RapidMoveRegionList                                                                      |                  |      |
| Success Return                                                                             | ResponseStatus                                                                           |                  |      |
| Notes:                                                                                     |                                                                                          |                  |      |
| 1. This resource is not suitable to add/modify multiple scenes, only support to delete the |                                                                                          |                  |      |

coordinates of multiple scenes.

2. If <RapidMoveRegionList> is listed, but <RapidMoveRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/rapidMove/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

RapidMoveRegionList XML Block

```
<RapidMoveRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <RapidMoveRegion/>
</RapidMoveRegionList>
```

## 8.5.52 /ISAPI/Smart/rapidMove/<ID>/regions/<ID>

| /ISAPI/Smart/rapidMove/ID/regions/ID                                                                                    |                                                      | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------|------|
| GET                                                                                                                     |                                                      |                  |      |
| Description                                                                                                             | Access the list of regions for Rapid Move Detection. |                  |      |
| Query                                                                                                                   | None                                                 |                  |      |
| Inbound Data                                                                                                            | None                                                 |                  |      |
| Success Return                                                                                                          | RapidMoveRegion                                      |                  |      |
| PUT                                                                                                                     |                                                      |                  |      |
| Description                                                                                                             | Access the list of regions for Rapid Move Detection. |                  |      |
| Query                                                                                                                   | None                                                 |                  |      |
| Inbound Data                                                                                                            | RapidMoveRegion                                      |                  |      |
| Success Return                                                                                                          | ResponseStatus                                       |                  |      |
| Notes:                                                                                                                  |                                                      |                  |      |
| 1. If <RegionCoordinatesList> doesn't exist, it means that this coordinates for this region remains unchanged.          |                                                      |                  |      |
| 2. If <RegionCoordinatesList> is listed, but <RegionCoordinates> is not, it means the region and sensitivity are empty. |                                                      |                  |      |

RapidMoveRegion XML Block

```
<RapidMoveRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!--req, xs:integer, 1..100, 0 is the least sensitive --></sensitivityLevel>
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
```

```
</RegionCoordinatesList> <!-- opt -->
<detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
</RapidMoveRegion>
```

### 8.5.53 /ISAPI/Smart/parking

/ISAPI/Smart/parking

General Resource v2.0

|                |                                                               |
|----------------|---------------------------------------------------------------|
| GET            |                                                               |
| Description    | Parking Detection configuration for all video input channels. |
| Query          | None                                                          |
| Inbound Data   | None                                                          |
| Success Return | ParkingList                                                   |
| PUT            |                                                               |
| Description    | Parking Detection configuration for all video input channels. |
| Query          | None                                                          |
| Inbound Data   | ParkingList                                                   |
| Success Return | ResponseStatus                                                |

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <ParkingRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <ParkingRegionList> is listed, but <ParkingRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/parking/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

ParkingList XML Block

```
<ParkingList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Parking/> <!-- opt -->
</ParkingList>
```

### 8.5.54 /ISAPI/Smart/parking/<ID>/capabilities

| /ISAPI/Smart/parking/<ID>/capabilities |                                                 | General Resource | v2.0 |
|----------------------------------------|-------------------------------------------------|------------------|------|
| <b>GET</b>                             |                                                 |                  |      |
| Description                            | It is used to get Parking Detection capability. |                  |      |
| Query                                  | None                                            |                  |      |
| Inbound Data                           | None                                            |                  |      |

|                                                                                                                                                                                                                                                       |           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Success Return                                                                                                                                                                                                                                        | <Parking> |
| <b>Notes:</b><br><mutexAbility opt="PDC"/><!-- opt it means the parking detection function is mutually exclusive to people counting statistics--><br><isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function |           |

#### Parking XML Block

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <Parking version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema"><br><id>  <!-- req, xs:string -->  </id><br><enabled>  <!-- req, xs:boolean -->  </enabled><br><normalizedScreenSize><!-- req, ro --><br><normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth><br><normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight><br></normalizedScreenSize><br><ParkingRegionList size="4"> <!-- opt --><br><ParkingRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema"><br><id>                    <!-- req, xs:string -->                    </id><br><sensitivityLevel min="1" max="100"><!--req, xs:integer, 1..100, 1 is the least sensitive--></sensitivityLevel><br><timeThreshold min="5" max="100"/> <!-- req, xs:integer,seconds --><br><RegionCoordinatesList>  <!-- opt --><br><RegionCoordinates>  <!-- opt --><br><positionX>          <!-- req, xs:integer;coordinate -->  </positionX><br><positionY>          <!-- req, xs:integer;coordinate -->  </positionY><br></RegionCoordinates><br></RegionCoordinatesList><br></ParkingRegion><br></ParkingRegionList><br><mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" --><br><isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene><br></Parking> |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

### 8.5.55 /ISAPI/Smart/parking/<ID>

| /ISAPI/Smart/parking/ID |                                                             | General Resource | v2.0 |
|-------------------------|-------------------------------------------------------------|------------------|------|
| GET                     |                                                             |                  |      |
| Description             | Parking Detection configuration for a video input channels. |                  |      |
| Query                   | None                                                        |                  |      |
| Inbound Data            | None                                                        |                  |      |
| Success Return          | Parking                                                     |                  |      |
| PUT                     |                                                             |                  |      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Parking Detection configuration for a video input channels. |
| <b>Query</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | None                                                        |
| <b>Inbound Data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Parking</b>                                              |
| <b>Success Return</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>ResponseStatus</b>                                       |
| <b>Notes:</b> <ol style="list-style-type: none"> <li>1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.</li> <li>2. If &lt;ParkingRegionList&gt; doesn't exist, it means the region and sensitivity remain the same.</li> <li>3. If &lt;ParkingRegionList&gt; is listed, but &lt;ParkingRegion&gt; is not, it means the region and sensitivity are empty.</li> </ol> <p>Please refer to /ISAPI/Smart/parking/&lt;ID&gt;/region/&lt;ID&gt; for detailed multiple scenes configuration on Speed Dome.</p> |                                                             |

#### Parking XML Block

```
<Parking version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <ParkingRegionList/> <!-- opt -->
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Parking>
```

## 8.5.56 /ISAPI/Smart/parking/<ID>/regions

| /ISAPI/Smart/parking/ID/regions |                                                                                       | General Resource | v2.0 |
|---------------------------------|---------------------------------------------------------------------------------------|------------------|------|
| GET                             |                                                                                       |                  |      |
| Description                     | Access the list of regions for Parking Detection on a particular video input channel. |                  |      |
| Query                           | None                                                                                  |                  |      |
| Inbound Data                    | None                                                                                  |                  |      |
| Success Return                  | ParkingRegionList                                                                     |                  |      |
| PUT                             |                                                                                       |                  |      |
| Description                     | Access the list of regions for Parking Detection on a particular video input channel. |                  |      |
| Query                           | None                                                                                  |                  |      |
| Inbound Data                    | ParkingRegionList                                                                     |                  |      |



| Success Return                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ResponseStatus |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Notes:</b> <ol style="list-style-type: none"> <li>1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.</li> <li>2. If &lt;ParkingRegionList&gt; is listed, but &lt;ParkingRegion&gt; is not, it means the region and sensitivity are empty.</li> </ol> <p>Please refer to /ISAPI/Smart/parking/&lt;ID&gt;/region/&lt;ID&gt; for detailed multiple scenes configuration on Speed Dome.</p> |                |

#### ParkingRegionList XML Block

```
<ParkingRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <ParkingRegion/>
</ParkingRegionList>
```

## 8.5.57 /ISAPI/Smart/parking/<ID>/regions/<ID>

/ISAPI/Smart/parking/ID/regions/ID

General Resource

v2.0

| GET            |                                                   |
|----------------|---------------------------------------------------|
| Description    | Access the list of regions for Parking Detection. |
| Query          | None                                              |
| Inbound Data   | None                                              |
| Success Return | ParkingRegion                                     |
| PUT            |                                                   |
| Description    | Access the list of regions for Parking Detection. |
| Query          | None                                              |
| Inbound Data   | ParkingRegion                                     |
| Success Return | ResponseStatus                                    |

Notes:

1. If <RegionCoordinatesList> doesn't exist, it means that this coordinates for this region remains unchanged.
2. If <RegionCoordinatesList> is listed, but <RegionCoordinates> is not, it means the region and sensitivity are empty.

#### ParkingRegion XML Block

```
<ParkingRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!--req, xs:integer, 1..100, 0 is the least sensitive --></sensitivityLevel>
```



## 8.5.59 /ISAPI/Smart/unattendedBaggage/<ID>/capabilities

| /ISAPI/Smart/unattendedBaggage/<ID>/capabilities                                                                                                                     |                                                            | General Resource | v2.0 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                  |                                                            |                  |      |
| Description                                                                                                                                                          | It is used to get Unattended Baggage Detection capability. |                  |      |
| Query                                                                                                                                                                | None                                                       |                  |      |
| Inbound Data                                                                                                                                                         | None                                                       |                  |      |
| Success Return                                                                                                                                                       | <UnattendedBaggage>                                        |                  |      |
| Notes:                                                                                                                                                               |                                                            |                  |      |
| <code>&lt;mutexAbility opt="PDC"/&gt;&lt;!-- opt it means the unattended baggage detection function is mutually exclusive to people counting statistics--&gt;</code> |                                                            |                  |      |
| <code>&lt;isSupportMultiScene&gt;</code> : whether or not support multiple scenes, speed dome supports this function                                                 |                                                            |                  |      |

### UnattendedBaggage XML Block

```

<UnattendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <UnattendedBaggageRegionList size="4"> <!-- opt -->
    <UnattendedBaggageRegion version="2.0"
      xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--req, xs:integer, 1..100, 1 is the least
sensitive--></sensitivityLevel>
      <timeThreshold min="5" max="100"/> <!-- req, xs:integer,seconds -->
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
          <positionY> <!-- req, xs:integer;coordinate --> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </UnattendedBaggageRegion>
  </UnattendedBaggageRegionList>
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</UnattendedBaggage>

```

## 8.5.60 /ISAPI/Smart/unattendedBaggage/<ID>

/ISAPI/Smart/unattendedBaggage/ID

General Resource v2.0

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| GET            |                                                                        |
| Description    | Unattended Baggage Detection configuration for a video input channels. |
| Query          | None                                                                   |
| Inbound Data   | None                                                                   |
| Success Return | UnattendedBaggage                                                      |
| PUT            |                                                                        |
| Description    | Unattended Baggage Detection configuration for a video input channels. |
| Query          | None                                                                   |
| Inbound Data   | UnattendedBaggage                                                      |
| Success Return | ResponseStatus                                                         |

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <UnattendedBaggageRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <UnattendedBaggageRegionList> is listed, but <UnattendedBaggageRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/unattendedBaggage/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

### UnattendedBaggage XML Block

```
<UnattendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <UnattendedBaggageRegionList/> <!-- opt -->
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</UnattendedBaggage>
```

## 8.5.61 /ISAPI/Smart/unattendedBaggage/<ID>/regions

| /ISAPI/Smart/unattendedBaggage/ID/regions | General Resource v2.0 |
|-------------------------------------------|-----------------------|
|-------------------------------------------|-----------------------|

| GET                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Description                                                                                                                                                                                                                                                                                                                                                                                                             | Access the list of regions for Unattended Baggage Detection on a particular video input channel. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                   | None                                                                                             |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                            | None                                                                                             |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                          | <b>UnattendedBaggageRegionList</b>                                                               |
| PUT                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                  |
| Description                                                                                                                                                                                                                                                                                                                                                                                                             | Access the list of regions for Unattended Baggage Detection on a particular video input channel. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                                   | None                                                                                             |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                            | <b>UnattendedBaggageRegionList</b>                                                               |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                          | <b>ResponseStatus</b>                                                                            |
| <b>Notes:</b><br><br>1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.<br>2. If <UnattendedBaggageRegionList> is listed, but <UnattendedBaggageRegion> is not, it means the region and sensitivity are empty.<br><br>Please refer to /ISAPI/Smart/unattendedBaggage/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome. |                                                                                                  |

#### UnattendedBaggageRegionList XML Block

```
<UnattendedBaggageRegionList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <UnattendedBaggageRegion/>
</UnattendedBaggageRegionList>
```

## 8.5.62 /ISAPI/Smart/unattendedBaggage/<ID>/regions/ <ID>

| /ISAPI/Smart/unattendedBaggage/ID/regions/ID |                                                              | General Resource | v2.0 |
|----------------------------------------------|--------------------------------------------------------------|------------------|------|
| GET                                          |                                                              |                  |      |
| Description                                  | Access the list of regions for Unattended Baggage Detection. |                  |      |
| Query                                        | None                                                         |                  |      |
| Inbound Data                                 | None                                                         |                  |      |
| Success Return                               | UnattendedBaggageRegion                                      |                  |      |
| PUT                                          |                                                              |                  |      |
| Description                                  | Access the list of regions for Unattended Baggage Detection. |                  |      |

|                                                                                                                                                                                                                                                                                                                                   |                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Query                                                                                                                                                                                                                                                                                                                             | None                           |
| Inbound Data                                                                                                                                                                                                                                                                                                                      | <b>UnattendedBaggageRegion</b> |
| Success Return                                                                                                                                                                                                                                                                                                                    | <b>ResponseStatus</b>          |
| <b>Notes:</b> <ol style="list-style-type: none"> <li>1. If &lt;RegionCoordinatesList&gt; doesn't exist, it means that this coordinates for this region remains unchanged.</li> <li>2. If &lt;RegionCoordinatesList&gt; is listed, but &lt;RegionCoordinates&gt; is not, it means the region and sensitivity are empty.</li> </ol> |                                |

#### UnattendedBaggageRegion XML Block

```
<UnattendedBaggageRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!--req, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>
  <timeThreshold><!--opt, xs:integer--> </timeThreshold>
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</UnattendedBaggageRegion>
```

## 8.5.63 /ISAPI/Smart/attendedBaggage

| /ISAPI/Smart/attendedBaggage                                                                                               |                                                                        | General Resource v2.0 |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------|
| GET                                                                                                                        |                                                                        |                       |
| Description                                                                                                                | Attended Baggage Detection configuration for all video input channels. |                       |
| Query                                                                                                                      | None                                                                   |                       |
| Inbound Data                                                                                                               | None                                                                   |                       |
| Success Return                                                                                                             | AttendedBaggageList                                                    |                       |
| PUT                                                                                                                        |                                                                        |                       |
| Description                                                                                                                | Attended Baggage Detection configuration for all video input channels. |                       |
| Query                                                                                                                      | None                                                                   |                       |
| Inbound Data                                                                                                               | AttendedBaggageList                                                    |                       |
| Success Return                                                                                                             | ResponseStatus                                                         |                       |
| Notes:                                                                                                                     |                                                                        |                       |
| 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes. |                                                                        |                       |
| 2. If <AttendedBaggageRegionList> doesn't exist, it means the region and sensitivity remain the same.                      |                                                                        |                       |
| 3. If <AttendedBaggageRegionList> is listed, but <AttendedBaggageRegion> is not, it means the                              |                                                                        |                       |

region and sensitivity are empty.

Please refer to `/ISAPI/Smart/attendedBaggage/<ID>/region/<ID>` for detailed multiple scenes configuration on Speed Dome.

AttendedBaggageList XML Block

```
<AttendedBaggageList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <AttendedBaggage/> <!-- opt -->
</AttendedBaggageList>
```

## 8.5.64 /ISAPI/Smart/attendedBaggage/<ID>/capabilities

| /ISAPI/Smart/attendedBaggage/<ID>/capabilities                                                                                            |                                                          | General Resource | v2.0 |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------|------|
| GET                                                                                                                                       |                                                          |                  |      |
| Description                                                                                                                               | It is used to get Attended Baggage Detection capability. |                  |      |
| Query                                                                                                                                     | None                                                     |                  |      |
| Inbound Data                                                                                                                              | None                                                     |                  |      |
| Success Return                                                                                                                            | <AttendedBaggage>                                        |                  |      |
| <b>Notes:</b>                                                                                                                             |                                                          |                  |      |
| <mutexAbility opt="PDC"/><!-- opt it means the attended baggage detection function is mutually exclusive to people counting statistics--> |                                                          |                  |      |
| <isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function                                          |                                                          |                  |      |

AttendedBaggage XML Block

```
<AttendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <AttendedBaggageRegionList size="4"> <!-- opt -->
    <AttendedBaggageRegion version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--req, xs:integer, 1..100, 1 is the least
sensitive--></sensitivityLevel>
      <timeThreshold min="5" max="100"/> <!-- req, xs:integer,seconds -->
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
```

```

        <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
</RegionCoordinatesList>
</AttendedBaggageRegion>
</AttendedBaggageRegionList>
<mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</AttendedBaggage>

```

## 8.5.65 /ISAPI/Smart/attendedBaggage/<ID>

| /ISAPI/Smart/attendedBaggage/ID                                                                                                 |                                                                      | General Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------|------|
| GET                                                                                                                             |                                                                      |                  |      |
| Description                                                                                                                     | Attended Baggage Detection configuration for a video input channels. |                  |      |
| Query                                                                                                                           | None                                                                 |                  |      |
| Inbound Data                                                                                                                    | None                                                                 |                  |      |
| Success Return                                                                                                                  | AttendedBaggage                                                      |                  |      |
| PUT                                                                                                                             |                                                                      |                  |      |
| Description                                                                                                                     | Attended Baggage Detection configuration for a video input channels. |                  |      |
| Query                                                                                                                           | None                                                                 |                  |      |
| Inbound Data                                                                                                                    | Attended Baggage                                                     |                  |      |
| Success Return                                                                                                                  | ResponseStatus                                                       |                  |      |
| Notes:                                                                                                                          |                                                                      |                  |      |
| 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.      |                                                                      |                  |      |
| 2. If <AttendedBaggageRegionList> doesn't exist, it means the region and sensitivity remain the same.                           |                                                                      |                  |      |
| 3. If <AttendedBaggageRegionList> is listed, but <AttendedBaggageRegion> is not, it means the region and sensitivity are empty. |                                                                      |                  |      |
| Please refer to /ISAPI/Smart/attendedBaggage/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.         |                                                                      |                  |      |

### AttendedBaggage XML Block

```

<AttendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <id>    <!-- req, xs:string -->    </id>
    <enabled> <!-- req, xs:boolean --> </enabled>
    <normalizedScreenSize>
        <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
        <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
    </normalizedScreenSize>
    <AttendedBaggageRegionList/> <!-- opt -->

```



```
<mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</AttendedBaggage>
```

## 8.5.66 /ISAPI/Smart/attendedBaggage/<ID>/regions

| /ISAPI/Smart/attendedBaggage/ID/regions                                                                                         |                                                                                                | General Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                             |                                                                                                |                  |      |
| Description                                                                                                                     | Access the list of regions for Attended Baggage Detection on a particular video input channel. |                  |      |
| Query                                                                                                                           | None                                                                                           |                  |      |
| Inbound Data                                                                                                                    | None                                                                                           |                  |      |
| Success Return                                                                                                                  | AttendedBaggageRegionList                                                                      |                  |      |
| PUT                                                                                                                             |                                                                                                |                  |      |
| Description                                                                                                                     | Access the list of regions for Attended Baggage Detection on a particular video input channel. |                  |      |
| Query                                                                                                                           | None                                                                                           |                  |      |
| Inbound Data                                                                                                                    | AttendedBaggageRegionList                                                                      |                  |      |
| Success Return                                                                                                                  | ResponseStatus                                                                                 |                  |      |
| Notes:                                                                                                                          |                                                                                                |                  |      |
| 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.      |                                                                                                |                  |      |
| 2. If <AttendedBaggageRegionList> is listed, but <AttendedBaggageRegion> is not, it means the region and sensitivity are empty. |                                                                                                |                  |      |
| Please refer to /ISAPI/Smart/attendedBaggage/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.         |                                                                                                |                  |      |

AttendedBaggageRegionList XML Block

```
<AttendedBaggageRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <AttendedBaggageRegion/>
</AttendedBaggageRegionList>
```

## 8.5.67 /ISAPI/Smart/attendedBaggage/<ID>/regions/<ID>

**D>**

| /ISAPI/Smart/attendedBaggage/ID/regions/ID |                                                            | General Resource v2.0 |
|--------------------------------------------|------------------------------------------------------------|-----------------------|
| <b>GET</b>                                 |                                                            |                       |
| Description                                | Access the list of regions for Attended Baggage Detection. |                       |

|                                                                                                                                                                                                                                                                                                                                   |                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Query                                                                                                                                                                                                                                                                                                                             | None                                                       |
| Inbound Data                                                                                                                                                                                                                                                                                                                      | None                                                       |
| Success Return                                                                                                                                                                                                                                                                                                                    | <b>AttendedBaggageRegion</b>                               |
| <b>PUT</b>                                                                                                                                                                                                                                                                                                                        |                                                            |
| Description                                                                                                                                                                                                                                                                                                                       | Access the list of regions for Attended Baggage Detection. |
| Query                                                                                                                                                                                                                                                                                                                             | None                                                       |
| Inbound Data                                                                                                                                                                                                                                                                                                                      | <b>AttendedBaggageRegion</b>                               |
| Success Return                                                                                                                                                                                                                                                                                                                    | <b>ResponseStatus</b>                                      |
| <b>Notes:</b> <ol style="list-style-type: none"> <li>1. If &lt;RegionCoordinatesList&gt; doesn't exist, it means that this coordinates for this region remains unchanged.</li> <li>2. If &lt;RegionCoordinatesList&gt; is listed, but &lt;RegionCoordinates&gt; is not, it means the region and sensitivity are empty.</li> </ol> |                                                            |

#### AttendedBaggageRegion XML Block

```
<AttendedBaggageRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!--req, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>
  <timeThreshold><!--opt, xs:integer--> </timeThreshold>
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</AttendedBaggageRegion>
```

## 8.5.68 /ISAPI/Smart/peopleDetection

| /ISAPI/Smart/peopleDetection |                                                                     | General Resource | v2.0 |
|------------------------------|---------------------------------------------------------------------|------------------|------|
| GET                          |                                                                     |                  |      |
| Description                  | Region People detection configuration for all video input channels. |                  |      |
| Query                        | None                                                                |                  |      |
| Inbound Data                 | None                                                                |                  |      |
| Success Return               | PeopleDetectionList                                                 |                  |      |
| PUT                          |                                                                     |                  |      |
| Description                  | Region People detection configuration for all video input channels. |                  |      |
| Query                        | None                                                                |                  |      |
| Inbound Data                 | PeopleDetectionList                                                 |                  |      |

| Success Return                                                                                                                                                                                                                                                                                                                       | ResponseStatus |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Notes:</b><br><br>1、该资源不适用多场景区域的新增和修改，只支持对多场景区域坐标的清空。<br><br>2、RegionPeopleDetectionList 节点不存在，表示区域和时间阈值参数保持不变。<br><br>3、RegionPeopleDetectionList 节点存在，但子节点（RegionPeopleDetection）不存在，表示区域和时间阈值参数清空。<br><br>球机多场景区域的配置，可以根据场景调整后，使用独立协议配置完成，详见 /ISAPI/Smart/RegionPeopleDetection/<ID>/regions/<ID>。<br><br>当前司法球只支持一个场景。ID 值为 1 |                |

#### PeopleDetectionList XML Block

```
<PeopleDetectionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <PeopleDetection/> <!-- opt -->
</PeopleDetectionList>
```

## 8.5.69

### /ISAPI/Smart/peopleDetection/<ID>/capabilities

| /ISAPI/Smart/peopleDetection/<ID>/capabilities |                                                       | General Resource | v2.0 |
|------------------------------------------------|-------------------------------------------------------|------------------|------|
| GET                                            |                                                       |                  |      |
| Description                                    | It is used to get Region People Detection capability. |                  |      |
| Query                                          | None                                                  |                  |      |
| Inbound Data                                   | None                                                  |                  |      |
| Success Return                                 | <PeopleDetection>                                     |                  |      |
| Notes:                                         |                                                       |                  |      |

#### PeopleDetection XML Block

```
<PeopleDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionPeopleDetectionList size="4"> <!-- opt -->
    <RegionPeopleDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
```



```
<id> <!-- req, xs:string --> </id>
<enabled> <!-- req, xs:boolean --> </enabled>
<normalizedScreenSize>
  <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
  <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
</normalizedScreenSize>
<RegionPeopleDetectionList/> <!-- opt -->
</PeopleDetection>
```

## 8.5.71 /ISAPI/Smart/peopleDetection/<ID>/regions

/ISAPI/Smart/peopleDetection/ID/regions

General Resource v2.0

|                |                                                                                             |
|----------------|---------------------------------------------------------------------------------------------|
| GET            |                                                                                             |
| Description    | Access the list of regions for Region People detection on a particular video input channel. |
| Query          | None                                                                                        |
| Inbound Data   | None                                                                                        |
| Success Return | RegionPeopleDetectionList                                                                   |

|                |                                                                                             |
|----------------|---------------------------------------------------------------------------------------------|
| PUT            |                                                                                             |
| Description    | Access the list of regions for Region People detection on a particular video input channel. |
| Query          | None                                                                                        |
| Inbound Data   | RegionPeopleDetectionList                                                                   |
| Success Return | ResponseStatus                                                                              |

Notes:

1、该资源不适用多区域的新增和修改，只支持对多区域坐标的清空。

2、RegionPeopleDetectionList 节点存在，但子节点（RegionPeopleDetection）不存在，表示区域和时间阈值参数清空。

球机多场景区域的配置，可以根据场景调整后，使用独立协议配置完成，详见 /ISAPI/Smart/peopleDetection/<ID>/regions/<ID>。

当前司法球只支持一个场景。ID 值为 1

### RegionPeopleDetectionList XML Block

```
<RegionPeopleDetectionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <RegionPeopleDetection/>
</RegionPeopleDetectionList>
```

## 8.5.72

**/ISAPI/Smart/peopleDetection/<ID>/regions/<ID>**

/ISAPI/Smart/peopleDetection/ID/regions/ID

General Resource v2.0

|                |                                                         |
|----------------|---------------------------------------------------------|
| GET            |                                                         |
| Description    | Access the list of regions for Region People detection. |
| Query          | None                                                    |
| Inbound Data   | None                                                    |
| Success Return | RegionPeopleDetection                                   |

|                |                                                         |
|----------------|---------------------------------------------------------|
| PUT            |                                                         |
| Description    | Access the list of regions for Region People detection. |
| Query          | None                                                    |
| Inbound Data   | RegionPeopleDetection                                   |
| Success Return | ResponseStatus                                          |

Notes:

1、RegionCoordinatesList 节点不存在，表示区域坐标参数保持不变。

3、RegionCoordinatesList 节点存在，但子节点（RegionCoordinates）不存在，表示区域坐标参数清空。

## RegionPeopleDetection XML Block

```

<RegionPeopleDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <timeThreshold><!-- req, xs:integer, 5..30 --></timeThreshold>
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt, -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</RegionPeopleDetection>

```

8.5.73 **/ISAPI/Smart/storageDetection**

| <b>/ISAPI/Smart/storageDetection</b> |                                            | <b>General Resource v2.0</b> |
|--------------------------------------|--------------------------------------------|------------------------------|
| <b>GET</b>                           |                                            |                              |
| <b>Description</b>                   | It is used to get Smart Storage Detection. |                              |
| <b>Query</b>                         | None                                       |                              |

|                |                    |
|----------------|--------------------|
| Inbound Data   | None               |
| Success Return | <StorageDetection> |
| Notes:         |                    |

#### StorageDetection XML Block

```
<StorageDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <healthState> <!-- opt, xs:string, "good,bad,damage,unknown" -->   </healthState>
  <badBlocks>  <!-- opt, xs:integer, "坏块数" -->   </badBlocks>
  <SDCardState> <!-- opt, xs:string, "onLine,offLine,unknown,locked " -->   </SDCardState>
  <abnormalPowerLoss><!-- opt, xs:integer, "异常掉电数" --> </abnormalPowerLoss>
  <remainingLife><!-- opt, xs:integer, "0~100,SD卡剩余寿命;以百分比形式 " -->
</remainingLife>
</StorageDetection>
```

### 8.5.74 /ISAPI/Smart/storageDetection/rwlock

| /ISAPI/Smart/storageDetection/rwlock |                                                      | General Resource | v2.0 |
|--------------------------------------|------------------------------------------------------|------------------|------|
| GET                                  |                                                      |                  |      |
| Description                          | It is used to get Smart Storage read and write lock. |                  |      |
| Query                                | None                                                 |                  |      |
| Inbound Data                         | None                                                 |                  |      |
| Success Return                       | <RWLock>                                             |                  |      |
| PUT                                  |                                                      |                  |      |
| Description                          | It is used to set Smart Storage read and write lock. |                  |      |
| Query                                | None                                                 |                  |      |
| Inbound Data                         | <RWLock>                                             |                  |      |
| Success Return                       | ResponseStatus                                       |                  |      |
| Notes:                               |                                                      |                  |      |

#### RWLock XML Block

```
<RWLock version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled><!-- req,xs:boolean,--></enabled>
  <passwd><!-- req,wo, xs:string -->   </passwd>
  <originalPasswd><!-- opt,wo, xs:string -->   </originalPasswd>
</RWLock>
```

## 8.5.75 /ISAPI/Smart/storageDetection/rwlock/capabilities

| /ISAPI/Smart/storageDetection/rwlock/capabilities |                                                                   | General Resource | v2.0 |
|---------------------------------------------------|-------------------------------------------------------------------|------------------|------|
| GET                                               |                                                                   |                  |      |
| Description                                       | It is used to get Smart Storage read and write lock capabilities. |                  |      |
| Query                                             | None                                                              |                  |      |
| Inbound Data                                      | None                                                              |                  |      |
| Success Return                                    | <RWLock>                                                          |                  |      |
| Notes:                                            |                                                                   |                  |      |

### RWLock XML Block

```
<RWLock version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled><!--req,xs:boolean,--></enabled>
  <passwd min="" max=""><!-- req,wo, xs:string --> </passwd>
  <originalPasswd min="" max=""><!-- opt,wo, xs:string --> </originalPasswd>
  <SDCardType opt="HIK"><!--opt,ro,xs:string,--></SDCardType>
</RWLock>
```

## 8.5.76 /ISAPI/Smart/storageDetection/unlock

| /ISAPI/Smart/storageDetection/unlock |                                                        | General Resource | v2.0 |
|--------------------------------------|--------------------------------------------------------|------------------|------|
| PUT                                  |                                                        |                  |      |
| Description                          | It is used to set Smart Storage read and write unlock. |                  |      |
| Query                                | None                                                   |                  |      |
| Inbound Data                         | <UnLock>                                               |                  |      |
| Success Return                       | ResponseStatus                                         |                  |      |
| Notes:                               |                                                        |                  |      |

### UnLock XML Block

```
<UnLock version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <passwd><!-- req,wo, xs:string --> </passwd>
</UnLock>
```



## 8.5.77 /ISAPI/Smart/storageDetection/unlock/capabilities

| /ISAPI/Smart/storageDetection/unlock/capabilities |                                                                     | General Resource | v2.0 |
|---------------------------------------------------|---------------------------------------------------------------------|------------------|------|
| GET                                               |                                                                     |                  |      |
| Description                                       | It is used to get Smart Storage read and write unlock capabilities. |                  |      |
| Query                                             | None                                                                |                  |      |
| Inbound Data                                      | None                                                                |                  |      |
| Success Return                                    | <UnLock>                                                            |                  |      |
| Notes:                                            |                                                                     |                  |      |

### UnLock XML Block

```
<UnLock version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <passwd min="" max=""><!-- req,wo, xs:string -->  </passwd>
</UnLock>
```

## 8.6 /ISAPI/WLAlarm/

| /ISAPI/WLAlarm                | Service | v2.0 |
|-------------------------------|---------|------|
| Notes: wireless alarm service |         |      |

### 8.6.1 /ISAPI/WLAlarm/capabilities

| /ISAPI/WLAlarm/capabilities |                                              | General Resource | v2.0 |
|-----------------------------|----------------------------------------------|------------------|------|
| GET                         |                                              |                  |      |
| Description                 | It is used to get wireless alarm capability. |                  |      |
| Query                       | None                                         |                  |      |
| Inbound Data                | None                                         |                  |      |
| Success Return              | <WLAlarmCap>                                 |                  |      |
| Notes:                      |                                              |                  |      |

### WLAlarmCap XML Block

```
<WLAlarmCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportTeleControl> <!-- opt, xs:boolean -->  <isSupportTeleControl>
  <isSupportPIR> <!-- opt, xs:boolean --> </isSupportPIR>
  <isSupportWLSensors> <!-- opt, xs:boolean --> </isSupportWLSensors>
```

```
<isSupportCallHelp> <!-- opt, xs:boolean --> </isSupportCallHelp>
</WLAlarmCap>
```

## 8.6.2 /ISAPI/WLAlarm/telecontrol

| /ISAPI/WLAlarm/telecontrol |                                                                          | General Resource | v2.0 |
|----------------------------|--------------------------------------------------------------------------|------------------|------|
| GET                        |                                                                          |                  |      |
| Description                | It is used to get the properties of snapshot channels for the device.    |                  |      |
| Query                      | None                                                                     |                  |      |
| Inbound Data               | None                                                                     |                  |      |
| Success Return             | telecontrol                                                              |                  |      |
| PUT                        |                                                                          |                  |      |
| Description                | It is used to config the properties of snapshot channels for the device. |                  |      |
| Query                      | None                                                                     |                  |      |
| Inbound Data               | telecontrol                                                              |                  |      |
| Success Return             | ResponseStatus                                                           |                  |      |
| Notes:                     |                                                                          |                  |      |

### telecontrol XML Block

```
<telecontrol version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <delay> <!--opt, xs:integer, seconds -->
    <armingdelay><!--opt, xs:integer, seconds --> </armingdelay>
    <disarmingdelay><!--opt, xs:integer, seconds --> </disarmingdelay>
  </delay>
</telecontrol>
```

## 8.6.3 /ISAPI/WLAlarm/telecontrol/study

| /ISAPI/WLAlarm/telecontrol/study       |                                                                       | General Resource | v2.0 |
|----------------------------------------|-----------------------------------------------------------------------|------------------|------|
| PUT                                    |                                                                       |                  |      |
| Description                            | It is used to update the properties of a particular snapshot channel. |                  |      |
| Query                                  | None                                                                  |                  |      |
| Inbound Data                           |                                                                       |                  |      |
| Success Return                         | ResponseStatus                                                        |                  |      |
| Notes: the device enters arming status |                                                                       |                  |      |

## 8.6.4 /ISAPI/WLAlarm/telecontrol/arming

| /ISAPI/WLAlarm/telecontrol/arming |                                                                       | General Resource | v2.0 |
|-----------------------------------|-----------------------------------------------------------------------|------------------|------|
| PUT                               |                                                                       |                  |      |
| Description                       | It is used to update the properties of a particular snapshot channel. |                  |      |
| Query                             | None                                                                  |                  |      |
| Inbound Data                      |                                                                       |                  |      |
| Success Return                    | ResponseStatus                                                        |                  |      |
| Notes:                            |                                                                       |                  |      |
| The device enters arming status   |                                                                       |                  |      |

## 8.6.5 /ISAPI/WLAlarm/telecontrol/disarming

| /ISAPI/WLAlarm/telecontrol/disarming |                                                                       | General Resource | v2.0 |
|--------------------------------------|-----------------------------------------------------------------------|------------------|------|
| PUT                                  |                                                                       |                  |      |
| Description                          | It is used to update the properties of a particular snapshot channel. |                  |      |
| Query                                | None                                                                  |                  |      |
| Inbound Data                         |                                                                       |                  |      |
| Success Return                       | ResponseStatus                                                        |                  |      |
| Notes:                               |                                                                       |                  |      |

## 8.6.6 /ISAPI/WLAlarm/PIR

| /ISAPI/WLAlarm/PIR |                                                                          | General Resource | v2.0 |
|--------------------|--------------------------------------------------------------------------|------------------|------|
| GET                |                                                                          |                  |      |
| Description        | It is used to get the properties of snapshot channels for the device.    |                  |      |
| Query              | None                                                                     |                  |      |
| Inbound Data       | None                                                                     |                  |      |
| Success Return     | PIRAlarm                                                                 |                  |      |
| PUT                |                                                                          |                  |      |
| Description        | It is used to config the properties of snapshot channels for the device. |                  |      |
| Query              | None                                                                     |                  |      |
| Inbound Data       | PIRAlarm                                                                 |                  |      |
| Success Return     | ResponseStatus                                                           |                  |      |
| Notes:             |                                                                          |                  |      |

### PIRAlarm XML Block

```
<PIRAalarm version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!--req, xs:boolean --></enabled>
  <name> <!--opt, xs:string --></name>
</PIRAalarm>
```

## 8.6.7 /ISAPI/WLAlarm/WLSensors

| /ISAPI/WLAlarm/WLSensors |                                                                          | General Resource | v2.0 |
|--------------------------|--------------------------------------------------------------------------|------------------|------|
| GET                      |                                                                          |                  |      |
| Description              | It is used to get the properties of snapshot channels for the device.    |                  |      |
| Query                    | None                                                                     |                  |      |
| Inbound Data             | None                                                                     |                  |      |
| Success Return           | WLSensorlist                                                             |                  |      |
| PUT                      |                                                                          |                  |      |
| Description              | It is used to config the properties of snapshot channels for the device. |                  |      |
| Query                    | None                                                                     |                  |      |
| Inbound Data             | WLSensorlist                                                             |                  |      |
| Success Return           | ResponseStatus                                                           |                  |      |
| Notes:                   |                                                                          |                  |      |

### WLSensorlist XML Block

```
<WLSensorlist version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <WLSensor/>
</WLSensorlist>
```

## 8.6.8 /ISAPI/WLAlarm/WLSensors/<ID>

| /ISAPI/WLAlarm/WLSensors/ID |                                                                          | General Resource | v2.0 |
|-----------------------------|--------------------------------------------------------------------------|------------------|------|
| GET                         |                                                                          |                  |      |
| Description                 | It is used to get the properties of snapshot channels for the device.    |                  |      |
| Query                       | None                                                                     |                  |      |
| Inbound Data                | None                                                                     |                  |      |
| Success Return              | WLSensor                                                                 |                  |      |
| PUT                         |                                                                          |                  |      |
| Description                 | It is used to config the properties of snapshot channels for the device. |                  |      |
| Query                       | None                                                                     |                  |      |
| Inbound Data                | WLSensor                                                                 |                  |      |
| Success Return              | ResponseStatus                                                           |                  |      |
| Notes:                      |                                                                          |                  |      |

#### WLSensorlist XML Block

```
<WLSensor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!--req, xs:boolean --></enabled>
  <name> <!--opt, xs:string --></name>
</WLSensor>
```

## 8.6.9 /ISAPI/WLAlarm/callhelp

| /ISAPI/WLAlarm/callhelp |                | General Resource | v2.0 |
|-------------------------|----------------|------------------|------|
| GET                     |                |                  |      |
| Description             |                |                  |      |
| Query                   | None           |                  |      |
| Inbound Data            | None           |                  |      |
| Success Return          | Callhelp       |                  |      |
| PUT                     |                |                  |      |
| Description             |                |                  |      |
| Query                   | None           |                  |      |
| Inbound Data            | Callhelp       |                  |      |
| Success Return          | ResponseStatus |                  |      |
| Notes:                  |                |                  |      |

#### Callhelp XML Block

```
<Callhelp version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!--req, xs:boolean --></enabled>
  <name> <!--opt, xs:string --></name>
</Callhelp>
```

## 8.7 /ISAPI/GIS

| /ISAPI/GIS                | Service | v2.0 |
|---------------------------|---------|------|
| Notes: GIS configuration. |         |      |

### 8.7.1 /ISAPI/GIS/channels

| /ISAPI/GIS/channels | General Resource | v2.0 |
|---------------------|------------------|------|
| <b>GET</b>          |                  |      |

|                       |                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------|
| <b>Description</b>    | It is used to get all value that the url of AngleView, MaxViewRadius, PTZValue and CCD parameters. |
| <b>Query</b>          | None                                                                                               |
| <b>Inbound Data</b>   | None                                                                                               |
| <b>Success Return</b> | <b>GISList</b>                                                                                     |
| <b>Notes:</b>         |                                                                                                    |

#### GISList XML Block

```
<GISList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <GIS/> <!-- opt -->
</GISList>
```

## 8.7.2 /ISAPI/GIS/channels/<ID>/centralizedControl/capabilities

| /ISAPI/GIS/channels/<ID>/centralizedControl/capabilities |                    | General Resource v2.0 |
|----------------------------------------------------------|--------------------|-----------------------|
| <b>GET</b>                                               |                    |                       |
| <b>Description</b>                                       |                    |                       |
| <b>Query</b>                                             | None               |                       |
| <b>Inbound Data</b>                                      | None               |                       |
| <b>Success Return</b>                                    | CentralizedControl |                       |

#### CentralizedControl XML Block

```
<CentralizedControl version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!-- req, xs:boolean "true-开始, false-结束"--></enabled>
  <controlType opt="forcedControl,optionalControl"><!--dep, xs:string;集成控制模式"(强制布控),(非强制布控)"--></controlType>
  <expires min="" max=""><!--dep,xs:integer "60S---6*60*60S" 单位是S--></expires>
  <longitudeType opt="E,W"><!--req,xs:string "经度"--></longitudeType>
  <latitudeType opt="S,N"><!--req,xs:string "纬度"--></latitudeType>
  <Longitude><!--req,"经度"-->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float,"精确到小数点后3位"--></sec>
  </Longitude>
  <Latitude><!--req,"纬度"-->
    <degree><!--req,xs:interge--></degree>
```

```

<minute><!--req,xs:interge--></minute>
<sec><!--req,xs:float,"精确到小数点后3位"--></sec>
</Latitude>
</CentralizedControl>

```

### 8.7.3 /ISAPI/GIS/channels/<ID>/centralizedControl

| /ISAPI/GIS/channels/<ID>/centralizedControl |                    | General Resource | v2.0 |
|---------------------------------------------|--------------------|------------------|------|
| GET                                         |                    |                  |      |
| Description                                 |                    |                  |      |
| Query                                       | None               |                  |      |
| Inbound Data                                | None               |                  |      |
| Success Return                              | CentralizedControl |                  |      |
| PUT                                         |                    |                  |      |
| Description                                 |                    |                  |      |
| Query                                       | None               |                  |      |
| Inbound Data                                | CentralizedControl |                  |      |
| Success Return                              | ResponseStatus     |                  |      |
| Notes:                                      |                    |                  |      |

#### CentralizedControl XML Block

```

<CentralizedControl version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!-- req, xs:boolean "true-开始, false-结束"--></enabled>
  <controlType opt="forcedControl,optionalControl"><!--dep, xs:string;集成控制模式"(强制布控),(非强制布控)"--></controlType>
  <expires min="" max=""><!--dep,xs:integer "60S---6*60*60S" 单位是S--></expires>
  <longitudeType opt="E,W"><!--req,xs:string "经度"--></longitudeType>
  <latitudeType opt="S,N"><!--req,xs:string "纬度"--></latitudeType>
  <Longitude><!--req,"经度"-->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float,"精确到小数点后3位"--></sec>
  </Longitude>
  <Latitude><!--req,"纬度"-->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float,"精确到小数点后3位"--></sec>
  </Latitude>

```

</CentralizedControl>

## 8.8 /ISAPI/GIS

### 8.8.1 /ISAPI/GIS/channels/<ID>/reviseGPS/capabilities

| /ISAPI/GIS/channels/<ID>/reviseGPS/capabilities |                             | General Resource | v2.0 |
|-------------------------------------------------|-----------------------------|------------------|------|
| GET                                             |                             |                  |      |
| Description                                     | Get revise GPS capabilities |                  |      |
| Query                                           | None                        |                  |      |
| Inbound Data                                    | None                        |                  |      |
| Success Return                                  | ReviseGPS                   |                  |      |
| Notes:                                          |                             |                  |      |

ReviseGPS XML Block

```
<ReviseGPS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <longitudeType opt="E,W"><!--req,xs:string --></longitudeType>
  <latitudeType opt="S,N"><!--req,xs:string--></latitudeType>
  <Longitude><!--req, -->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float, --></sec>
  </Longitude>
  <Latitude><!--req, -->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float, --></sec>
  </Latitude>
</ReviseGPS>
```

### 8.8.2 /ISAPI/GIS/channels/<ID>/reviseGPS

| /ISAPI/GIS/channels/<ID>/reviseGPS |  | General Resource | v2.0 |
|------------------------------------|--|------------------|------|
| <b>GET</b>                         |  |                  |      |



|                       |                       |
|-----------------------|-----------------------|
| <b>Description</b>    | Get revise GPS        |
| <b>Query</b>          | None                  |
| <b>Inbound Data</b>   | None                  |
| <b>Success Return</b> | ReviseGPS             |
| <b>PUT</b>            |                       |
| <b>Description</b>    | Set revise GPS        |
| <b>Query</b>          | None                  |
| <b>Inbound Data</b>   | ReviseGPS             |
| <b>Success Return</b> | <b>ResponseStatus</b> |
| <b>Notes:</b>         |                       |

#### ReviseGPS XML Block

```
<ReviseGPS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <longitudeType><!--req,xs:string  "E,W"--></longitudeType>
  <latitudeType><!--req,xs:string "S,N"--></latitudeType>
  <Longitude><!--req, -->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float, --></sec>
  </Longitude>
  <Latitude><!--req, -->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float, --></sec>
  </Latitude>
</ReviseGPS>
```

### 8.8.3 /ISAPI/GIS/channels/<ID>

| /ISAPI/GIS/channels/ID |      | General Resource | v2.0 |
|------------------------|------|------------------|------|
| GET                    |      |                  |      |
| Description            |      |                  |      |
| Query                  | None |                  |      |
| Inbound Data           | None |                  |      |
| Success Return         | GIS  |                  |      |
| PUT                    |      |                  |      |
| Description            |      |                  |      |
| Query                  | None |                  |      |

|                |                |
|----------------|----------------|
| Inbound Data   | GISList        |
| Success Return | ResponseStatus |
| Notes:         |                |

### GIS XML Block

```
<GIS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <AngleView>
    <horizontalValue/> <!-- req, xs:float -->
    <verticalValue/> <!-- req, xs:float -->
    <visibleRadius/> <!-- req, xs:float -->
  </AngleView>
  <MaxViewRadius>
    <mVisibleRadius/> <!-- req, xs:integer -->
  </MaxViewRadius>
  <AbsoluteHigh>
    <elevation> <!-- opt, xs:integer, -900..2700 --> </elevation>
    <azimuth> <!-- opt, xs:integer, 0..3600 --> </azimuth>
    <absoluteZoom> <!-- opt, xs:integer, 0.. 1000 --> </absoluteZoom>
  </AbsoluteHigh>
  <Sensor>
    <SensorType> <!-- opt, xs:string, " CCD,CMOS" --> </SensorType>
    <hor/> <!-- req, xs:float -->
    <ver/> <!-- req, xs:float -->
    <fold/> <!-- req, xs:float -->
  </Sensor>
  <longitudeType> <!-- req, xs:string "经度" "E,W" --> </longitudeType>
  <latitudeType> <!-- req, xs:string "纬度" "S,N" --> </latitudeType>
  <Longitude> <!-- req, "经度" -->
    <degree> <!-- req, xs:integer --> </degree>
    <minute> <!-- req, xs:integer --> </minute>
    <sec> <!-- req, xs:float, "精确到小数点后6位" --> </sec>
  </Longitude>
  <Latitude> <!-- req, "纬度" -->
    <degree> <!-- req, xs:integer --> </degree>
    <minute> <!-- req, xs:integer --> </minute>
    <sec> <!-- req, xs:float, "精确到小数点后6位" --> </sec>
  </Latitude>
```

```
<azimuth><!--req,xs: float "方位角"--></azimuth>
</GIS>
```

## 8.9 /ISAPI/Traffic

### 8.9.1 /ISAPI/Traffic/Capabilities

| /ISAPI/Traffic/capabilities |                                      | General Resource | v2.0 |
|-----------------------------|--------------------------------------|------------------|------|
| GET                         |                                      |                  |      |
| Description                 | It is used to get device capability. |                  |      |
| Query                       | None                                 |                  |      |
| Inbound Data                | None                                 |                  |      |
| Success Return              | <TrafficCap>                         |                  |      |
| Notes:                      |                                      |                  |      |

#### TrafficCap XML Block

```
<TrafficCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <plateCap><!-- opt --, >
    <supCustomStateOrProvince><!--opt, xs:boolean , --></supCustomStateOrProvince>
    <supCountry><!--opt ,xs:integer 1,2,3...-->
    </supCountry>
    <isSupportPlateList><!--opt --,xs:boolean></isSupportPlateList>
    <plateListNum><!--opt --, integer, ></plateListNum>
    <plateMaskLen><!--opt --, integer, ></plateMaskLen>
  </plateCap>
</TrafficCap>
```

### 8.9.2 /ISAPI/Traffic/plateList

| /ISAPI/Traffic/plateList |                                                    | General Resource | v2.0 |
|--------------------------|----------------------------------------------------|------------------|------|
| GET                      |                                                    |                  |      |
| Description              | Export license plate of black and white black list |                  |      |
| Query                    | None                                               |                  |      |
| Inbound Data             | None                                               |                  |      |
| Success Return           | Opaque Data(.xls)                                  |                  |      |
| PUT                      |                                                    |                  |      |

|                                                                                                 |                                                    |                      |                               |
|-------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------|-------------------------------|
| <b>Description</b>                                                                              | Import license plate of black and white black list |                      |                               |
| <b>Query</b>                                                                                    | None                                               |                      |                               |
| <b>Inbound Data</b>                                                                             | Opaque Data(.xls)                                  |                      |                               |
| <b>Success Return</b>                                                                           | <ImportplateError >                                |                      |                               |
| <b>Error Code</b>                                                                               | <b>statusCode</b>                                  | <b>subStatusCode</b> | <b>description</b>            |
|                                                                                                 | 2                                                  | noMemory             | noMemory                      |
|                                                                                                 | 2                                                  | importFail           | importFail                    |
|                                                                                                 | 6                                                  | importErrorData      | importErrorData               |
|                                                                                                 | 2                                                  | configOperating      | device importing or exporting |
| <b>Notes:</b><br>Configuration file is device-dependant – it may be binary or any other format. |                                                    |                      |                               |

#### ImportplateError XML Block

```
<ImportResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">result
  <existError> <!-- req, xs:boolean --> </existError>
  <errorCode> <!-- opt, xs:string, importErrorData, importFail, configOperating, overLimit>
  </errorCode>
  <PlateErrorList/> <!-- opt -->
</ImportResult>
```

```
<PlateErrorList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <plateError> <!-- opt -->
    <id> <!-- req, xs:string, --> </id>
    <errorRowNo> <!-- req, xs:integer --> </errorRowNo>error number
    <errorType> <!-- req, xs:string, invalidGroup() --> </errorType>
  </plateError>
</PlateErrorList>
```

## 8.9.3 /ISAPI/ITC/capability

| /ISAPI/ITC/capability |                             | General Resource v2.0 |
|-----------------------|-----------------------------|-----------------------|
| <b>GET</b>            |                             |                       |
| <b>Description</b>    | GET ip traffic Capabilities |                       |
| <b>Query</b>          | None                        |                       |
| <b>Inbound Data</b>   | None                        |                       |
| <b>Success Return</b> | ITCCap                      |                       |

#### ITCCap XML Block

```
<ITCCap version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <isSupportITC> <!-- dep, xs: boolean> </isSupportITC>
  <isSupportVehicleDetection> <!-- dep, xs: boolean> <isSupportVehicleDetection>
  <isSupportLicencePlateAuditData> <!-- opt, xs: boolean> <isSupportLicencePlateAuditData>
  <isSupportSearchLPListAudit> <!-- opt, xs: boolean> </isSupportSearchLPListAudit>
</ITCCap>
```

## 8.9.4 /ISAPI/ContentMgmt/search

| /ISAPI/ContentMgmt/search                                        |                               | General Resource | v2.0 |
|------------------------------------------------------------------|-------------------------------|------------------|------|
| GET   POST                                                       |                               |                  |      |
| Description                                                      | It is used to search picture. |                  |      |
| Query                                                            | None                          |                  |      |
| Inbound Data                                                     | CMSearchDescription           |                  |      |
| Success Return                                                   | CMSearchResult                |                  |      |
| Notes:                                                           |                               |                  |      |
| Add new metaID—//recordType.meta.std-cgi.com/HVTVehicleDetection |                               |                  |      |

### CMSearchDescription XML Block

```
<CMSearchDescription version="1.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!-- req, xs: uuid --></searchID>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:time, ISO8601 time --></startTime>
      <endTime><!-- req, xs:time, ISO8601 time --></endTime>
    </timeSpan>
  </timeSpanList>
  <metadataList>
    <metadata>
      <metadataDescriptor>
        <metaID><!-- req, xs:string --></metaID>
        <CustomExtension>
          <plateSearchMask><!-- opt, xs:string --></plateSearchMask>
        </CustomExtension>
      </metadataDescriptor>
      <SearchProperty>
        <plateSearchMask><!-- opt, xs:string,1-31 --></plateSearchMask>
        <stateOrProvince><!-- opt, xs:interger --></stateOrProvince>
        <subType> <!-- opt, xs:string, "all,pedestrian,nonMotorVehicle,motorVehicle" -->
      </subType>
    </metadata>
  </metadataList>
</CMSearchDescription>
```

```

</SearchProperty>
</metadata>
</metadataList>
<searchResultPosition> <!-- opt, xs: interger --></searchResultPosition>
<maxResults><!-- opt, xs: interger --></maxResults>
</CMSearchDescription>

```

### CMSearchDescription XML Block

```

<CMSearchDescription version="1.0" xmlns=" http://www.std-cgi.org/ver20/XMLSchema">
  <responseStatus><!-- req, xs:boolean--></responseStatus>
  <responseStatusStrg><!-- req, xs:string--></responseStatusStrg>
  <numOfMatches><!-- req, xs:integer --></numOfMatches>
  <matchList> <!-- opt -->
    <matchElement> <!-- opt -->
      <timeSpan> <!-- opt -->
        <startTime><!-- req, xs:datetime --></startTime>
        <endTime><!-- req, xs:datetime --></endTime>
      </timeSpan>
      <value> <!-- req, xs:integer --> </value>
    </matchElement>
  </matchList>
</CMSearchDescription>

```

## 8.9.5 /ISAPI/Traffic/channels/<ID>/CurVehicleDetectMod

e

| /ISAPI/Traffic/channels/<ID>/CurVehicleDetectMode |                                                         | General Resource | v2.0 |
|---------------------------------------------------|---------------------------------------------------------|------------------|------|
| GET                                               |                                                         |                  |      |
| Description                                       | It is used to get the current vehicle detection type.   |                  |      |
| Query                                             | None                                                    |                  |      |
| Inbound Data                                      | None                                                    |                  |      |
| Success Return                                    | CurVehicleDetectMode                                    |                  |      |
| PUT                                               |                                                         |                  |      |
| Description                                       | It is used to update the current vehicle detection type |                  |      |
| Query                                             | None                                                    |                  |      |

|                |                      |
|----------------|----------------------|
| Inbound Data   | CurVehicleDetectMode |
| Success Return | ResponseStatus       |
| Notes:         |                      |

#### VehicleDetectCfg XML Block

```
<CurVehicleDetectMode version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <CurMode><!-- req, xs:string,"hvtVehicleDetection,"vehicleDetection"--></CurMode>
</CurVehicleDetectMode>
```

## 8.9.6 /ISAPI/Traffic/channels/<ID>/vehicleCalibration

| /ISAPI/Traffic/channels/<ID>/vehicleCalibration              |                                            | General Resource | v2.0 |
|--------------------------------------------------------------|--------------------------------------------|------------------|------|
| GET                                                          |                                            |                  |      |
| Description                                                  | It is used to get the Vehicle Calibration. |                  |      |
| Query                                                        | None                                       |                  |      |
| Inbound Data                                                 | None                                       |                  |      |
| Success Return                                               | Calibration Region                         |                  |      |
| Notes:                                                       |                                            |                  |      |
| /ISAPI/Traffic/channels/<ID>/vehicleCalibration/capabilities |                                            |                  |      |

#### Calibration Region XML Block

```
<Calibration version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <CalibrationRegionList size="1">
    <CalibrationRegion>
      <id><!-- ro, req, xs:string --></id>
      <RegionCoordinatesList size="4">
        <RegionCoordinates> <!-- ro, req, -->
          <positionX><!-- ro, req, xs:integer;coordinate --></positionX>
          <positionY><!-- ro, req, xs:integer;coordinate --></positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </CalibrationRegion>
  </CalibrationRegionList>
</Calibration>
```

## 8.9.7 VehicleDetection

### 8.9.7.1/ISAPI/Traffic/channels/<ID>/vehicleDetect

| /ISAPI/Traffic/channels/<ID>/vehicleDetect                             |                                                              | General Resource | v2.0 |
|------------------------------------------------------------------------|--------------------------------------------------------------|------------------|------|
| GET                                                                    |                                                              |                  |      |
| Description                                                            | It is used to get the configuration of vehicle detection .   |                  |      |
| Query                                                                  | None                                                         |                  |      |
| Inbound Data                                                           | None                                                         |                  |      |
| Success Return                                                         | VehicleDetectCfg                                             |                  |      |
| PUT                                                                    |                                                              |                  |      |
| Description                                                            | It is used to update the configuration of vehicle detection. |                  |      |
| Query                                                                  | None                                                         |                  |      |
| Inbound Data                                                           | VehicleDetectCfg                                             |                  |      |
| Success Return                                                         | ResponseStatus                                               |                  |      |
| Notes:                                                                 |                                                              |                  |      |
| The number of PlateRecogRegion should be same with the number of lane. |                                                              |                  |      |

#### VehicleDetectCfg XML Block

```
<VehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled>                <!-- req, xs:boolean -->          </enabled>
  <stateOrProvinceName> <!-- opt, xs:string --> </stateOrProvinceName>
  <VehicleDetectSceneList>
    <VehicleDetectScene/>
  </VehicleDetectSceneList>
  <RodeType><!--opt, -->
    <type><!--opt,xs:string,"entrance,city,custom"--> </type>
    <Custom><!--dep, custom -->
      <delayTime><!--opt,xs:interger,[0,15000]--></delayTime>
      <delayTimeUnit><!--opt,xs:string,"ms"></delayTimeUnit>
    </Custom>
  </RodeType>
</VehicleDetectCfg>
```

### 8.9.7.2/ISAPI/Traffic/channels/<ID>/vehicleDetects/<SID>

| /ISAPI/Traffic/channels/<ID>/vehicleDetects/<SID> |                                                           | General Resource | v2.0 |
|---------------------------------------------------|-----------------------------------------------------------|------------------|------|
| <b>GET</b>                                        |                                                           |                  |      |
| Description                                       | It is used to get the configuration of vehicle detection. |                  |      |



|                                                                                         |                                                              |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Query                                                                                   | None                                                         |
| Inbound Data                                                                            | None                                                         |
| Success Return                                                                          | VehicleDetectScene                                           |
| <b>PUT</b>                                                                              |                                                              |
| Description                                                                             | It is used to update the configuration of vehicle detection. |
| Query                                                                                   | None                                                         |
| Inbound Data                                                                            | VehicleDetectScene                                           |
| Success Return                                                                          | ResponseStatus                                               |
| <b>Notes:</b><br>The number of PlateRecogRegion should be same with the number of lane. |                                                              |

### VehicleDetectCfg XML Block

```

<VehicleDetectScene xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:integer -->          </id>
  <sceneName> <!-- opt, xs:string --> </sceneName>
  <enabled>      <!-- req, xs:boolean -->      </enabled>
  <PlateRecogParam>
    <PlateRecogRegionList>
      <PlateRecogRegion>
        <id> <!-- req, xs:string--> </id>
        <RegionCoordinatesList>
          <RegionCoordinates> <!-- req, -->
            <positionX>      <!-- req, xs:integer;coordinate -->      </positionX>
            <positionY>      <!-- req, xs:integer;coordinate -->      </positionY>
          </RegionCoordinates>
        </RegionCoordinatesList>
      </PlateRecogRegion>
    </PlateRecogRegionList>
  </PlateRecogParam>
  <LaneConfig>
    <LaneList>
      <Lane>
        <laneId>      <!-- req xs:integer--> </laneId>
        <RegionCoordinatesList> <!-- req -->
          <RegionCoordinates>      <!-- minoccurs=2,maxoccurs=2-->
            <positionX> <!-- req, xs:integer> </positionX>
            <positionY> <!-- req, xs:integer> </positionY>
          </RegionCoordinates>
        </RegionCoordinatesList>
      </Lane>
    </LaneList>
  </LaneConfig>
</VehicleDetectScene>

```

### 8.9.7.3/ISAPI/Traffic/channels/<ID>/vehicleDetect/capabilities

| /ISAPI/Traffic/channels/<ID>/vehicleDetect/capabilities |                                                                         | General Resource | v2.0 |
|---------------------------------------------------------|-------------------------------------------------------------------------|------------------|------|
| GET                                                     |                                                                         |                  |      |
| Description                                             | It is used to get the configuration capabilities of vehicle detection . |                  |      |
| Query                                                   | None                                                                    |                  |      |
| Inbound Data                                            | None                                                                    |                  |      |
| Success Return                                          | VehicleDetectCfg                                                        |                  |      |
| Notes:                                                  |                                                                         |                  |      |

#### VehicleDetectCfg XML Block

```
<VehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <stateOrProvinceName opt=""> <!-- opt, xs:string --> </stateOrProvinceName>
  <VehicleDetectSceneList size="">
    <VehicleDetectScene>
      <id> <!-- req, xs:integer --> </id>
      <sceneName min="" max=""> <!-- opt, xs:string --> </sceneName>
      <enabled> <!-- req, xs:boolean --> </enabled>
      <PlateRecogParam>
        <PlateRecogRegionList size="">
          <PlateRecogRegion>
            <id> <!-- req, xs:string --> </id>
            <RegionCoordinatesList size="">
              <RegionCoordinates> <!-- req, -->
                <positionX> <!-- req, xs:integer;coordinate -->
</positionX>
                <positionY> <!-- req, xs:integer;coordinate -->
</positionY>
              </RegionCoordinates>
            <RegionCoordinatesList>
          </PlateRecogRegion>
        <PlateRecogRegionList>
      <PlateRecogParam>
      <LaneConfig>
        <LaneList size="">
          <Lane>
            <laneId min="" max=""> <!-- req xs:integer--> </laneId>
            <RegionCoordinatesList size=""> <!-- req -->

```



### 8.9.7.5/ISAPI/Traffic/channels/<ID>/searchLPListAudit

| /ISAPI/Traffic/channels/<ID>/searchLPListAudit |                                | General Resource | v2.0 |
|------------------------------------------------|--------------------------------|------------------|------|
| POST                                           |                                |                  |      |
| Description                                    | Get Vehicle Audit List Info    |                  |      |
| Query                                          | None                           |                  |      |
| Inbound Data                                   | <LPListAuditSearchDescription> |                  |      |
| Success Return                                 | <LPListAuditSearchResult>      |                  |      |
| Notes:                                         |                                |                  |      |
| channels/<ID>: video Channel                   |                                |                  |      |
| LP:License Plate                               |                                |                  |      |

#### LPListAuditSearchDescription XML Block

```
<LPListAuditSearchDescription version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!-- req, xs: string; --></searchID>
  <searchResultPosition><!-- req, xs: integer --></searchResultPosition>
  <maxResults><!-- req, xs: integer --></maxResults>
</LPListAuditSearchDescription>
```

#### LPListAuditSearchResult XML Block

```
<LPListAuditSearchResult version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!-- req, xs: string; --></searchID>
  <responseStatus>true</responseStatus>
  <responseStatusStr>OK</responseStatusStr>
  <numOfMatches><!-- req, xs: integer --></numOfMatches>
  <totalMatches><!-- req, xs: integer --></totalMatches>
  <LicensePlateInfoList>
    <LicensePlateInfo>
      <id><!-- req, xs: string --></id>
      <LicensePlate><!-- opt, xs: string; --></LicensePlate>
      <type><!-- opt, xs: string, "blackList, whitelist, allVehicleList, otherVehicleList" --></type>
      <createTime><!-- opt, xs: time, ISO8601 time --></createTime>
      <direction><!-- opt, xs: string, "forward, reverse, unknown" --></direction>
      <laneNo><!-- opt, xs: integer, "1" --></laneNo>
    </LicensePlateInfo>
  </LicensePlateInfoList>
</LPListAuditSearchResult>
```



### 8.9.7.7/ISAPI/Traffic/channels/<ID>/picParam/capabilities

| /ISAPI/Traffic/channels/<ID>/picParam/capabilities                                                                                                                                                                                                                                    |                                                                        | General Resource | v2.0 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------|------|
| GET                                                                                                                                                                                                                                                                                   |                                                                        |                  |      |
| Description                                                                                                                                                                                                                                                                           | It is used to get the parameters of picture to be capture capabilities |                  |      |
| Query                                                                                                                                                                                                                                                                                 | None                                                                   |                  |      |
| Inbound Data                                                                                                                                                                                                                                                                          | None                                                                   |                  |      |
| Success Return                                                                                                                                                                                                                                                                        | PicParam                                                               |                  |      |
| <b>Notes:</b><br><picQuality> is requested when <mode> is set to “quality”,on the contrary, <picSize> is requested when <mode> is set to “size”.<br><br><item> values are: positionNo,positionInfo, cameraNo, captureTime, plateNo,vehicleColor,sceneName,carType,vehicleLogo,sceneNo |                                                                        |                  |      |

#### PicParam XML Block

```
<PicParam version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <PictureCfg>
    <mode opt="quality,size"> <!--req, xs:string,""--> </mode>
    <pictureQuality min="1" max="100"> <!--dep, xs:integer,1-100 --> </pictureQuality>
    <pictureSize> <!--dep, xs:integer,unit:kb --> </pictureSize>
  </PictureCfg>
  <Overlap>
    <enabled> <!-- req, xs: boolean> </enabled>
    <OverlapItem
      opt="positionNo,positionInfo,cameraNo,captureTime,plateNo,vehicleColor,sceneName,
      carType,vehicleLogo,sceneNo"><!--req, xs:string, "
      "--></OverlapItem>
    <fontColor> <!--opt, xs: hexBinary;color --> </fontColor>
    <backColor> <!--opt, xs: hexBinary;color --> </backColor>
  </Overlap>
</PicParam>
```

### 8.9.7.8/ISAPI/Traffic/channels/<ID>/eventTrigger

| /ISAPI/Traffic/channels/<ID>/eventTrigger |                           | General Resource | v2.0 |
|-------------------------------------------|---------------------------|------------------|------|
| <b>GET</b>                                |                           |                  |      |
| <b>Description</b>                        | Get Traffic Event Trigger |                  |      |
| <b>Query</b>                              | None                      |                  |      |
| <b>Inbound Data</b>                       | None                      |                  |      |

|                |                     |
|----------------|---------------------|
| Success Return | TrafficEventTrigger |
|----------------|---------------------|

### TrafficEventTrigger XML Block

```
<TrafficEventTrigger version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <EventType><!--req,-->
    <allVehicleList><!--opt,xs:boolean--></allVehicleList>
  </EventType>
</TrafficEventTrigger>
```

## 8.9.7.9/ISAPI/System/Network/ftp/uploadInfo

| /ISAPI/System/Network/ftp/uploadInfo                            |                           | General Resource | v2.0 |
|-----------------------------------------------------------------|---------------------------|------------------|------|
| GET                                                             |                           |                  |      |
| Description                                                     | Get ftp Upload info Param |                  |      |
| Query                                                           | None                      |                  |      |
| Inbound Data                                                    | None                      |                  |      |
| Success Return                                                  | FtpUpload                 |                  |      |
| PUT                                                             |                           |                  |      |
| Description                                                     | Set ftp Upload info Param |                  |      |
| Query                                                           | None                      |                  |      |
| Inbound Data                                                    | FtpUpload                 |                  |      |
| Success Return                                                  | ResponseStatus            |                  |      |
| Notes:                                                          |                           |                  |      |
| <item> values are: capture_time,plate_No,alarm_type,camera_name |                           |                  |      |

### FtpUpload XML Block

```
<FtpUpload version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <vehiclePicName>
    <mode><!--req, xs:string,"default,custom"--></mode>
    <NameRuleType><!--dep," customType"-->
      <RuleTypeItemList >
        <RuleTypeItem>
          <id><!-- req, xs: interger --></id>
          <item><!-- req, xs: string --></item>
          <cameraName><!-- dep, xs: string "dep camera_name
node"--></cameraName>
        </RuleTypeItem>
      </RuleTypeItemList>
    </NameRuleType>
  </vehiclePicName>
</FtpUpload>
```

### 8.9.7.10 /ISAPI/Event/schedules/vehicledetects

| /ISAPI/Event/schedules/vehicledetects |                                        | General Resource | v2.0 |
|---------------------------------------|----------------------------------------|------------------|------|
| GET                                   |                                        |                  |      |
| Description                           | It is used to get trigger schedule.    |                  |      |
| Query                                 | None                                   |                  |      |
| Inbound Data                          | None                                   |                  |      |
| Success Return                        | VehicleDetectScheduleList              |                  |      |
| PUT                                   |                                        |                  |      |
| Description                           | It is used to update trigger schedule. |                  |      |
| Query                                 | None                                   |                  |      |
| Inbound Data                          | VehicleDetectScheduleList              |                  |      |
| Success Return                        | ResponseStatus                         |                  |      |
| Notes:                                |                                        |                  |      |

#### VehicleDetectScheduleList XML Block

```
<VehicleDetectScheduleList xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</VehicleDetectScheduleList>
```

| /ISAPI/Event/schedules/vehicledetects/ID |                                        | General Resource | v2.0 |
|------------------------------------------|----------------------------------------|------------------|------|
| GET                                      |                                        |                  |      |
| Description                              | It is used to get trigger schedule.    |                  |      |
| Query                                    | None                                   |                  |      |
| Inbound Data                             | None                                   |                  |      |
| Success Return                           | Schedule                               |                  |      |
| PUT                                      |                                        |                  |      |
| Description                              | It is used to update trigger schedule. |                  |      |
| Query                                    | None                                   |                  |      |
| Inbound Data                             | Schedule                               |                  |      |
| Success Return                           | ResponseStatus                         |                  |      |
| Notes:                                   |                                        |                  |      |

#### Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID>          <!-- ro, dep, xs:string; id -->          </inputIOPortID>
  <outputIOPortID>        <!-- ro, dep, xs:string; id -->          </inputIOPortID>
```



```

<videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
<TimeBlockList> <!-- req -->
  <TimeBlock>
    <dayOfWeek>
      <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
    </dayOfWeek>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
    <CustomExtension>
      <vehicleDetectSceneID><!-- req, xs:integer --></vehicleDetectSceneID>
    </CustomExtension>
  </TimeBlock>
</TimeBlockList>
</Schedule>

```

### 8.9.7.11 /ISAPI/System/Network/ftp/capabilities

Pay attention to the key of XML

New XML nodes of URL (/ISAPI/System/Network/ftp/capabilities)

<FtpUpload>

## 8.9.8 HVTVehicleDetection

### 8.9.8.18.17.7.1/ISAPI/Traffic/channels/<ID>/HVTVehicleDetects

| /ISAPI/Traffic/channels/<ID>/HVTVehicleDetects |                                                                | General Resource | v2.0 |
|------------------------------------------------|----------------------------------------------------------------|------------------|------|
| GET                                            |                                                                |                  |      |
| Description                                    | It is used to get the configuration of hvt vehicle detection . |                  |      |
| Query                                          | None                                                           |                  |      |
| Inbound Data                                   | None                                                           |                  |      |
| Success Return                                 | HVTVehicleDetectCfg                                            |                  |      |

| PUT                                                                                     |                                                                  |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Description                                                                             | It is used to update the configuration of hvt vehicle detection. |
| Query                                                                                   | None                                                             |
| Inbound Data                                                                            | <b>HVTVehicleDetectCfg</b>                                       |
| Success Return                                                                          | <b>ResponseStatus</b>                                            |
| <b>Notes:</b><br>The number of PlateRecogRegion should be same with the number of lane. |                                                                  |

#### VehicleDetectCfg XML Block

```
<HVTVehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <stateOrProvince> <!-- opt, xs:interger --> </stateOrProvince>
  <HVTVehicleDetectSceneList>
    <HVTVehicleDetectScene/>
  </HVTVehicleDetectSceneList>
</HVTVehicleDetectCfg>
```

### 8.9.8.2/ISAPI/Traffic/channels/<ID>/HVTVehicleDetects/<SID>

| /ISAPI/Traffic/channels/<ID>/HVTVehicleDetects/<SID>                   |                                                                  | General Resource | v2.0 |
|------------------------------------------------------------------------|------------------------------------------------------------------|------------------|------|
| GET                                                                    |                                                                  |                  |      |
| Description                                                            | It is used to get the configuration of hvt vehicle detection.    |                  |      |
| Query                                                                  | None                                                             |                  |      |
| Inbound Data                                                           | None                                                             |                  |      |
| Success Return                                                         | HVTVehicleDetectScene                                            |                  |      |
| PUT                                                                    |                                                                  |                  |      |
| Description                                                            | It is used to update the configuration of hvt vehicle detection. |                  |      |
| Query                                                                  | None                                                             |                  |      |
| Inbound Data                                                           | HVTVehicleDetectScene                                            |                  |      |
| Success Return                                                         | ResponseStatus                                                   |                  |      |
| Notes:                                                                 |                                                                  |                  |      |
| The number of PlateRecogRegion should be same with the number of lane. |                                                                  |                  |      |

#### VehicleDetectCfg XML Block

```
<HVTVehicleDetectScene xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:interger -->          </id>
  <sceneName> <!-- opt, xs:string --> </sceneName>
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <PlateRecogParam>
    <PlateRecogRegionList>
```

```

<PlateRecogRegion>
  <id> <!-- req, xs:string--> </id>
  <RegionCoordinatesList>
    <RegionCoordinates> <!-- req, -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</PlateRecogRegion>
<PlateRecogRegionList>
<PlateRecogParam>
<LaneConfig>
  <LaneList>
    <Lane>
      <laneId> <!-- req xs:integer--> </laneId>
      <RegionCoordinatesList> <!-- req -->
        <RegionCoordinates> <!-- minoccurs=2,maxoccurs=2-->
          <positionX> <!-- req, xs:integer> </positionX>
          <positionY> <!-- req, xs:integer> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </Lane>
  </LaneList>
</LaneConfig>
</HVTVehicleDetectScene>

```

### 8.9.8.3/ISAPI/Traffic/channels/<ID>/HVTVehicleDetects/picParam

| /ISAPI/Traffic/channels/<ID>/HVTVehicleDetects/picParam |                                                           | General Resource | v2.0 |
|---------------------------------------------------------|-----------------------------------------------------------|------------------|------|
| m                                                       |                                                           |                  |      |
| GET                                                     |                                                           |                  |      |
| Description                                             | It is used to get the parameters of picture to be capture |                  |      |
| Query                                                   | None                                                      |                  |      |
| Inbound Data                                            | None                                                      |                  |      |
| Success Return                                          | PicParam                                                  |                  |      |
| PUT                                                     |                                                           |                  |      |
| Description                                             | It is used to set the parameters of picture to be capture |                  |      |
| Query                                                   | None                                                      |                  |      |
| Inbound Data                                            | PicParam                                                  |                  |      |
| Success Return                                          | ResponseStatus                                            |                  |      |



<item> values are: positionNo,positionInfo, cameraNo, captureTime, plateNo,vehicleColor,sceneName,carType,vehicleLogo,sceneNo

### PicParam XML Block

```
<PicParam version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <PictureCfg>
    <mode> <!--req, xs:string,"quality,size"--> </mode>
    <pictureQuality> <!--dep, xs:integer,1-100 --> </pictureQuality>
    <pictureSize> <!--dep, xs:integer,unit:kb --> </pictureSize>
  </PictureCfg>
  <Overlap>
    <enabled> <!-- req, xs: boolean> </enabled>
    <OverlapItem opt=""><!--req, xs:string,
"positionNo,positionInfo,cameraNo,captureTime,plateNo,vehicleColor,sceneName,carType,vehicleLogo,sceneNo"--></OverlapItem>
    <fontColor> <!--opt, xs: hexBinary;color --> </fontColor>
    <backColor> <!--opt, xs: hexBinary;color --> </backColor>
  </Overlap>
</PicParam>
```

### 8.9.8.5/ISAPI/Traffic/channels/<ID>/HVTVehicleDetects/cameraInfo

| /ISAPI/Traffic/channels/<ID>/HVTVehicleDectects/camera |                                                     | General Resource | v2.0 |
|--------------------------------------------------------|-----------------------------------------------------|------------------|------|
| Info                                                   |                                                     |                  |      |
| GET                                                    |                                                     |                  |      |
| Description                                            | It is used to get the identify parameters of camera |                  |      |
| Query                                                  | None                                                |                  |      |
| Inbound Data                                           | None                                                |                  |      |
| Success Return                                         | CameraInfo                                          |                  |      |
| PUT                                                    |                                                     |                  |      |
| Description                                            | It is used to set the identify parameters of camera |                  |      |
| Query                                                  | None                                                |                  |      |
| Inbound Data                                           | CameraInfo                                          |                  |      |
| Success Return                                         | ResponseStatus                                      |                  |      |
| Notes:                                                 |                                                     |                  |      |

### CameraInfo XML Block

```
<CameraInfo version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <positionNum> <!-- opt, xs: string,0-48 --> </positionNum>
  <positionInfo> <!-- opt, xs: string,0-48 --> </positionInfo>
```

```
<cameraNum> <!-- opt, xs: string,0-48 --> </cameraNum>
</CameraInfo>
```

## 8.9.9 EventTrigger

Pay attention to the key of XML

**New XML nodes of URL (/ISAPI/Event/triggersCap)**

```
<BlackListTriggerCap>
<WhiteListTriggerCap>
<AllVehicleListTriggerCap>
<OtherVehicleListTriggerCap>
```

**New Info with XML node of URL (/ISAPI/Event/triggers/ID)**

vehicledetection,HVTVehicleDetection,blackList,whitelist ,allVehicleList,otherVehicleList

## 8.10/ISAPI/Intelligent

### 8.10.1 /ISAPI/Intelligent/channels/ID/capabilities

| /ISAPI/Intelligent/channels/ID/capabilities |                                                   | General Resource | v2.0 |
|---------------------------------------------|---------------------------------------------------|------------------|------|
| <b>GET</b>                                  |                                                   |                  |      |
| Description                                 | Get supported intelligent types by device channel |                  |      |
| Query                                       | None                                              |                  |      |
| Inbound Data                                | None                                              |                  |      |
| Success Return                              | <b>IntelliCap</b>                                 |                  |      |

**IntelliCap XML Block**

```
<IntelliCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isFaceSupport> <!--req, xs:string "true,false"--> </isFaceSupport>
  <isBehaviorSupport> <!--req, xs:string "true,false"--> </isBehaviorSupport>
  <isLineDetectionSupport> <!--req, xs:string "true,false"--> </isLineDetectionSupport>
  <isFieldDetectionSupport> <!--req, xs:string "true,false"--> </isFieldDetectionSupport>
  <isRegionEntranceSupport> <!--req, xs:string "true,false"--> </isRegionEntranceSupport>
  <isRegionExitingSupport> <!--req, xs:string "true,false"--> </isRegionExitingSupport>
  <isLoiteringSupport> <!--req, xs:string "true,false"--> </isLoiteringSupport>
```

```

<isGroupSupport> <!--req, xs:string "true,false"--> </isGroupSupport>
<isRapidMoveSupport> <!--req, xs:string "true,false"--> </isRapidMoveSupport>
<isParkingSupport> <!--req, xs:string "true,false"--> </isParkingSupport>
<isUnattendedBaggageSupport> <!--req, xs:string "true,false"-->
</isUnattendedBaggageSupport>
<isAttendedBaggageSupport> <!--req, xs:string "true,false"--> </isAttendedBaggageSupport>
<isTeacherSupport> <!--req, xs:string "true,false"--> </isTeacherSupport>
<isStudentSupport> <!--req, xs:string "true,false"--> </isStudentSupport>
<isFaceCaptureStatisticsSupport> <!--req, xs:string "true,false"-->
</isFaceCaptureStatisticsSupport>
</IntelliCap>

```

## 8.10.2 /ISAPI/Intelligent/channels/ID/intelliResource

| /ISAPI/Intelligent/channels/ID/intelliResource |                                                              | General Resource | v2.0 |
|------------------------------------------------|--------------------------------------------------------------|------------------|------|
| GET                                            |                                                              |                  |      |
| Description                                    | Get basic configurations of intelligent resources by channel |                  |      |
| Query                                          | None                                                         |                  |      |
| Inbound Data                                   | None                                                         |                  |      |
| Success Return                                 | IntelliResource                                              |                  |      |
| PUT                                            |                                                              |                  |      |
| Description                                    | Set basic configurations of intelligent resources by channel |                  |      |
| Query                                          | None                                                         |                  |      |
| Inbound Data                                   | IntelliResource                                              |                  |      |
| Success Return                                 | ResponseStatus                                               |                  |      |
| Notes:                                         |                                                              |                  |      |

### IntelliResource XML Block

```

<IntelliResource>
  <BehaviorInfo> <!--dep-->
    <IntelliImage>
      <isUpload> <!--req, xs:string "true,false" --> <!--whether to upload pictures
--></isUpload>
      <imgQuality> <!--req, xs:string "best,good,general" --> <!--image
quality--></imgQuality>
      <imgResolutionWidth> <!--req, xs:integer --> <!--image resolution-->
</imgResolutionWidth>
      <imgResolutionHeight> <!--req, xs:integer --> <!--image resolution --> </imgResolutionHeight>
      <isImgTargetOverlap> <!--req, xs:string "true,false" --> <!--Alarm capture overlay object

```

```

information--> </isImgTargetOverlap>
<isImgRuleOverlap> <!--req, xs:string "true,false" --> <!--Alarm capture overlay rules
information--> </isImgRuleOverlap>
</IntelliImage>
<VideoOverlapInfo>
    <isOverlapIntelli><!--req, xs:string "true,false"-->
</isOverlapIntelli>
    <isOverlapTarget> <!--req, xs:string "true,false"--> </isOverlapTarget>
<isOverlapRule> <!--req, xs:string "true,false" --> </isOverlapRule>
</VideoOverlapInfo>
<IntelliAnalysisEnable> <!--req, xs:string "true,false"--> </IntelliAnalysisEnable> <!--Enable
intelligent analysis-->
    </BehaviorInfo>
    <FaceCaptureInfo> <!--dep-->
        <imgQuality> <!--req, xs:string"best,good,general" --> <!--Image quality--></imgQuality>
<Professional face parameters>
    <isImgTargetOverlap> <!--req, xs:string "true,false" --> <!-- ipc Alarm capture overlay
object information --> </isImgTargetOverlap>
<VideoOverlapInfo>
    <isOverlapIntelli><!--req, xs:string "true,false"--> </isOverlapIntelli>
    <isOverlapTarget> <!--opt xs:string "true,false"--> </isOverlapTarget>
<isOverlapRule> <!--opt, xs:string "true,false" --> </isOverlapRule>
</VideoOverlapInfo>
<backgroundUpload> <!-- opt, xs: boolean --> </backgroundUpload>

</FaceCaptureInfo>
<AlgVersionInfo>
    <AlgItem>
        <id> <!--ro, xs:string --> </id>
        <algName> <!--ro, xs:string --> </algName>
    </AlgItem>
</AlgVersionInfo>
</IntelliResource>

```

### 8.10.3 /ISAPI/Intelligent/channels/ID/AlgParam

| /ISAPI/Intelligent/channels/ID/AlgParam |                                         | General Resource v2.0 |
|-----------------------------------------|-----------------------------------------|-----------------------|
| <b>GET</b>                              |                                         |                       |
| <b>Description</b>                      | Get algorithm lib parameters by channel |                       |



|                |                                         |
|----------------|-----------------------------------------|
| Query          | None                                    |
| Inbound Data   | None                                    |
| Success Return | AlgParam                                |
| <b>PUT</b>     |                                         |
| Description    | Set algorithm lib parameters by channel |
| Query          | None                                    |
| Inbound Data   | AlgParam                                |
| Success Return | ResponseStatus                          |
| Notes:         |                                         |

## AlgParam XML Block

```
<AlgParam version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <BehaviorParam>
    <detectionSensitiveLevel> <!--req, xs: integer --> </detectionSensitiveLevel> <!--object
detection sensitivity: the values of ipc and speed dome are different, and can be got by
abilities-->
    <bgChangeSpeed> <!--req, xs: integer --> </bgChangeSpeed> <!--background changing
speed: the values of ipc and speed dome are different, and can be got by abilities -->
    <minTargetSize> <!--opt, xs: integer --> </minTargetSize> <!--Target minimum size: only
for speed dome, 0-4(slow--fast), default value is 1 -->
    <suppressionLevel> <!--opt, xs: integer --> </suppressionLevel> <!--suppression: only for
speed dome, 0-4(slow--fast), default value is 1-->
    <lightSuppressionEnable> <!--req, xs: string "true, false"--> </lightSuppressionEnable>
<!--only for speed dome, whether to enablelight variation suppression-->
    <antiSheildEnable> <!--req, xs: string "true,false" --> </antiSheildEnable> <!--only for
speed dome, whether to enable antisheild function-->
    <traceTime> <!--req, xs: integer --> </traceTime> <!--only for speed dome, the time when
tracking object stop: 2S---600S, default value is 8S -->
    <outputMode> <!--opt - xs:integer --> </outputMode> <!--ipc 0-Target center(by
default),1-bottom center, 2-top center-->
    <singleAlarmEnable> <!--opt xs:string"true,false"--> </singleAlarmEnable> <!--ipc whether to
enable single alarm-->
    <leavesSuppressionEnable> <!--opt xs:string"true,false"--> </leavesSuppressionEnable> <!--ipc
-->
    <SizeFilter><!-- Global size filter ipc-->
    <enabled> <!--req, xs:string "true,false" --> </enabled>
    <mode> <!--req, xs:string,"pixels" --> </mode><!--Filter type: pixel size-->
    <MaxObjectSize><!--Max object size:float -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
```

```

        <width> <!-- req, xs:integer --> </width>
        <height> <!-- req, xs:integer --> </height>
    </MaxObjectSize>
    <MinObjectSize><!-- Min object size:float -->
        <positionX> <!-- req, xs:integer;coordinate --> </positionX>
        <positionY> <!-- req, xs:integer;coordinate --> </positionY>
        <width> <!-- req, xs: integer --> </width>
        <height> <!-- req, xs: integer --> </height>
    </MinObjectSize>
</SizeFilter>
    <isStop> <!--dep, xs: string"true,false"--> </isStop> <!--Stop tracking after detecting face,
    default value is false(behavior analysis+face detection, it's effective when the two exist
    simultaneously) -->
    <gradeThreshold> <!--dep, xs: integer --> </gradeThreshold> <!--Threshold of end tracking:1-15,
    default value is 6(behavior analysis+face detection, it's effective when the two exist
    simultaneously)-->
    <physiologyIdentifiTrigger> <!--opt, xs:boolean --> </physiologyIdentifiTrigger>
    <horizontalTrackLimit> <!--opt, xs: integer --> </horizontalTrackLimit>
</BehaviorParam>
<FaceParam>
    <enabled> <!--req, xs:string "true, false"--> </enabled> <!--enable face capture, not enabled by
    default-->
    <imgInterval> <!--req, xs:integer --> </imgInterval> <!--Capture interval: (1—255frame), default
    value is 1 -->
    <imgNum> <!--req, xs:integer --> </imgNum> <!-- Capture number of single object:1-10, default
    value is 1-->
    <sensitiveLevel> <!--req, xs:integer --> </sensitiveLevel> <!--Object detection sensitivity:1-5,
    default value is 3 -->
    <threshold> <!--req, xs:integer 0-20 --> </threshold> <!--Capture threshold: 0—20, default value
    is 4 -->
    <targetSpeed> <!--req, xs:integer 0-3 --> </targetSpeed> <!--, 1-5, default value is 3-->
    <brightRef> <!--opt, xs:integer 0-100 --> </brightRef> <!--ipc bright reference,1-100, default is
    50-->
    <exposureEnabled> <!--opt, xs:string "true,false"--> </exposureEnabled> <!--ipc enable face
    exposure-->
    <expDurationTime> <!--opt, xs:integer 1-3600 --> </expDurationTime> <!--ipc the shortest
    duration time of face exposure,1-3600s, 60s by default>
    <ROIEnable> <!--opt, xs:string "true,false"--> </ROIEnable> <!--ipc whether to enable face ROI>
</FaceParam>

```

```
</AlgParam>
```

## 8.10.4 /ISAPI/Intelligent/channels/ID/AlgParam/capabilities

ISAPI protocol interface definition

| /ISAPI/Intelligent/channels/ID/AlgParam/ capabilities |                                         | General Resource | v2.0 |
|-------------------------------------------------------|-----------------------------------------|------------------|------|
| <b>GET</b>                                            |                                         |                  |      |
| Description                                           | Get algorithm lib parameters by channel |                  |      |
| Query                                                 | None                                    |                  |      |
| Inbound Data                                          | None                                    |                  |      |
| Success Return                                        | AlgParamCap                             |                  |      |

### AlgParamCap XML Block

```
<AlgParamCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <detectionSensitiveLevel> <!--req, xs: string --> </detectionSensitiveLevel>
  <bgChangeSpeed> <!--req, xs: string --> </bgChangeSpeed>
  <physiologyIdentifiTrigger> <!--opt, xs:boolean --> </physiologyIdentifiTrigger>
  <horizontalTrackLimit min="1" max="5"> <!--opt, xs: integer --></horizontalTrackLimit>
</AlgParamCap>
```

## 8.10.5 /ISAPI/Intelligent/channels/ID/faceCaptureStatistics/search

| /ISAPI/Intelligent/channels/ID/faceCaptureStatistics/search |                                  | General Resource | v2.0 |
|-------------------------------------------------------------|----------------------------------|------------------|------|
| h                                                           |                                  |                  |      |
| GET                                                         |                                  |                  |      |
| Description                                                 | 人脸抓拍人员统计查询                       |                  |      |
| Query                                                       | None                             |                  |      |
| Inbound Data                                                | FaceCaptureStatisticsDescription |                  |      |
| Success Return                                              | FaceCaptureStatisticsResult      |                  |      |
| POST                                                        |                                  |                  |      |
| Description                                                 | 人脸抓拍人员统计查询                       |                  |      |

|                                                                                                                                                                                                      |                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Query                                                                                                                                                                                                | None                             |
| Inbound Data                                                                                                                                                                                         | FaceCaptureStatisticsDescription |
| Success Return                                                                                                                                                                                       | FaceCaptureStatisticsResult      |
| <b>Notes:</b><br>Capabilities URL<br><a href="/ISAPI/Intelligent/channels/ID/faceCaptureStatistics/search/capabilities">/ISAPI/Intelligent/channels/ID/faceCaptureStatistics/search/capabilities</a> |                                  |

#### FaceCaptureStatisticsDescription XML Block

```
<FaceCaptureStatisticsDescription version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>
    <!-- req, xs:string, "daily,weekly,monthly,yearly"-->
  </reportType>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:datetime --></startTime>
      <endTime><!-- req, xs:datetime --></endTime>
    </timeSpan>
  </timeSpanList>
  <statType><!--req, xs:string, "age,gender,numberOfPeople,all"--></statType>
</FaceCaptureStatisticsDescription>
```

#### FaceCaptureStatisticsResult XML Block

```
<FaceCaptureStatisticsResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <responseStatus><!-- req, xs:boolean--></responseStatus>
  <responseStatusStr><!-- req, xs:string--></responseStatusStr>
  <numOfMatches><!-- req, xs:integer --></numOfMatches>
  <matchList><!-- opt -->
    <matchElement><!-- opt -->
      <id><!-- req, xs:integer; id --></id>
      <timeSpan><!-- req -->
        <startTime><!-- req, xs:datetime --></startTime>
        <endTime><!-- req, xs:datetime --></endTime>
      </timeSpan>
      <Age><!--opt, -->
        <teenage><!-- req, xs:integer --></teenage>
        <youth><!-- req, xs:integer --></youth>
        <midlife><!-- req, xs:integer --></midlife>
        <elderly><!-- req, xs:integer --></elderly>
      </Age>
      <Gender><!--opt, -->
        <male><!-- req, xs:integer --></male>
        <female><!-- req, xs:integer --></female>
```

```

        </Gender>
        <NumberOfPeople><!--opt, xs:integer --></NumberOfPeople>
    </matchElement>
</matchList>
</FaceCaptureStatisticsResult>

```

#### FaceCaptureStatisticsDescription Capabilities XML Block

```

<FaceCaptureStatisticsDescription version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
    <reportType opt="daily,weekly,monthly,yearly">
        <!-- req, xs:string, -->
    </reportType>
    <timeSpanList>
        <timeSpan>
            <startTime><!-- req, xs:datetime --></startTime>
            <endTime><!-- req, xs:datetime --></endTime>
        </timeSpan>
    </timeSpanList>
    <statType opt="age,gender,numberOfPeople,all"><!--req, xs:string,--></statType>
</FaceCaptureStatisticsDescription>

```

### 8.10.6 /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/rule/ID

| /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/rule/ID |                            | General Resource | v2.0 |
|-----------------------------------------------------------|----------------------------|------------------|------|
| D                                                         |                            |                  |      |
| GET                                                       |                            |                  |      |
| Description                                               | Get scene rules by channel |                  |      |
| Query                                                     | None                       |                  |      |
| Inbound Data                                              | None                       |                  |      |
| Success Return                                            | RuleInfo                   |                  |      |
| PUT                                                       |                            |                  |      |
| Description                                               | Set scene rules by channel |                  |      |
| Query                                                     | None                       |                  |      |
| Inbound Data                                              | RuleInfo                   |                  |      |
| Success Return                                            | ResponseStatus             |                  |      |
| DELETE                                                    |                            |                  |      |
| Description                                               | Delete scene rules         |                  |      |
| Query                                                     | None                       |                  |      |

|                |                |
|----------------|----------------|
| Inbound Data   | None           |
| Success Return | ResponseStatus |
| Notes:         |                |

## RuleInfo XML Block

```

<RuleInfo>
  <ruleId> <!--req, xs:string --> </ruleId>
  <ruleName> <!--req, xs:string --> </ruleName>
  <enabled> <!--req, xs:string "true,false" --> </enabled>
  <eventType><!--req,xs:string "none,lineDetection,fieldDetection,regionEntrance,regionExiting,
loitering,group,rapidMove,parking,unattendedBaggage, attendedBaggage, teacher,student"-->
  </eventType>
  <ruleType> <!--req, xs:string "region, line"--> </ruleType>
  <LineDetectionParam/> <dep>
  <FieldDetectionParam/> <dep>
  <RegionEntranceParam/> <dep>
  <RegionExitingParam/> <dep>
  <LoiteringParam/> <dep>
  <GroupParam/> <dep>
  <RapidMoveParam/> <dep>
  <ParkingParam/> <dep>
  <UnattendedBaggageParam/> <!--dep-->
  <AttendedBaggageParam/> <!--dep-->
  <TeacherParam/> <!--dep-->
  <StudentParam/> <!--dep-->
  <SizeFilter><!--Dimension filter -->
    <enabled> <!--req, xs:string "true,false" --> </enabled>
    <mode> <!--req, xs:string,"pixels, actualSize" --> </mode><!--filter type: pixels-->
    <MaxObjectSize><!--Max size:float -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
      <width> <!-- req, xs:integer --> </width>
      <height> <!-- req, xs:integer --> </height>
    </MaxObjectSize>
    <MinObjectSize><!--Min size:float -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
      <width> <!-- req, xs: integer --> </width>

```

```

    <height> <!-- req, xs: integer --> </height>
  </MinObjectSize>
</SizeFilter>
<RuleRegion><!--Region-->
  <RegionCoordinatesList>
    <RegionCoordinates> <!-- req, -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</RuleRegion>
</RuleInfo>

<LineDetectionParam> <dep>
  <directionSensitivity> <!--req, xs:string "left-right,
right-left,any"--> </directionSensitivity>
</LineDetectionParam>

<FieldDetectionParam> <!-- dep-->
  <durationTime> <!-- req, xs: integer --> </durationTime>
</FieldDetectionParam>

<RegionEntranceParam> <dep>
</RegionEntranceParam>

<RegionExitingParam> <dep>
</RegionExitingParam>

<LoiteringParam> <dep>
  <durationTime> <!-- req, xs: integer --> </durationTime> <!--Duration time 1-100seconds,
1s by default-->
</LoiteringParam>

<GroupParam> <dep>
  <populDensity> <!-- dep, xs:integer --> </populDensity> <!--population density 1-10-->
</GroupParam>

<RapidMoveParam> <dep>

```

```

<rapidMoveMode> <!-- dep, xs:string "pixels,actualSize"--> </rapidMoveMode> <!--mode
pixel,actual size-->
    <distanceThreshold> <!-- dep, xs:integer --> </distanceThreshold> <!--distance 1.pixels 1-10
2.actual size 1-20>
</RapidMoveParam>

<ParkingParam> <dep>
    <durationTime> <!-- req, xs:integer --> </durationTime> <!--Duration time 5-100 second, 5
seconds by default -->
</ParkingParam>

<UnattendedBaggageParam> <dep>
    <durationTime> <!-- req, xs:integer --> </durationTime> <!--Duration time 5-100 second, 5
seconds by default -->
</UnattendedBaggageParam>

<AttendedBaggageParam> <!--dep-->
    <durationTime> <!-- req, xs:integer --> </durationTime> <!--Duration time 5-100 second, 5
seconds by default -->
</AttendedBaggageParam>

<TeacherParam> <!--dep -->
    <durationTime> <!-- req, xs: integer --> </durationTime>
</TeacherParam>

<StudentParam> <!--dep -->
</StudentParam>

```

### 8.10.7 /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/notifications

| /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/notifications |                                     | General Resource | v2.0 |
|-----------------------------------------------------------------|-------------------------------------|------------------|------|
| <b>GET</b>                                                      |                                     |                  |      |
| <b>Description</b>                                              | Get tracking scene rules by channel |                  |      |
| <b>Query</b>                                                    | None                                |                  |      |
| <b>Inbound Data</b>                                             | None                                |                  |      |
| <b>Success Return</b>                                           | <b>RuleNotification</b>             |                  |      |



| PUT            |                                     |
|----------------|-------------------------------------|
| Description    | Set tracking scene rules by channel |
| Query          | None                                |
| Inbound Data   | RuleNotification                    |
| Success Return | ResponseStatus                      |
| Notes:         |                                     |

### RuleNotification XML Block

```
<RuleNotification version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sid> <!--req, xs:string --> </sid>
  <RuleList>
    <RuleInfo>
      <ruleId> <!--req, xs:string --> </ruleId>
      <EventTriggerNotificationList>
        <EventTriggerNotification> <!-- opt -->
          <id> <!-- req, xs:string;id --> </id>
          <notificationMethod> <!-- req, xs:string"IO,email,record,center,cloud" -->
          </notificationMethod>
          <notificationRecurrence><!-- opt, xs:string, "beginning,beginningandend,recurring"
-->
          </notificationRecurrence>
          <notificationInterval> <!-- dep, xs:integer, milliseconds --> </notificationInterval>
          <outputIOPortID> <!-- dep, xs:string;id --> </outputIOPortID>
          <dynOutputIOPortID> <!-- dep, xs:string;id --> </dynOutputIOPortID>
        </EventTriggerNotification>
      </EventTriggerNotificationList>
    </RuleInfo>
  </RuleList>
</RuleNotification>
```

## 8.10.8 /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/schedules

|                                                             |                       |
|-------------------------------------------------------------|-----------------------|
| /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/schedules | General Resource v2.0 |
| GET                                                         |                       |

|                       |                                           |
|-----------------------|-------------------------------------------|
| <b>Description</b>    | Get arming time of scene rules by channel |
| <b>Query</b>          | None                                      |
| <b>Inbound Data</b>   | None                                      |
| <b>Success Return</b> | <b>RuleSchedule</b>                       |
| <b>PUT</b>            |                                           |
| <b>Description</b>    | Set arming time of scene rules by channel |
| <b>Query</b>          | None                                      |
| <b>Inbound Data</b>   | <b>RuleSchedule</b>                       |
| <b>Success Return</b> | <b>ResponseStatus</b>                     |
| <b>Notes:</b>         |                                           |

### RuleSchedule XML Block

```
<RuleSchedule version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sid> <!--req, xs:string --> </sid>
  <RuleList><!--规则信息 ->
    <RuleInfo>
      <ruleId> <!--req, xs:string --> </ruleId>
      <Schedule>
        <TimeBlockList> <!-- req -->
          <TimeBlock>
            <dayOfWeek>
              <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
            </dayOfWeek>
            <TimeRange>      <!-- req -->
              <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
              <endTime>     <!-- req, xs:time, ISO8601 time --> </endTime>
            </TimeRange>
          </TimeBlock>
        </TimeBlockList>
      </Schedule>
    </RuleInfo>
  </RuleList>
</RuleSchedule>
```

## 8.10.9 /ISAPI/Intelligent/channels/ID/capabilities

|                                                    |                                                   |                         |             |
|----------------------------------------------------|---------------------------------------------------|-------------------------|-------------|
| <b>/ISAPI/Intelligent/channels/ID/capabilities</b> |                                                   | <b>General Resource</b> | <b>v2.0</b> |
| <b>GET</b>                                         |                                                   |                         |             |
| <b>Description</b>                                 | Get supported intelligent types by device channel |                         |             |

|                |            |
|----------------|------------|
| Query          | None       |
| Inbound Data   | None       |
| Success Return | IntelliCap |

### IntelliCap XML Block

```
<IntelliCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isFaceSupport> <!--req, xs:string "true,false"--> </isFaceSupport>
  <isBehaviorSupport> <!--req, xs:string "true,false"--> </isBehaviorSupport>
  <isLineDetectionSupport> <!--req, xs:string "true,false"--> </isLineDetectionSupport>
  <isFieldDetectionSupport> <!--req, xs:string "true,false"--> </isFieldDetectionSupport>
  <isRegionEntranceSupport> <!--req, xs:string "true,false"--> </isRegionEntranceSupport>
  <isRegionExitingSupport> <!--req, xs:string "true,false"--> </isRegionExitingSupport>
  <isLoiteringSupport> <!--req, xs:string "true,false"--> </isLoiteringSupport>
  <isGroupSupport> <!--req, xs:string "true,false"--> </isGroupSupport>
  <isRapidMoveSupport> <!--req, xs:string "true,false"--> </isRapidMoveSupport>
  <isParkingSupport> <!--req, xs:string "true,false"--> </isParkingSupport>
  <isUnattendedBaggageSupport> <!--req, xs:string "true,false"-->
</isUnattendedBaggageSupport>
  <isAttendedBaggageSupport> <!--req, xs:string "true,false"--> </isAttendedBaggageSupport>
  <isTeacherSupport> <!--req, xs:string "true,false"--> </isTeacherSupport>
  <isStudentSupport> <!--req, xs:string "true,false"--> </isStudentSupport>
  <isFaceCaptureStatisticsSupport> <!--req, xs:string "true,false"-->
</isFaceCaptureStatisticsSupport>
</IntelliCap>
```

## 8.11/ISAPI/Compass

### 8.11.1 /ISAPI/Compass/channels/<ID>/capabilities

| /ISAPI/Compass/channels/<ID>/capabilities |            | General Resource | v2.0 |
|-------------------------------------------|------------|------------------|------|
| <b>GET</b>                                |            |                  |      |
| Description                               |            |                  |      |
| Query                                     | None       |                  |      |
| Inbound Data                              | None       |                  |      |
| Success Return                            | CompassCap |                  |      |

### CompassCap XML Block

```
<CompassCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VandalProofAlarm> <!--req, -->
```

```

<isSupportUpload><!-- req, xs:boolean ""--></isSupportUpload>
<isSupportVoiceWarning><!-- req, xs:boolean ""--></isSupportVoiceWarning>
</VandalProofAlarm>
<isSupportCalibrate> <!-- opt, xs:boolean --> </isSupportCalibrate>
<isSupportPointToNorth> <!-- opt, xs:boolean --> </isSupportPointToNorth>
</CompassCap>

```

## 8.11.2 /ISAPI/Compass/channels/<ID>/vandalProofAlarm

| /ISAPI/Compass/channels/<ID>/vandalProofAlarm |                  | General Resource | v2.0 |
|-----------------------------------------------|------------------|------------------|------|
| GET                                           |                  |                  |      |
| Description                                   |                  |                  |      |
| Query                                         | None             |                  |      |
| Inbound Data                                  | None             |                  |      |
| Success Return                                | VandalProofAlarm |                  |      |
| PUT                                           |                  |                  |      |
| Description                                   |                  |                  |      |
| Query                                         | None             |                  |      |
| Inbound Data                                  | VandalProofAlarm |                  |      |
| Success Return                                | ResponseStatus   |                  |      |
| Notes:                                        |                  |                  |      |

### VandalProofAlarm XML Block

```

<VandalProofAlarm version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sensitivityLevel><!--req, xs:integer, 1..100, 1 is the least sensitive --></sensitivityLevel>
  <upload><!-- req, xs:boolean ""--></upload>
  <voiceWarning><!-- req, xs:boolean ""--></voiceWarning>
</VandalProofAlarm>

```

## 8.11.3 /ISAPI/Compass/channels/<ID>/calibrate

| /ISAPI/Compass/channels/<ID>/calibrate |  | General Resource | v2.0 |
|----------------------------------------|--|------------------|------|
| <b>PUT</b>                             |  |                  |      |
| Description                            |  |                  |      |

|                |                |
|----------------|----------------|
| Query          | None           |
| Inbound Data   | None           |
| Success Return | ResponseStatus |
| Notes:         |                |

### 8.11.4 /ISAPI/Compass/channels/<ID>/pointToNorth

|                                           |                |                  |      |
|-------------------------------------------|----------------|------------------|------|
| /ISAPI/Compass/channels/<ID>/pointToNorth |                | General Resource | v2.0 |
| PUT                                       |                |                  |      |
| Description                               |                |                  |      |
| Query                                     | None           |                  |      |
| Inbound Data                              | None           |                  |      |
| Success Return                            | ResponseStatus |                  |      |
| Notes:                                    |                |                  |      |

|                                                                                                                                              |                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Description                                                                                                                                  | Update the device time information. |
| Query                                                                                                                                        | None                                |
| Inbound Data                                                                                                                                 | Time                                |
| Success Return                                                                                                                               | ResponseStatus                      |
| Notes:                                                                                                                                       |                                     |
| If <timeMode> is present and set to "local", the <localTime> and <timeZone> fields are required. The <localTime> block sets the device time. |                                     |
| If <timeMode> is present and set to "NTP", only the <timeZone> field is required. The device time is set by synchronizing with NTP.          |                                     |
| If <timeMode> is present and set to "satellite", the <localTime> and <timeZone> fields are not required.                                     |                                     |

#### Time XML Block

```
<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <timeMode>    <!-- req, xs:string, "NTP, manual,satellite" -->    </timeMode>
  <localTime>    <!-- dep, xs:datetime -->                          </localTime>
  <timeZone>    <!-- dep, xs:string, POSIX time zone string -->    </timeZone>
</Time>
```

## 8.12/ISAPI/ITC

### 8.12.1 /ISAPI/ITC/capability

| /ISAPI/ITC/capability |                                                              | General Resource | v2.0 |
|-----------------------|--------------------------------------------------------------|------------------|------|
| <b>GET</b>            |                                                              |                  |      |
| Description           | Base on supported ability(Capture camera, vehicle detection) |                  |      |
| Query                 | None                                                         |                  |      |
| Inbound Data          | None                                                         |                  |      |
| Success Return        | ITCCap                                                       |                  |      |

#### ITCCap XML Block

```
<ITCCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportITC> <!-- dep, xs: boolean> </isSupportITC>
  <isSupportVehicleDetection> <!-- dep, xs: boolean> <isSupportVehicleDetection>
  <isSupportHVTVehicleDetection> <!-- dep, xs: boolean> <isSupportHVTVehicleDetection>
</ITCCap>
```

### 8.12.2 /ISAPI/ITC/VideoEpolic

| /ISAPI/ITC/VideoEpolic |                      | General Resource | v2.0 |
|------------------------|----------------------|------------------|------|
| GET                    |                      |                  |      |
| Description            | Get index by channel |                  |      |
| Query                  | None                 |                  |      |
| Inbound Data           | NONE                 |                  |      |
| Success Return         | VideoEpolic          |                  |      |
| PUT                    |                      |                  |      |
| Description            | Set index by channel |                  |      |
| Query                  | None                 |                  |      |
| Inbound Data           | VideoEpolic          |                  |      |
| Success Return         | ResponseStatus       |                  |      |
| Notes:                 |                      |                  |      |

#### VideoEpolic XML Block

```
<VideoEpolic version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <LaneCount> <!-- req xs:integer,"1-2" --> </LaneCount>
  <LaneList>
```

```

<Lane>
  <laneId>    <!-- req xs:integer--> </laneId>
  <RegionCoordinatesList> <!-- req -->
    <RegionCoordinates>    <!-- Note: only two coordinates are required -->
      <positionX> <!-- req, xs:integer> </positionX>
      <positionY> <!-- req, xs:integer> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</Lane>
</LaneList>
</VideoEpolice>

```

## 8.13/ISAPI/System/time/

### 8.13.1 /ISAPI/System/time/capabilities

| /ISAPI/System/time/capabilities |                                               | General Resource | v2.0 |
|---------------------------------|-----------------------------------------------|------------------|------|
| <b>GET</b>                      |                                               |                  |      |
| Description                     | Get the device time information capabilities. |                  |      |
| Query                           | None                                          |                  |      |
| Inbound Data                    | None                                          |                  |      |
| Success Return                  | Time                                          |                  |      |

#### Time XML Block

```

<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <timeMode opt="NTP,manual,satellite,timecorrect" def="satellite"> <!-- req, xs:string -->
</timeMode>
  <localTime>    <!-- dep, xs:datetime -->          </localTime>
  <timeZone>    <!-- dep, xs:string, POSIX time zone string -->    </timeZone>
</Time>

```

### 8.13.2 /ISAPI/System/time

| /ISAPI/System/time |                                  | General Resource | v2.0 |
|--------------------|----------------------------------|------------------|------|
| <b>GET</b>         |                                  |                  |      |
| Description        | Get the device time information. |                  |      |

|                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Query                                                                                                                                                                                                                                                                                                                                                                                                            | None                                |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                     | None                                |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                   | Time                                |
| <b>PUT</b>                                                                                                                                                                                                                                                                                                                                                                                                       |                                     |
| Description                                                                                                                                                                                                                                                                                                                                                                                                      | Update the device time information. |
| Query                                                                                                                                                                                                                                                                                                                                                                                                            | None                                |
| Inbound Data                                                                                                                                                                                                                                                                                                                                                                                                     | Time                                |
| Success Return                                                                                                                                                                                                                                                                                                                                                                                                   | ResponseStatus                      |
| <b>Notes:</b><br>If <timeMode> is present and set to "local", the <localTime> and <timeZone> fields are required. The <localTime> block sets the device time.<br>If <timeMode> is present and set to "NTP", only the <timeZone> field is required. The device time is set by synchronizing with NTP.<br>If <timeMode> is present and set to "satellite", the <localTime> and <timeZone> fields are not required. |                                     |

#### Time XML Block

```
<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <timeMode>    <!-- req, xs:string, "NTP, manual,satellite,timecorrect" -->    </timeMode>
  <localTime>    <!-- dep, xs:datetime -->                                </localTime>
  <timeZone>    <!-- dep, xs:string, POSIX time zone string -->    </timeZone>
</Time>
```

## 8.14/ISAPI/System/fisheye/

### 8.14.1 /ISAPI/System/fisheye/

| /ISAPI/System/fisheye/ |                   | General Resource | v2.0 |
|------------------------|-------------------|------------------|------|
| GET                    |                   |                  |      |
| Description            | Get fisheye param |                  |      |
| Query                  | None              |                  |      |
| Inbound Data           | None              |                  |      |
| Success Return         | FishEye           |                  |      |
| PUT                    |                   |                  |      |
| Description            | Set fisheye param |                  |      |
| Query                  | None              |                  |      |
| Inbound Data           | FishEye           |                  |      |
| Success Return         | ResponseStatus    |                  |      |
| Notes:                 |                   |                  |      |



```
streamingMode:
mode1: fisheye+panorama+3PTZ;
mode2: fisheye +4PTZ;
mode3: fisheye (primary)+ fisheye (secondary)+3PTZ;
mode4: panorama (main stream + sub stream);
mode5: 4PTZ
mode6: fisheye
```

#### FishEye XML Block

```
<FishEye version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<type><!--req, xs:string, "ceiling,wall,desktop" --></type>
<streamingMode><!--opt, xs:string,
"mode1,mode2,mode3,mode4,mode5,mode6"--></streamingMode>
</FishEye>
```

### 8.14.2 /ISAPI/System/fisheye/capabilities

| /ISAPI/System/fisheye/capabilities |                          | General Resource | v2.0 |
|------------------------------------|--------------------------|------------------|------|
| GET                                |                          |                  |      |
| Description                        | Set fisheye capabilities |                  |      |
| Query                              | None                     |                  |      |
| Inbound Data                       | None                     |                  |      |
| Success Return                     | FishEye                  |                  |      |
| Notes:                             |                          |                  |      |

#### FishEye XML Block

```
<FishEye version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<type opt="ceiling,wall,desktop"><!--req, xs:string--></type>
<streamingMode opt="mode1,mode2,mode3,mode4,mode5,mode6"><!--opt,
xs:string--></streamingMode>
<isSupportEPTZParam><!-- opt, xs:boolean --></isSupportEPTZParam>
</FishEye>
```

### 8.14.3 /ISAPI/System/fisheye/EPTZParam

| ISAPI/System/fisheye/EPTZParam |  | General Resource | v2.0 |
|--------------------------------|--|------------------|------|
| <b>GET</b>                     |  |                  |      |

|                |                |
|----------------|----------------|
| Description    | Get EPTZ param |
| Query          | None           |
| Inbound Data   | None           |
| Success Return | EPTZParam      |
| <b>PUT</b>     |                |
| Description    | Set EPTZ param |
| Query          | None           |
| Inbound Data   | EPTZParam      |
| Success Return | ResponseStatus |
| <b>Notes:</b>  |                |

#### EPTZParam XML Block

```
<EPTZParam version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enableEPTZ><!-- req, xs:boolean --></enableEPTZ>
</EPTZParam>
```

### 8.14.4 /ISAPI/System/fisheye/EPTZParam/capabilities

| /ISAPI/System/fisheye/EPTZParam/capabilities |                       | General Resource | v2.0 |
|----------------------------------------------|-----------------------|------------------|------|
| <b>GET</b>                                   |                       |                  |      |
| Description                                  | Get EPTZ capabilities |                  |      |
| Query                                        | None                  |                  |      |
| Inbound Data                                 | None                  |                  |      |
| Success Return                               | EPTZParam             |                  |      |

#### EPTZParam XML Block

```
<EPTZParam version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enableEPTZ><!-- req, xs:boolean --></enableEPTZ>
</EPTZParam>
```

## 8.15/ISAPI/ContentMgmt/RecordingHost(/ISAPI/RecordHost)

### 8.15.1 /ISAPI/ContentMgmt/RecordingHost/hostParam

| /ISAPI/ContentMgmt/RecordingHost/hostParam |                                             | General Resource | v2.0 |
|--------------------------------------------|---------------------------------------------|------------------|------|
| <b>GET</b>                                 |                                             |                  |      |
| Description                                | It is used to access recordingHost settings |                  |      |

|                |                                                |
|----------------|------------------------------------------------|
| Query          | None                                           |
| Inbound Data   | None                                           |
| Success Return | hostParam                                      |
| <b>PUT</b>     |                                                |
| Description    | It is used to configure recordingHost settings |
| Query          | None                                           |
| Inbound Data   | hostParam                                      |
| Success Return | ResponseStatus                                 |
| Notes:         |                                                |

#### hostParam XML Block

```
<hostParam version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <oneKeyDefaultDelay/> <!--req, xs:int, unit:sec-->
  <directMode/> <!--req, xs:string, "auto, manual" -->
</hostParam>
```

## 8.15.2 /ISAPI/ContentMgmt/RecordingHost/recordExport

| /ISAPI/ContentMgmt/RecordingHost/recordExport                                                                                                            |                                                | General Resource | v2.0 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------|------|
| GET                                                                                                                                                      |                                                |                  |      |
| Description                                                                                                                                              | It is used to access record export settings    |                  |      |
| Query                                                                                                                                                    | None                                           |                  |      |
| Inbound Data                                                                                                                                             | None                                           |                  |      |
| Success Return                                                                                                                                           | recordExport                                   |                  |      |
| PUT                                                                                                                                                      |                                                |                  |      |
| Description                                                                                                                                              | It is used to configure record export settings |                  |      |
| Query                                                                                                                                                    | None                                           |                  |      |
| Inbound Data                                                                                                                                             | recordExport                                   |                  |      |
| Success Return                                                                                                                                           | ResponseStatus                                 |                  |      |
| Notes:                                                                                                                                                   |                                                |                  |      |
| <p>&lt;streamId&gt;: 码流编号, 必须与/ISAPI/Streaming/channels或/ISAPI/ContentMgmt/StreamingProxy/channels或/ISAPI/ContentMgmt/mirrorStreaming/channels中的id一致</p> |                                                |                  |      |

### recordExport XML Block

```
<recordExport version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <remoteExport> <!--opt-->
    <server> <!--req -->
      <type/> <!--req, xs:string, "http, ftp"-->
      <http/> <!--dep, isapi: HttpHostNotification -->
      <ftp/> <!--dep, isapi:FTPNotification -->
    </server>
    <exportStreamChannelList> <!--req-->
      <exportStreamChannel>
        <export/> <!--req, xs:boolean-->
        <streamId/> <!--req, xs:string;id>
      </exportStreamChannel>
    </exportStreamChannelList>
  </remoteExport>
  <localExport> <!--opt-->
    <path/> <!--opt,xs:string-->
    <exportStreamChannelList/> <!--req-->
  </localExport>
</recordExport>
```

## 8.15.3 /ISAPI/ContentMgmt/RecordingHost/courses

| /ISAPI/ContentMgmt/RecordingHost/courses |                                          | General Resource | v2.0 |
|------------------------------------------|------------------------------------------|------------------|------|
| GET                                      |                                          |                  |      |
| Description                              | It is used to access courses settings    |                  |      |
| Query                                    | None                                     |                  |      |
| Inbound Data                             | None                                     |                  |      |
| Success Return                           | courseList                               |                  |      |
| PUT                                      |                                          |                  |      |
| Description                              | It is used to configure courses settings |                  |      |
| Query                                    | None                                     |                  |      |
| Inbound Data                             | courseList                               |                  |      |
| Success Return                           | ResponseStatus                           |                  |      |
| Notes:                                   |                                          |                  |      |

#### courseList XML Block

```
<courseList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <course/> <!--req -->
</courseList>
```

| /ISAPI/ContentMgmt/RecordingHost/courses/<ID> |                                                   | General Resource | v2.0 |
|-----------------------------------------------|---------------------------------------------------|------------------|------|
| GET                                           |                                                   |                  |      |
| Description                                   | It is used to access a special course settings    |                  |      |
| Query                                         | None                                              |                  |      |
| Inbound Data                                  | None                                              |                  |      |
| Success Return                                | course                                            |                  |      |
| PUT                                           |                                                   |                  |      |
| Description                                   | It is used to configure a special course settings |                  |      |
| Query                                         | None                                              |                  |      |
| Inbound Data                                  | course                                            |                  |      |
| Success Return                                | ResponseStatus                                    |                  |      |
| Notes:                                        |                                                   |                  |      |
| <id>:course index                             |                                                   |                  |      |

#### courseXML Block

```
<course version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!--req, xs:string; id-->
  <name/> <!--req, xs:string -->
  <instructorName/> <!--opt, xs:string -->
  <description/> <!--opt, xs:string -->
</course>
```

## 8.15.4 /ISAPI/ContentMgmt/RecordingHost/weeklySchedules

| /ISAPI/ContentMgmt/RecordingHost/weeklySchedules |                                                | General Resource | v2.0 |
|--------------------------------------------------|------------------------------------------------|------------------|------|
| <b>GET</b>                                       |                                                |                  |      |
| Description                                      | It is used to access weekly schedules settings |                  |      |



```

<dayScheduleList> <!-- opt -->
  <daySchedule>    <!-- req -->
    <DayOfWeek/>    <!-- req, isapi:DayOfWeek>
    <courseScheduleList>    <!-- req -->
      <courseSchedule>
        <courseId/> <!-- req -->
        <startTime/> <!-- req, xs:time -->
        <endTime/> <!-- req, xs:time -->
      </courseSchedule>
    </courseScheduleList>
  </daySchedule>
</dayScheduleList>
</weeklySchedule>

```

## 8.15.5 /ISAPI/ContentMgmt/RecordingHost/eventSources

| /ISAPI/ContentMgmt/RecordingHost/eventSources |                                             | General Resource | v2.0 |
|-----------------------------------------------|---------------------------------------------|------------------|------|
| GET                                           |                                             |                  |      |
| Description                                   | It is used to access event sources settings |                  |      |
| Query                                         | None                                        |                  |      |
| Inbound Data                                  | None                                        |                  |      |
| Success Return                                | eventSourceList                             |                  |      |
| PUT                                           |                                             |                  |      |
| Description                                   | It is used to configure courses settings    |                  |      |
| Query                                         | None                                        |                  |      |
| Inbound Data                                  | eventSourceList                             |                  |      |
| Success Return                                | ResponseStatus                              |                  |      |
| Notes:                                        |                                             |                  |      |

### eventSourceList XML Block

```
<eventSourceList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
```

```
<eventSource/> <!--req -->
</eventSourceList>
```

| /ISAPI/ContentMgmt/RecordingHost/eventSources/<ID> |                                                         | General Resource | v2.0 |
|----------------------------------------------------|---------------------------------------------------------|------------------|------|
| GET                                                |                                                         |                  |      |
| Description                                        | It is used to access a special event source settings    |                  |      |
| Query                                              | None                                                    |                  |      |
| Inbound Data                                       | None                                                    |                  |      |
| Success Return                                     | eventSource                                             |                  |      |
| PUT                                                |                                                         |                  |      |
| Description                                        | It is used to configure a special event source settings |                  |      |
| Query                                              | None                                                    |                  |      |
| Inbound Data                                       | eventSource                                             |                  |      |
| Success Return                                     | ResponseStatus                                          |                  |      |
| Notes:                                             |                                                         |                  |      |

#### eventSource XML Block

```
<eventSource version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string -->
  <enabled/> <!--req, xs:boolean-->
  <evtSrcDescriptor>
    <proxyProtocol/> <!--req xs:enumeration "HIKVISION, AXIS, PANASONIC, BOSCH, PELCO,
    SONY..."-->
    <userName/> <!--req,wo, xs:string -->
    <password/> <!--req,wo, xs:string -->
    <addressingFormatType/> <!-- dep --> <!-- req, xs:enumeration, "ipaddress, hostname, ..." -->
    <hostName/> <!-- dep, xs:string -->
    <ipAddress/> <!-- dep, xs:string -->
    <ipv6Address/> <!-- dep, xs:string -->
    <managePortNo/> <!--req, xs:integer -->
    <innerIOPortID/> <!--req, xs:string; id -->
  </evtSrcDescriptor>
  <priority/> <!--opt, xs:int-->
  <relatedVideoInputId/> <!--req, xs:string; id->
</eventSource>
```



## 8.15.6 /ISAPI/ContentMgmt/RecordingHost/courses/search

General Resource v2.0

### /ISAPI/ContentMgmt/RecordingHost/courses/search

#### POST

|                |                      |
|----------------|----------------------|
| Description    | Serach course        |
| Query          | None                 |
| Inbound Data   | <CourseCond>         |
| Success Return | <CourseSearchResult> |

#### Notes:

#### CourseCond XML Block

```
<CourseCond version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!--req, xs:string;--></searchID>
  <searchResultPosition><!-- req, xs: integer--></searchResultPosition>
  <maxResults><!-- req, xs: integer --></maxResults>
  <startTime><!-- opt, xs:time, ISO8601 time--></startTime>
  <endTime><!-- opt, xs:time, ISO8601 time--></endTime>
  <courseName><!--opt, xs: string, min="0" max="128"--></courseName>
  <instructorName><!--opt, xs: string, min="0" max="128"--></instructorName>
  <courseType opt="manual"><!--opt, xs: string, --></courseType>
</CourseCond>
```

#### CourseSearchResult XML Block

```
<CourseSearchResult version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!--req, xs:string;--></searchID>
  <responseStatus><!--req, xs:string, "true, false"--></responseStatus>
  <responseStatusStrg><!--req, xs:string, "OK, NO MATCHES, MORE"--></responseStatusStrg>
  <numOfMatches><!-- req, xs: integer --></numOfMatches>
  <totalMatches><!-- req, xs: integer --></totalMatches>
  <CourseInfoList>
    <CourseInfo><!--opt-->
      <startTime><!-- opt, xs:time, ISO8601 time--></startTime>
```

```

<endTime><!-- opt, xs:time, ISO8601 time--></endTime>

<courseName><!--opt, xs: string, min="0" max="128"--></courseName>

<instructorName><!--opt, xs: string, min="0" max="128"--></instructorName>

<courseDescription><!--opt, xs: string, min="0" max="256"--></courseDescription>

<courseType><!--opt, xs: string, opt="manual"--></courseType>

<recUUID><!--opt, xs: string, min="0" max="64"--></recUUID>

</CourseInfo>
</CourseInfoList>
</CourseSearchResult>

```

## 8.15.7 /ISAPI/ContentMgmt/RecordingHost/courses/search/capabilities

General Resource v2.0

### /ISAPI/ContentMgmt/RecordingHost/courses/search/capabilities

#### GET

|                |                            |
|----------------|----------------------------|
| Description    | Search course capabilities |
| Query          | None                       |
| Inbound Data   | None                       |
| Success Return | <CourseCond>               |

#### Notes:

#### CourseCond XML Block

```

<CourseCond version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">

    <searchID min="" max=""><!--req,xs:string--></searchID>

    <searchResultPosition min="" max=""><!-- req, xs: integer--></searchResultPosition>

    <maxResults min="" max=""><!-- req, xs: integer --></maxResults>

    <startTime><!-- opt, xs:time, ISO8601 time--></startTime>

    <endTime><!-- opt, xs:time, ISO8601 time--></endTime>

    <courseName min="" max=""><!--opt, xs: string--></courseName>

```

```
<instructorName min="0" max="128"><!--opt, xs: string--></instructorName>

<courseType opt="manual"><!--opt, xs: string--></courseType>

</CourseCond>
```

## 8.15.8 /ISAPI/ContentMgmt/RecordingHost/BackPic/uploadCfg?index=

| /ISAPI/ContentMgmt/RecordingHost/BackPic/uploadCfg?index= |                                 | General Resource | v2.0 |
|-----------------------------------------------------------|---------------------------------|------------------|------|
| PUT                                                       |                                 |                  |      |
| Description                                               | Upload background picture param |                  |      |
| Query                                                     | None                            |                  |      |
| Inbound Data                                              | BackPicCfg                      |                  |      |
| Success Return                                            | ResponseStatus                  |                  |      |
| Notes:                                                    |                                 |                  |      |

### BackPicCfg XML Block

```
<BackPicCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <picSize><!--req, xs: integer, min="0"--></picSize>
  <picType><!--req, xs: string, opt="YUV,JPEG"--></picType>
  <picWidth><!--req, xs: integer, min="0"--></picWidth>
  <picHeight><!--req, xs: integer, min="0"--></picHeight>
  <picName><!--opt, xs: string, min="0", max="128"--></picName>
</BackPicCfg>
```

## 8.15.9 /ISAPI/ContentMgmt/RecordingHost/BackPic/upload?index=

| /ISAPI/ContentMgmt/RecordingHost/BackPic/upload?index= |                           | General Resource | v2.0 |
|--------------------------------------------------------|---------------------------|------------------|------|
| PUT                                                    |                           |                  |      |
| Description                                            | Upload background picture |                  |      |
| Query                                                  |                           |                  |      |

|                       |                       |
|-----------------------|-----------------------|
| <b>Inbound Data</b>   | Picture data          |
| <b>Success Return</b> | <PictureUploadResult> |
| <b>Notes:</b>         |                       |
|                       |                       |

#### PictureUploadResult XML Block

```
<PictureUploadResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <picID><!--req, xs: string, min="0" max="128"--></picID>
</PictureUploadResult>
```

## 8.15.10/ISAPI/RecordHost/BackPicCfg/picID/ID

| /ISAPI/RecordHost/BackPicCfg/picID/ID |                         | General Resource | v2.0 |
|---------------------------------------|-------------------------|------------------|------|
| <b>GET</b>                            |                         |                  |      |
| <b>Description</b>                    | Get picture param by ID |                  |      |
| <b>Query</b>                          | None                    |                  |      |
| <b>Inbound Data</b>                   | None                    |                  |      |
| <b>Success Return</b>                 | <b>BackPicCfg</b>       |                  |      |

#### BackPicCfg XML Block

```
<BackPicCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <picSize><!--req, xs: integer, min="0"--></picSize>
  <picType><!--req, xs: string, opt="YUV,JPEG"--></picType>
  <picWidth><!--req, xs: integer, min="0"--></picWidth>
  <picHeight><!--req, xs: integer, min="0"--></picHeight>
  <picName><!--opt, xs: string, min="0", max="128"--></picName>
</BackPicCfg>
```

## 8.15.11/ISAPI/ContentMgmt/RecordingHost/BackPic/capabilities

| /ISAPI/ContentMgmt/RecordingHost/BackPic/capabilities |                                      | General Resource | v2.0 |
|-------------------------------------------------------|--------------------------------------|------------------|------|
| <b>GET</b>                                            |                                      |                  |      |
| Description                                           | Get picture param by ID capabilities |                  |      |
| Query                                                 | None                                 |                  |      |
| Inbound Data                                          | None                                 |                  |      |
| Success Return                                        | BackPicCfg                           |                  |      |

### BackPicCfg XML Block

```
<BackPicCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <picSize min="0"><!--req, xs: integer--></picSize>
  <picType opt="YUV,JPEG"><!--req, xs: string--></picType>
  <picWidth min="0"><!--req, xs: integer--></picWidth>
  <picHeight min="0"><!--req, xs: integer--></picHeight>
  <picName min="0" max="128"><!--opt, xs: string--></picName>
</BackPicCfg>
```

## 8.15.12/ISAPI/RecordHost/BackPicInfo

| /ISAPI/RecordHost/BackPicInfo |                                    | General Resource | v2.0 |
|-------------------------------|------------------------------------|------------------|------|
| GET                           |                                    |                  |      |
| Description                   | Get which picture to be background |                  |      |
| Query                         | None                               |                  |      |
| Inbound Data                  | None                               |                  |      |
| Success Return                | BackPicInfo                        |                  |      |
| PUT                           |                                    |                  |      |
| Description                   | Set which picture to be background |                  |      |
| Query                         | None                               |                  |      |
| Inbound Data                  | BackPicInfo                        |                  |      |
| Success Return                | ResponseStatus                     |                  |      |

### BackPicInfo XML Block

```
<BackPicInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enable><!--req, xs: boolean--></enable>
  <picID><!--req, xs: string, min="0" max="128"--></picID>
</BackPicInfo>
```

### 8.15.13/ISAPI/RecordHost/BackPicInfo/capabilities

| /ISAPI/RecordHost/BackPicInfo/capabilities |                                    | General Resource | v2.0 |
|--------------------------------------------|------------------------------------|------------------|------|
| <b>GET</b>                                 |                                    |                  |      |
| Description                                | Get which picture to be background |                  |      |
| Query                                      | None                               |                  |      |
| Inbound Data                               | None                               |                  |      |
| Success Return                             | BackPicInfo                        |                  |      |

#### BackPicInfo XML Block

```
<BackPicInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enable><!--req, xs: boolean --></enable>
  <picID min="0" max="128"><!--req, xs: string--></picID>
</BackPicInfo>
```

### 8.15.14/ISAPI/RecordHost/BackPic/ID

| /ISAPI/RecordHost/BackPic/ID |                           | General Resource | v2.0 |
|------------------------------|---------------------------|------------------|------|
| <b>DELETE</b>                |                           |                  |      |
| Description                  | Delete background picture |                  |      |
| Query                        | None                      |                  |      |
| Inbound Data                 |                           |                  |      |
| Success Return               | ResponseStatus            |                  |      |

### 8.15.15/ISAPI/ContentMgmt/RecordingHost/imageDiffDetection/channels/ID

| /ISAPI/ContentMgmt/RecordingHost/imageDiffDetection/channels/ID |                               | General Resource | v2.0 |
|-----------------------------------------------------------------|-------------------------------|------------------|------|
| GET                                                             |                               |                  |      |
| Description                                                     | Get image diffdetection param |                  |      |
| Query                                                           | None                          |                  |      |
| Inbound Data                                                    | None                          |                  |      |
| Success Return                                                  | ImageDiffDetectionCfg         |                  |      |
| PUT                                                             |                               |                  |      |
| Description                                                     | Set image diffdetection param |                  |      |
| Query                                                           | None                          |                  |      |

|                |                       |
|----------------|-----------------------|
| Inbound Data   | ImageDiffDetectionCfg |
| Success Return | ResponseStatus        |

#### ImageDiffDetectionCfg XML Block

```
<ImageDiffDetectionCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!-- req, xs:boolean --></enabled>
  <threshold><!--req, xs: integer, min="0", max="100"--></threshold>
  <sensitivity><!--req, xs: integer, min="0", max="100"--></sensitivity>
  <RegionCoordinatesList> <!-- req-->
    <RegionCoordinates> <!-- Note: at least two coordinates are required -->
      <positionX> <!-- req, xs:integer--></positionX>
      <positionY> <!-- req, xs:integer--></positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</ImageDiffDetectionCfg>
```

### 8.15.16/ISAPI/ContentMgmt/RecordingHost/imageDiffDetection/channels/ID/capabilities

|                                                                              |                               |                  |      |
|------------------------------------------------------------------------------|-------------------------------|------------------|------|
| /ISAPI/ContentMgmt/RecordingHost/imageDiffDetection/channels/ID/capabilities |                               | General Resource | v2.0 |
| GET                                                                          |                               |                  |      |
| Description                                                                  | Get image diffdetection param |                  |      |
| Query                                                                        | None                          |                  |      |
| Inbound Data                                                                 | None                          |                  |      |
| Success Return                                                               | ImageDiffDetectionCfg         |                  |      |

#### ImageDiffCheckCfg XML Block

```
<ImageDiffDetectionCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!-- req, xs:boolean --></enabled>
  <threshold min="0" max="100"><!--req, xs: integer--></threshold>
  <sensitivity min="0" max="100"><!--req, xs: integer--></sensitivity>
  <normalizedScreenSize> <!--opt-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionCoordinatesList size=""><!-- req-->
    <RegionCoordinates> <!-- Note: at least two coordinates are required -->
      <positionX> <!-- req, xs:integer--></positionX>
      <positionY> <!-- req, xs:integer--></positionY>
```

```
</RegionCoordinates>
</RegionCoordinatesList>
</ImageDiffDetectionCfg>
```

## 8.15.17/ISAPI/ContentMgmt/InputProxy/channels/status

**S**

|                                               |                                 |                  |      |
|-----------------------------------------------|---------------------------------|------------------|------|
| /ISAPI/ContentMgmt/InputProxy/channels/status |                                 | General Resource | v2.0 |
| GET                                           |                                 |                  |      |
| Description                                   | Get input proxy channels status |                  |      |
| Query                                         | None                            |                  |      |
| Inbound Data                                  | None                            |                  |      |
| Success Return                                | InputProxyChannelStatusList     |                  |      |
| Notes:                                        |                                 |                  |      |

### InputProxyChannelStatusList XML Block

```
<InputProxyChannelStatusList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <InputProxyChannelStatus/>  <!-- opt -->
</InputProxyChannelStatusList>
```

## 8.15.18/ISAPI/ContentMgmt/InputProxy/channels/<ID>/

**status**

|                                                    |                                       |                  |      |
|----------------------------------------------------|---------------------------------------|------------------|------|
| /ISAPI/ContentMgmt/InputProxy/channels/<ID>/status |                                       | General Resource | v2.0 |
| GET                                                |                                       |                  |      |
| Description                                        | Get input proxy channels status by ID |                  |      |
| Query                                              | None                                  |                  |      |
| Inbound Data                                       | None                                  |                  |      |
| Success Return                                     | InputProxyChannelStatusList           |                  |      |
| Notes:                                             |                                       |                  |      |

### InputProxyChannelStatus XML Block

```
<InputProxyChannelStatus version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <sourceInputPortDescriptor>  <!-- req --> </sourceInputPortDescriptor>
  <online> <!-- req, xs:boolean --> </online>
```



```

<supportCreateStream/> <!-- opt, xs:boolean -->
<streamingProxyChannelIdList> <!-- req -->
    <streamingProxyChannelId> <!-- req, xs:string; id --> </streamingProxyChannelId>
</streamingProxyChannelIdList>
<relatedIOProxy> <!-- opt -->
    <inputProxyPortIdList> <!--opt-->
        <inputProxyPortId/> <!-- opt -->
    </inputProxyPortIdList>
    <outputProxyPortIdList><!-- opt-->
        <outputProxyPortId/> <!-- opt -->
    </outputProxyPortIdList>
</relatedIOProxy>
<chanDetectResult> <!-- opt, xs:string, "connect, overSysBandwidth, domainError, ipcStreamFail,
connecting, chanNoError, ipAddrConflictWithDev, ipAddrConflicWithIpc,
errorUserNameOrPasswd, netUnreachable, unknownError, notExist, ipcStreamTypeNotSupport,
ipcResolutionNotSupport, userLocked,userNotExist,ipcUnregistered, ipcNotActivated" -->
    </chanDetectResult>
<SecurityStatus>
    <PasswordStatus><!--opt, xs:string,"ipcNotActivated,risk,weak,medium,strong,invalid"--></
    PasswordStatus>
</SecurityStatus>
<chanStatus><!--opt, xs: string, opt="locate,getStream"--></chanStatus>
</InputProxyChannelStatus>

```

## 8.15.19/ISAPI/RecordHost/PublishFile/batch/channels/I

### D

| /ISAPI/RecordHost/PublishFile/batch/channels/ID |                          | General Resource | v2.0 |
|-------------------------------------------------|--------------------------|------------------|------|
| <b>PUT</b>                                      |                          |                  |      |
| Description                                     | Publish files with batch |                  |      |
| Query                                           | None                     |                  |      |
| Inbound Data                                    | <b>PublishFileList</b>   |                  |      |
| Success Return                                  | <b>ResponseStatus</b>    |                  |      |

#### PublishFileList XML Block

```
<PublishFileList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <PublishFile/><!-- opt-->
</PublishFileList>
```

## 8.15.20/ISAPI/RecordHost/PublishFile/channels/ID

| /ISAPI/RecordHost/PublishFile/channels/ID |                       | General Resource | v2.0 |
|-------------------------------------------|-----------------------|------------------|------|
| <b>PUT</b>                                |                       |                  |      |
| Description                               | Publish file          |                  |      |
| Query                                     | None                  |                  |      |
| Inbound Data                              | <b>PublishFile</b>    |                  |      |
| Success Return                            | <b>ResponseStatus</b> |                  |      |

### PublishFile XML Block

```
<PublishFile version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <beginTime><!-- req, xs:time, ISO8601 time,--> </beginTime>
  <endTime><!-- req, xs:time, ISO8601 time,--> </endTime>
  <fileID><!--req, xs: string,--></fileID>
  <cmdType><!--req, xs: string, opt="StartPublist,StopPublish "--></cmdType>
</PublishFile>
```

## 8.15.21/ISAPI/RecordHost/PublishFile/channels/ID/capabilities

| /ISAPI/RecordHost/PublishFile/channels/ID/capabilities |                               | General Resource | v2.0 |
|--------------------------------------------------------|-------------------------------|------------------|------|
| <b>GET</b>                                             |                               |                  |      |
| Description                                            | Get publish file capabilities |                  |      |
| Query                                                  | None                          |                  |      |
| Inbound Data                                           | None                          |                  |      |
| Success Return                                         | <b>PublishFile</b>            |                  |      |

### PublishFile XML Block

```
<PublishFile version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <beginTime><!-- req, xs:time, ISO8601 time--> </beginTime>
  <endTime><!-- req, xs:time, ISO8601 time--> </endTime>
  <fileID><!--req, xs: string--></fileID>
  <cmdType><!--req, xs: string, opt="StartPublist,StopPublish "--></cmdType>
</PublishFile>
```

## 8.15.22/ISAPI/RecordHost/PublishProgress/channels/ID?

**FileID=**

| /ISAPI/RecordHost/PublishProgress/channels/ID?FileID= |                                 | General Resource | v2.0 |
|-------------------------------------------------------|---------------------------------|------------------|------|
| <b>GET</b>                                            |                                 |                  |      |
| Description                                           | Get publish progress by file ID |                  |      |
| Query                                                 | None                            |                  |      |
| Inbound Data                                          | None                            |                  |      |
| Success Return                                        | PublishProgress                 |                  |      |

### PublishProgress XML Block

```
<PublishProgress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <publishPercent><!--req, xs: integer, min="0", max="100"--></publishPercent>
  <publishStatus><!--req, xs: string,, opt="Success,Publishing,WaitPublish,CannotConnectFTP,NoFile,Failed"--></publishStatus>
  <fileID><!--req, xs: string,--></fileID>
</PublishProgress>
```

## 8.15.23/ISAPI/RecordHost/PublishProgress/channels/ID?

**year=&week=**

| /ISAPI/RecordHost/PublishProgress/channels/ID?year=&week= |                                       | General Resource | v2.0 |
|-----------------------------------------------------------|---------------------------------------|------------------|------|
| <b>GET</b>                                                |                                       |                  |      |
| Description                                               | Get publish progress by yeah and week |                  |      |
| Query                                                     | None                                  |                  |      |
| Inbound Data                                              | None                                  |                  |      |
| Success Return                                            | PublishProgressList                   |                  |      |

### PublishProgressList XML Block

```
<PublishProgressList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <PublishProgress/><!--opt -->
</PublishProgressList>
```

## 8.15.24/ISAPI/ContentMgmt/RecordingHost/publishFile Cfg/channels/ID?fileID=

| ISAPI/ContentMgmt/RecordingHost/publishFileCfg/channels/ID?fileID= |                        | General Resource | v2.0 |
|--------------------------------------------------------------------|------------------------|------------------|------|
| GET                                                                |                        |                  |      |
| Description                                                        | Get publish file param |                  |      |
| Query                                                              | None                   |                  |      |
| Inbound Data                                                       | None                   |                  |      |
| Success Return                                                     | PublishFileCfg         |                  |      |
| PUT                                                                |                        |                  |      |
| Description                                                        | Set publish file param |                  |      |
| Query                                                              | None                   |                  |      |
| Inbound Data                                                       | PublishFileCfg         |                  |      |
| Success Return                                                     | ResponseStatus         |                  |      |

### PublishFileCfg XML Block

```
<PublishFileCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <fileID><!-- req, xs: string--></fileID>
  <startTime><!-- opt, ro, xs:time, ISO8601 time--></startTime>
  <endTime><!-- opt, ro, xs:time, ISO8601 time--></endTime>
  <courseName><!-- req, xs: string,min="0" max="128"--></courseName>
    <instructorName><!-- req, xs: string,min="0" max="64"--></instructorName>
    <courseDescription><!-- req, xs: string,min="0" max="256"--></courseDescription>
</PublishFileCfg>
```

## 8.15.25/ISAPI/ContentMgmt/RecordingHost/publishFile Cfg/channels/ID/capabilities

| /ISAPI/ContentMgmt/RecordingHost/publishFileCfg/channels/ID/capabilities |                                     | General Resource | v2.0 |
|--------------------------------------------------------------------------|-------------------------------------|------------------|------|
| <b>GET</b>                                                               |                                     |                  |      |
| Description                                                              | Get publish file param capabilities |                  |      |
| Query                                                                    | None                                |                  |      |
| Inbound Data                                                             | None                                |                  |      |
| Success Return                                                           | <b>PublishFileCfg</b>               |                  |      |

### PublishFileCfg XML Block

```
<PublishFileCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <fileID min="" max=""><!--req, xs: string--></fileID>
  <startTime><!-- opt, ro,xs:time, ISO8601 time--></startTime>
  <endTime><!-- opt, ro,xs:time, ISO8601 time--></endTime>
  <courseName min="" max=""><!--req, xs: string,--></courseName>
    <instructorName min="" max=""><!--req, xs: string,--></instructorName>
    <courseDescription min="0" max="256"><!--req, xs: string--></courseDescription>
</PublishFileCfg>
```

## 8.15.26/ISAPI/RecordHost/FilmModeCfg

| /ISAPI/RecordHost/FilmModeCfg |                     | General Resource | v2.0 |
|-------------------------------|---------------------|------------------|------|
| GET                           |                     |                  |      |
| Description                   | Get file mode param |                  |      |
| Query                         | None                |                  |      |
| Inbound Data                  | None                |                  |      |
| Success Return                | FilmModeCfg         |                  |      |
| PUT                           |                     |                  |      |
| Description                   | Set file mode param |                  |      |
| Query                         | None                |                  |      |
| Inbound Data                  | FilmModeCfg         |                  |      |
| Success Return                | ResponseStatus      |                  |      |

### FilmModeCfg XML Block

```
<FilmModeCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type><!--req, xs: string,opt="single,double,pip", single-single window , double -two
  windows, pip-windows in windows--></type>
</FilmModeCfg>
```

## 8.15.27/ISAPI/RecordHost/FilmModeCfg/capabilities

| /ISAPI/RecordHost/FilmModeCfg/capabilities |                                  | General Resource | v2.0 |
|--------------------------------------------|----------------------------------|------------------|------|
| <b>GET</b>                                 |                                  |                  |      |
| Description                                | Get file mode param capabilities |                  |      |
| Query                                      | None                             |                  |      |
| Inbound Data                               | None                             |                  |      |
| Success Return                             | <b>FilmModeCfg</b>               |                  |      |

#### VGAParam XML Block

```
<FilmModeCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type opt="single,double,pip"><!--req, xs:string--></type>
</FilmModeCfg>
```

## 8.15.28/ISAPI/RecordHost/capabilities

| /ISAPI/RecordHost/capabilities |                              | General Resource | v2.0 |
|--------------------------------|------------------------------|------------------|------|
| <b>GET</b>                     |                              |                  |      |
| Description                    | Get record host capabilities |                  |      |
| Query                          | None                         |                  |      |
| Inbound Data                   | None                         |                  |      |
| Success Return                 | <b>RecordHostCap</b>         |                  |      |

#### RecordHostCap XML Block

```
<RecordHostCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<isSupportFilmModeCfg><!-- opt, xs:boolean--></isSupportFilmModeCfg>
<isSupportDirectedStrategyCfg><!-- opt, xs:boolean--></isSupportDirectedStrategyCfg>
<isSupportFrameCfg><!-- opt, xs:boolean, --></isSupportFrameCfg>
<isSupportAudioEffectiveCfg><!-- opt, xs:boolean--></isSupportAudioEffectiveCfg>
<isSupportRecordingVideoCfg><!-- opt, xs:boolean--></isSupportRecordingVideoCfg>
<isSupportRTMPCfg><!-- opt, xs:boolean, --></isSupportRTMPCfg>
<isSupportDel><!-- opt, xs:boolean, --></isSupportDel>
<isSupportBackPicCfg><!-- opt, xs:boolean, --></isSupportBackPicCfg>
<isSupportBackPicInfo><!-- opt, xs:boolean, --></isSupportBackPicInfo>
<isSupportPublishFile><!-- opt, xs:boolean, --></isSupportPublishFile>
<isSupportPublishProgress><!-- opt, xs:boolean, --></isSupportPublishProgress>
<isSupportPublishFileCfg><!-- opt, xs:boolean, --></isSupportPublishFileCfg>
<isSupportSearchCourse><!-- opt, xs:boolean, --></isSupportSearchCourse>
<isSupportCurriculumControl><!-- opt, xs:boolean, --></isSupportCurriculumControl>
<isSupportUploadBackPic><!-- opt, xs:boolean, --></isSupportUploadBackPic>
<isSupportGetRecordStatus><!-- opt, xs:boolean, --></isSupportGetRecordStatus>
<isSupportImageDiffDetection><!-- opt, xs:boolean, --></isSupportImageDiffDetection>
</RecordHostCap>
```