



IP Surveillance API Image Service Specification

Version 2.5

Revision 1

2014-05



<http://www.hikvision.com/>

COPYRIGHT ©2009, Hikvision Digital Technology Co., Ltd

Revision History	Description	Reviser	Date
Version 2.0 Revision 1	Initial version	Minglei Yu Linming He Guangmu Ma	2013-12
Version 2.5 Revision 1	[mod]IPD5.3.8 add DSSLevel(*1.25, *1.5) /ISAPI/Image/channels/<ID>/DS S	Xiaomin wang	2015-05- 09

Contents

1.	Introduction.....	4
2.	Conformance.....	4
3.	Image Service and Resources	4
3.1	/ISAPI/Image/channels	5
3.2	/ISAPI/Image/channels/imageModes	5
3.3	/ISAPI/Image/channels/imageMode/<ID>.....	6
3.4	/ISAPI/Image/channels/<ID>	6
3.5	/ISAPI/Image/channels/<ID>/ISPMODE	8
3.6	/ISAPI/Image/channels/<ID>/reset	8
3.7	/ISAPI/Image/channels/<ID>/restore	9
3.8	/ISAPI/Image/channels/<ID>/focusConfiguration	9
3.9	/ISAPI/Image/channels/<ID>/lensInitialization	10
3.10	/ISAPI/Image/channels/<ID>/imageFlip	10
3.11	/ISAPI/Image/channels/<ID>/imageFreeze	11
3.12	/ISAPI/Image/channels/<ID>/proportionalpan.....	11
3.13	/ISAPI/Image/channels/<ID>/WDR.....	12
3.14	/ISAPI/Image/channels/<ID>/BLC.....	13
3.15	/ISAPI/Image/channels/<ID>/imageenhancement	14
3.16	/ISAPI/Image/channels/<ID>/ircutFilter	14
3.17	/ISAPI/Image/channels/<ID>/noiseReduce	15
3.18	/ISAPI/Image/channels/<ID>/DSS	16
3.19	/ISAPI/Image/channels/<ID>/whiteBalance.....	17
3.20	/ISAPI/Image/channels/<ID>/exposure	18
3.21	/ISAPI/Image/channels/<ID>/iris	19
3.22	/ISAPI/Image/channels/<ID>/shutter	20
3.23	/ISAPI/Image/channels/<ID>/gain.....	20
3.24	/ISAPI/Image/channels/<ID>/sharpness	21
3.25	/ISAPI/Image/channels/<ID>/gammaCorrection.....	22
3.26	/ISAPI/Image/channels/<ID>/powerLineFrequency	22
3.27	/ISAPI/Image/channels/<ID>/color.....	23
3.28	/ISAPI/Image/channels/<ID>/scene.....	24
3.29	/ISAPI/Image/channels/<ID>/EPTZ	24
3.30	/ISAPI/Image/channels/<ID>/EIS	25
3.31	/ISAPI/Image/channels/<ID>/HLC	26
3.32	/ISAPI/Image/channels/<ID>/zoomLimit	26
3.33	/ISAPI/Image/channels/<ID>/corridor	27
3.34	/ISAPI/Image/channels/<ID>/dehaze	27
3.35	/ISAPI/Image/channels/<ID>/capturemode	28
3.36	/ISAPI/Image/channels/<ID>/irLight	29

3.37	/ISAPI/Image/channels/<ID>/imageCap	29
3.38	/ISAPI/Image/channels/<ID>/regionalExposure	30
3.39	/ISAPI/Image/channels/<ID>/regionalFocus	30
3.40	/ISAPI/Image/channels/<ID>/mountingScenario	31

1. Introduction

The specification mainly introduces Imaging Services included in the ISAPI protocol. The imaging service provides configuration and control data for imaging specific properties.

2. Conformance

All of interface definition in this specification is consistent with that of ISAPI protocol, the specification is a part of ISAPI protocol. The architecture, glossary and relationship are consistent with ISAPI IPMD documentation.

3. Image Service and Resources

/ISAPI/Image	Service v2.0
Notes: Some of front-end parameters support two kinds of image parameters: Day/Night. If you want to configure parameters for Day mode, you just need to add /day at the end of URL; If you want to configure parameters for Night mode, you just need to add /night at the end of URL. Example: Day Mode: /ISAPI/Image/channels/1/color/day <Color version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema"> <brightnessLevel>45</brightnessLevel> <contrastLevel>45</contrastLevel> </Color> Night Mode: /ISAPI/Image/channels/<ID>/color/night <Color version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema"> <brightnessLevel>55</brightnessLevel> <contrastLevel>55</contrastLevel> </Color>	

```

3. Auto Mode: /ISAPI/Image/channels/<ID>/color
<Color version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <brightnessLevel>50</brightnessLevel>
    <contrastLevel>50</contrastLevel>
    <saturationLevel>50</saturationLevel>
    <hueLevel>50</ hueLevel >
</Color>

```

3.1 /ISAPI/Image/channels

/ISAPI/Image/channels		General Resource	v2.0
GET			
Description	It is used to get the list of channel Image configuration.		
Query	None		
Inbound Data	None		
Success Return	ImageChannellist		
PUT			
Description	It is used to update Image configuration for all channels.		
Query	None		
Inbound Data	ImageChannellist		
Success Return	ResponseStatus		
Notes:			

ImageChannellist XML Block

```

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

```

3.2 /ISAPI/Image/channels/imageModes

ISAPI/Image/channels/imageModes		General Resource	v2.0
GET			
Description	Get default parameter of image mode		
Query	None		
Inbound Data	None		
Success Return	ImageModeList		
Notes:			
Under different scenes, we will recommend setting different image parameters for the device, this interface is used to get default image mode.			

ImageModeList XML Block

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

3.3 /ISAPI/Image/channels/imageMode/<ID>

ISAPI/Image/channels/imageModes/ID		General Resource	v2.0
GET			
Description	get default parameter of image mode		
Query	None		
Inbound Data	None		
Success Return	ImageMode		
Notes:			

ImageMode XML Block

```
<ImageMode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type> <!-- req, xs:string, "standard, indoor, outdoor, dimLight"> </type>
  <recommendation> <!-- req, ro -->
    <brightnessLevel> <!-- opt, xs:integer, 0..100 --> </brightnessLevel>
    <contrastLevel> <!-- opt, xs:integer, 0..100 --> </contrastLevel>
    <sharpnessLevel> <!-- opt, xs:integer, 0..100 --> </sharpnessLevel>
    <saturationLevel> <!-- opt, xs:integer, 0..100 --> </saturationLevel>
    <hueLevel> <!-- opt, xs:integer, 0..100 --> </hueLevel>
    <deNoiseLevel> <!-- opt, xs:integer, 0..100 --> </deNoiseLevel>
  </recommendation>
</ImageMode>
```

3.4 /ISAPI/Image/channels/<ID>

/ISAPI/Image/channels/<ID>		General Resource	v2.0
GET			
Description	It is used to get a specific channel Image configuration.		
Query	None		
Inbound Data	None		
Success Return	ImageChannel		
PUT			
Description	It is used to update Image configuration for a specific channel.		

Query	None
Inbound Data	ImageChannel
Success Return	ResponseStatus
Notes: /ISAPI/Image/channels/<ID>: front-end image parameters under Auto Mode /ISAPI/Image/channels/<ID>/day front-end image parameters under Day Mode /ISAPI/Image/channels/<ID>/night front-end image parameters under Night Mode	

ImageChannel XML Block

```

<ImageChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!-- req, xs:integer --></id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <videoInputID> <!-- req, xs:integer --> </videoInputID>
  <Focusconfiguration/> <!-- opt -->
  <LensInitialization/> <!-- opt -->
  <ImageFlip/> <!-- opt -->
  <ImageFreeze/> <!-- opt -->
  <proportionalpan/> <!-- opt -->
  <WDR/> <!-- opt -->
  <BLC/> <!-- opt -->
  <NoiseReduce/> <!-- opt -->
  <ImageEnhancement/> <!-- opt -->
  <DSS/> <!-- opt -->
  <WhiteBlance/> <!-- opt -->
  <Exposure/> <!-- opt -->
  <Sharpness/> <!-- opt -->
  <gammaCorrection/> <!-- opt -->
  <powerLineFrequency/> <!-- opt -->
  <Color/> <!-- opt -->
  <IrcutFilter/> <!-- opt -->
  <Scene/> <!-- opt -->
  < EPTZ/ > <!-- opt -->
  <EIS/> <!-- opt -->
  <HLC/> <!-- opt -->
  <ZoomLimit/> <!-- opt -->
  <corridor/> <!-- opt -->
  <Dehaze/> <!-- opt -->
  <ImageMode/> <!--opt, xs:string, "standard, indoor, outdoor, dimLight" -->
  <enableImageLossDetection> <!-- opt, Boolean --> </enableImageLossDetection>
  <CaptureMode/> <!-- opt -->
  <IrLight/> <!-- opt -->
  <LensDistortionCorrection/> <!-- opt -->
</ImageChannel>

```

3.5 /ISAPI/Image/channels/<ID>/ISPMODE

/ISAPI/Image/channels/<ID>/ISPMode		General Resource	v2.0
GET			
Description	Get the parameters of Day/Night Mode		
Query	None		
Inbound Data	None		
Success Return	ISPMode		
PUT			
Description	Set the parameters of Day/Night Mode		
Query	None		
Inbound Data	ISPMode		
Success Return	ResponseStatus		
Notes:			

ISPMODE XML Block

```
<ISPMODE version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode>
    <!-- opt, xs:string, "auto,schedule"-->
  </mode>
  <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>
</ISPMODE>
```

3.6 /ISAPI/Image/channels/<ID>/reset

/ISAPI/Image/channels/<ID>/reset		General Resource v2.0
PUT		
Description	It is used to reset an image channel (cut off the power and reboot the speed dome).	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		

Image reset only reboot the camera unit.

3.7 /ISAPI/Image/channels/<ID>/restore

/ISAPI/Image/channels/<ID>/restore		General Resource v2.0
PUT		
Description	It is used to restore the image configure parameter to the default factory settings.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		

3.8 /ISAPI/Image/channels/<ID>/focusConfiguration

/ISAPI/Image/channels/<ID>/focusConfiguration		General Resource	v2.0
GET			
Description	It is used to get focus parameters of a specified image channel.		
Query	None		
Inbound Data	None		
Success Return	FocusConfiguration		
PUT			
Description	It is used to update focus parameters of a specified image channel.		
Query	None		
Inbound Data	FocusConfiguration		
Success Return	ResponseStatus		
Notes:			
AUTO: auto focus			
MANUAL: manual focus			
SEMIAUTOMATIC: semi automatic			
focusPosition's PUT operator is enabled only when FocusStyle's value is MANUAL.			
focusSpeed: 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.			

FocusConfiguration XML Block

```
<FocusConfiguration version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <focusStyle/>  <!-- req, xs:string, "AUTO, MANUAL, SEMIAUTOMATIC" -->
  <focusLimited/>  <!-- opt, xs:integer -->
  <focusPosition/>  <!-- dep, depends on <FocusStyle>, xs:integer -->
  <focusSpeed>  <!-- opt, xs:integer -->  </focusSpeed>
</FocusConfiguration>
```

3.9 /ISAPI/Image/channels/<ID>/lensInitialization

/ISAPI/Image/channels/<ID>/lensInitialization		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	LensInitialization		
PUT			
Description	It is used to modify the initialization status of the lens of a specified image channel.		
Query	None		
Inbound Data	LensInitialization		
Success Return	ResponseStatus		
Notes:			

LensInitialization XML Block

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

3.10 /ISAPI/Image/channels/<ID>/imageFlip

/ISAPI/Image/channels/<ID>/ImageFlip		General Resource	v2.0
GET			
Description	It is used to get the mirror status of a specified image channel.		
Query	None		
Inbound Data	None		
Success Return	ImageFlip		
PUT			
Description	It is used to update mirror status of a specified image channel.		
Query	None		

Inbound Data	ImageFlip
Success Return	ResponseStaus ResponseStatus
Notes: ImageFlipStyle is enabled only when the value is true.	

ImageFlip XML Block

```
<ImageFlip version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/>          <!--req, xs:boolean -->
  <ImageFlipStyle/>    <!--opt, xs:string, "LEFTRIGHT, UPDOWN, CENTER, AUTO" -->
</ImageFlip>
```

3.11 /ISAPI/Image/channels/<ID>/imageFreeze

/ISAPI/Image/channels/<ID>/imageFreeze		General Resource	v2.0
GET			
Description	It is used to get ImageFreeze status of a specified Image channel.		
Query	None		
Inbound Data	None		
Success Return	ImageFreeze		
PUT			
Description	It is used to update ImageFreeze status of a specified image channel.		
Query	None		
Inbound Data	ImageFreeze		
Success Return	ResponseStaus ResponseStatus		
Notes:			

ImageFreeze XML Block

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

3.12 /ISAPI/Image/channels/<ID>/proportionalpan

/ISAPI/Image/channels/<ID>/proportionalpan		General Resource	v2.0
GET			
Description	It is used to get proportional pan status of a specified image channel.		
Query	None		

Inbound Data	None
Success Return	proportionalpan
PUT	
Description	It is used to update proportional pan status of a specified image channel.
Query	None
Inbound Data	proportionalpan
Success Return	ResponseStaus ResponseStatus
Notes:	

proportionalpan XML Block

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

3.13 /ISAPI/Image/channels/<ID>/WDR

/ISAPI/Image/channels/<ID>/WDR		General Resource v2.0
GET		
Description	It is used to get the value of wide dynamic range for a specified Image channel.	
Query	None	
Inbound Data	None	
Success Return	WDR	
PUT		
Description	It is used to configure the value of wide dynamic range for a specified Image channel.	
Query	None	
Inbound Data	WDR	
Success Return	ResponseStatus	
Notes:		
<WDRLevelExt> is optional, some cameras may use more than one levels to control WDR working. <mode> value contains “open”, “close” or “auto” , some cameras may not support “auto” mode . If a camera works in auto mode, WDR would be automatically open or close according to different scenes. /ISAPI/Image/channels/<ID>/WDR //stands for WDR parameters under Auto Mode /ISAPI/Image/channels/<ID>/WDR/day //stands for WDR parameters under Day Mode /ISAPI/Image/channels/<ID>/WDR/night //stands for WDR parameters under Night		

Mode

WDR XML Block

```
<WDR version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode>      <!-- req, xs:string, "open,close,auto"--> </mode>
  <WDRLevel><!--opt,xs:integer--> </WDRLevel>
  <WDRContrastLevel> <!--opt, xs:integer --> </WDRContrastLevel>
  < WDRLevel1> <!--opt,xs:integer--> < /WDRLevel1>
</WDR >
```

3.14 /ISAPI/Image/channels/<ID>/BLC

/ISAPI/Image/channels/<ID>/BLC		General Resource v2.0
GET		
Description	It is used to get the configuration of backlight compensation for a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	BLC	
PUT		
Description	It is used to configure the configuration of backlight compensation for a specified image channel.	
Query	None	
Inbound Data	BLC	
Success Return	ResponseStaus ResponseStatus	
Notes:		
/ISAPI/Image/channels/<ID>/BLC //stands for BLC parameters under Auto Mode		
/ISAPI/Image/channels/<ID>/BLC/day //stands for BLC parameters under Day Mode		
/ISAPI/Image/channels/<ID>/BLC/night //stands for BLC parameters under Night Mode		

BLC XML Block

```
<BLC version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
  <enabled/>      <!-- req, xs:boolean -->
  <BLCMode/>      <!--opt, xs:string, "UP, DOWN, LEFT, RIGHT, CENTER ,
MULTI-AREA,Region" -->
  <BLCLevel>  <!-- opt,xs:integer--></BLCLevel>
  <BLCRegionList><!--dep-->
  <BLCRegion>
    <id> <!--req,integer--></id>
    <RegionCoordinatesList/>
```

```
</BLCRegion>
</BLCRegionList>
</BLC>
```

3.15 /ISAPI/Image/channels/<ID>/imageenhancement

/ISAPI/Image/channels/<ID>/imageenhancement		General Resource v2.0
GET		
Description	It is used to get the ImageEnhancement's configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	ImageEnhancement	
PUT		
Description	It is used to configure the ImageEnhancement's configuration of a specified image channel.	
Query	None	
Inbound Data	ImageEnhancement	
Success Return	ResponseStaus ResponseStatus	
Notes:		

Imageenhancement XML Block

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

3.16 /ISAPI/Image/channels/<ID>/ircutFilter

/ISAPI/Image/channels/<ID>/IrcutFilter		General Resource	v2.0
GET			
Description	It is used to get the IrcutFilter's configuration of a specified image channel.		
Query	None		
Inbound Data	None		
Success Return	IrcutFilter		
PUT			

Description	It is used to configure the IrcutFilter's configuration of a specified image channel.
Query	None
Inbound Data	IrcutFilter
Success Return	ResponseStatus
Notes:	

IrcutFilter XML Block

```
<IrcutFilter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<IrcutFilterType>
  <!-- opt, xs:string, " auto, day, night,schedule,eventTrigger"-->
</IrcutFilterType>
<dayToNightFilterLevel><!--opt, xs:string, "low, normal, high" --></dayToNightFilterLevel>
<dayToNightFilterTime> <!--opt xs:integer --> </dayToNightFilterTime>
<nightToDayFilterLevel><!--opt,xs:string, "low, normal, high" --></nightToDayFilterLevel>
<nightToDayFilterTime> <!--opt xs:integer --></nightToDayFilterTime>
<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>
<EventTrigger> <!--dep-->
  <eventType><!--req,xs:string,"IO,VMD"></eventType>
  <IrcutFilterAction> <!--req,xs:string,"day,night"> </ IrcutFilterAction >
</EventTrigger>
</IrcutFilter>
```

3.17 /ISAPI/Image/channels/<ID>/noiseReduce

/ISAPI/Image/channels/<ID>/noiseReduce		General Resource	v2.0
GET			
Description	It is used to get 3D noise-reduce parameters of a specified Image channel.		
Query	None		
Inbound Data	None		
Success Return	NoiseReduce		
PUT			
Description	It is used to configure3D noise-reduce parameter of a specified Image channel.		

Query	None
Inbound Data	NoiseReduce
Success Return	ResponseStatus
Notes: 3D noise-reduce method is related to 2D noise-reduce. 2D noise-reduce method is a noise-reduce method which tries to reduce the noise in the frame. 3D noise reduce method can reduce noise in the frame and the noise between every adjacent two frames. 3D noise-reduce depend on FrameNoiseReduceLevel and InterFrameNoiseReduceLevel, FrameNoiseReduceLevel affects noise-reduce between frames, InterFrameNoiseReduceLevel affects noise-reduce in the frame. If the GeneralMode was chosen, the generalLevel will be used, and then the FrameNoiseReduceLevel and InterFrameNoiseReduceLevel would be set to the same value as generalLevel. /ISAPI/Image/channels/<ID>/noiseReduce //stands for noiseReduce parameters under Auto Mode /ISAPI/Image/channels/<ID>/noiseReduce/day //stands for noiseReduce parameters under Day Mode /ISAPI/Image/channels/<ID>/noiseReduce/night //stands for noiseReduce parameters under Night Mode	

NosiseReduce XML Block

```
<NoiseReduce version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode><!--req,xs:string,"close, general, advanced"--></mode>
  <GeneralMode> <!--dep,depends on <mode> -->
    <generalLevel><!--req,xs:integer--></generalLevel>
  </GeneralMode>
  <AdvancedMode> <!-- dep -->
    <FrameNoiseReduceLevel><!--req,xs:integer--></FrameNoiseReduceLevel>
    <InterFrameNoiseReduceLevel><!--req,xs:integer--></InterFrameNoiseReduceLevel>
  </AdvancedMode>
</NoiseReduce>
```

3.18 /ISAPI/Image/channels/<ID>/DSS

/ISAPI/Image/channels/<ID>/DSS		General Resource v2.0
GET		
Description	It is used to get the configuration of digital slow shutter for a specified Image channel.	
Query	None	

Inbound Data	None
Success Return	DSS
PUT	
Description	It is used to configure the configuration of digital slow shutter for a specified Image channel.
Query	None
Inbound Data	DSS
Success Return	ResponseStaus ResponseStatus
Notes: DSSLevel is only enabled when enabled value is true. DSSLevel"*2": indicates the speed is 2 times of normal shutter.	

DSS XML Block

```
<DSS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/>          <!-- req, xs:boolean -->
  <DSSLevel/>          <!--opt,          xs:string,"*1.25,*1.5,
*2,*3*4,*6,*8,*12,*16,*24,*32,*48,*64,*96,*128,*256,*512"-->
</DSS>
```

3.19 /ISAPI/Image/channels/<ID>/whiteBalance

/ISAPI/Image/channels/<ID>/whiteBalance		General Resource	v2.0
GET			
Description	It is used to get the WhiteBalance value of a specified ilmage channel.		
Query	None		
Inbound Data	None		
Success Return	WhiteBalance		
PUT			
Description	It is used to configure the WhiteBalance value of a specified ilmage channel.		
Query	None		
Inbound Data	WhiteBalance		
Success Return	ResponseStatus		
Notes:			
WhiteBlanceRed and WhiteBalanceBlue’s PUT operator is enabled only when WhiteBlanceStyle’s value is manual.			
/ISAPI/Image/channels/<ID>/whiteBalance //stands for whiteBalance parameters under			

Auto Mode

/ISAPI/Image/channels/<ID>/whiteBalance/day //stands for whiteBalance parameters under Day Mode

/ISAPI/Image/channels/<ID>/whiteBalance/night //stands for whiteBalance parameters under Night Mode

WhiteBalance XML Block

```
<WhiteBalance version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <WhiteBalanceStyle/> <!-- req, xs:string, "auto, manual, indoor, outdoor, autotrace,
    onece, sodiumlight, mercurylight" -->
  <WhiteBalanceRed/> <!--dep, depends on <WhiteBalanceStyle>,xs:integer, -->
  <WhiteBalanceBlue/> <!--dep, depends on <WhiteBalanceStyle>,xs:integer -->
</WhiteBalance>
```

3.20 /ISAPI/Image/channels/<ID>/exposure

//ISAPI/Image/channels/<ID>/exposure		General Resource v2.0
GET		
Description	It is used to get the exposure mode of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	Exposure	
PUT		
Description	It is used to configure the exposure mode of a specified image channel.	
Query	None	
Inbound Data	Exposure	
Success Return	ResponseStatus	
Notes:		
//ISAPI/Image/channels/<ID>/exposure //stands for exposure parameters under Auto Mode //ISAPI/Image/channels/<ID>/exposure/day //stands for exposure parameters under Day Mode //ISAPI/Image/channels/<ID>/exposure/night //stands for exposure parameters under Night Mode		

Exposure XML Block

```
<Exposure version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ExposureType/> <!--req, xs:string, "auto, IrisFirst, ShutterFirst, gainFirst, manual, plris,
    T5280-PQ1,T5289-PQ1,T1140-PQ1,T2712-PQ1" -->
```

```

<autoIrisLevel><!--dep,xs:integer> <autoIrisLevel>
<OverexposeSuppress> <!--opt-->
  <enabled> <!--req, xs:boolean --> </enabled>
  <Type> <!--dep, depends on <enabled>, xs:string, "AUTO, MANUAL" --> </Type>
  <DistanceLevel> <!--dep, depends on <Type>, xs: integer --> </DistanceLevel>
  <shortIRDistanceLevel>
    <!--dep, depends on <Type>, xs: integer -->
  </shortIRDistanceLevel>
  <longIRDistanceLevel>
    <!--dep, depends on <Type>, xs: integer -->
  </longIRDistanceLevel>
</OverexposeSuppress>
<plris> <!--opt-->
  <plrisType/> <!--dep, depends on <ExposureType>, xs:string, "AUTO, MANUAL" -->
  <IrisLevel> <!--dep, depends on <plrisType>, xs:integer --> </IrisLevel>
</plris>
</Exposure>

```

3.21 /ISAPI/Image/channels/<ID>/iris

/ISAPI/Image/channels/<ID>/iris		General Resource v2.0
GET		
Description	It is used to get the iris's value of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	Iris	
PUT		
Description	It is used to configure the iris's value of a specified image channel.	
Query	None	
Inbound Data	Iris	
Success Return	ResponseStatus	
Notes:		
Iris's PUT operate is enabled only when <ExposureType> is IrisFirst		
irisSpeed: negative numbers close iris, positive numbers open iris. Numerical value is a percentage of the maximum iris speed of the lens module.		

IrisValue XML Block

```
<Iris version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IrisLevel/>  <!-- req, xs:integer -->
  <IrisSpeed>    <!-- opt, xs:integer --> </IrisSpeed>
</Iris>
```

3.22 /ISAPI/Image/channels/<ID>/shutter

/ISAPI/Image/channels/<ID>/shutter		General Resource v2.0
GET		
Description	It is used to get the Shutter value of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	Shutter	
PUT		
Description	It is used to configure the Shutter value of a specified image channel.	
Query	None	
Inbound Data	Shutter	
Success Return	ResponseStatus	
Notes:		
PUT method is enabled only when <ExposureType> is ShutterFirst		

Shutter XML Block

```
<Shutter version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ShutterLevel>  <!-- dep,depends on <ExposureType>, xs:string, "1/1, 1/2, 1/3, 1/6,
1/12, 1/25, 1/50, 1/75, 1/100, 1/120, 1/125, 1/150, 1/175, 1/215, 1/225, 1/300, 1/400, 1/425,
1/600, 1/1000, 1/1250, 1/1750, 1/2500, 1/3500, 1/6000, 1/10000," --> <ShutterLevel>
</Shutter>
```

3.23 /ISAPI/Image/channels/<ID>/gain

/ISAPI/Image/channels/<ID>/gain		General Resource v2.0
GET		
Description	It is used to get the gain configuration of a specified Image channel.	
Query	None	
Inbound Data	None	
Success Return	Gain	
PUT		
Description	It is used to configure the gain configuration of a specified Image	

	channel.
Query	None
Inbound Data	Gain
Success Return	ResponseStatus
Notes: PUT method is enabled only when <ExposureType> is gainFirst.	

Gain XML Block

```
<Gain version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <GainLevel/>  <!--dep,depends on <ExposureType>, xs:integer -- -->
  <GainWindow><!-- opt -->
  <RegionCoordinatesList> <!-- opt -->
  <RegionCoordinates><!-- opt -->
  <positionX><!-- req, xs:integer;coordinate --></positionX>
  <positionY><!-- req, xs:integer;coordinate --></positionY>
  </RegionCoordinates>
  </RegionCoordinatesList>
  </GainWindow>
</Gain>
```

3.24 /ISAPI/Image/channels/<ID>/sharpness

/ISAPI/Image/channels/<ID>/sharpness		General Resource v2.0
GET		
Description	It is used to get the sharpness's value of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	Sharpness	
PUT		
Description	It is used to configure the sharpness's value of a specified image channel.	
Query	None	
Inbound Data	Sharpness	
Success Return	ResponseStatus	
Notes:		
/ISAPI/Image/channels/<ID>/sharpness //stands for sharpness parameters under Auto Mode		
/ISAPI/Image/channels/<ID>/sharpness/day //stands for sharpness parameters under Day Mode		

/ISAPI/Image/channels/<ID>/sharpness/night //stands for sharpness parameters under Night Mode

Sharpness XML Block

```
<Sharpness version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SharpnessMode><!--opt, xs:string,"manual,auto" --></ SharpnessMode>
  <SharpnessLevel/> <!--req, xs:integer-->
</Sharpness>
```

3.25 /ISAPI/Image/channels/<ID>/gammaCorrection

/ISAPI/Image/channels/<ID>/gammaCorrection		General Resource	v2.0
GET			
Description	It is used to get the gamma correction of a specified Image channel.		
Query	None		
Inbound Data	None		
Success Return	gammaCorrection		
PUT			
Description	It is used to configure the gamma correction of a specified Image channel.		
Query	None		
Inbound Data	gammaCorrection		
Success Return	ResponseStatus		
Notes:			

gammaCorrection XML Block

```
<gammaCorrection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <gammaCorrectionEnabled> <!-- opt, xs:boolean --> </gammaCorrectionEnabled>
  <gammaCorrectionLevel> <!-- opt, xs:integer --> </gammaCorrectionLevel>
</gammaCorrection>
```

3.26 /ISAPI/Image/channels/<ID>/powerLineFrequency

/ISAPI/Image/channels/<ID>/powerLineFrequency		General Resource	v2.0
GET			
Description	It is used to get the powerLineFrequency value of a specified Image		

	channel.
Query	None
Inbound Data	None
Success Return	powerLineFrequency
PUT	
Description	It is used to configure the powerLineFrequency value of a specified Image channel.
Query	None
Inbound Data	powerLineFrequency
Success Return	ResponseStatus
Notes: To configure the powerlineFrequency requires rebooting the camera.	

powerlineFrequency XML Block

```
<powerLineFrequency version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <powerLineFrequencyMode />  <!-- opt, xs:string "50hz, 60hz" -->
</powerLineFrequency >
```

3.27 /ISAPI/Image/channels/<ID>/color

/ISAPI/Image/channels/<ID>/color		General Resource v2.0
GET		
Description	It is used to get the color's value of a specified Image channel.	
Query	None	
Inbound Data	None	
Success Return	Color	
PUT		
Description	It is used to configure the color's value of a specified Image channel.	
Query	None	
Inbound Data	Color	
Success Return	ResponseStatus	
Notes:		
/ISAPI/Image/channels/<ID>/color //stands for color parameters under Auto Mode		
/ISAPI/Image/channels/<ID>/color/day // stands for color parameters under Day Mode		
/ISAPI/Image/channels/<ID>/color/night // stands for color parameters under Night Mode		

Color XML Block

```
<Color version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <brightnessLevel>      <!-- opt, xs:integer -->      </brightnessLevel>
  <contrastLevel>        <!-- opt, xs:integer -->        </contrastLevel>
  <saturationLevel>      <!-- opt, xs:integer -->        </saturationLevel>
  <hueLevel><!-- opt, xs:integer -->      </ hueLevel >
  <grayScale>
    <grayScaleMode> <!-- opt, xs:string, "indoor,outdoor"--><grayScaleMode>
    <grayScale>
</Color>
```

3.28 /ISAPI/Image/channels/<ID>/scene

/ISAPI/Image/channels/<ID>/scene		General Resource	v2.0
GET			
Description	It is used to get sene mode of a camera.		
Query	None		
Inbound Data	None		
Success Return	Scene		
PUT			
Description	It is used to set sene mode of a camera.		
Query	None		
Inbound Data	Scene		
Success Return	ResponseStatus		
Notes:			

Scene XML Block

```
<Scene version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode><!--req,xs:string,"indoor, outdoor, standard, dimLight "--></mode>
</Scene>
```

3.29 /ISAPI/Image/channels/<ID>/EPTZ

/ISAPI/Image/channels/<ID>/EPTZ		General Resource	v2.0
GET			
Description	It is used to get electronic PTZ enabled status.		
Query	None		
Inbound Data	None		
Success Return	EPTZ		
PUT			

Description	It is used to get electronic PTZ enabled status.
Query	None
Inbound Data	EPTZ
Success Return	ResponseStatus
Notes:	

EPTZ XML Block

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

3.30 /ISAPI/Image/channels/<ID>/EIS

/ISAPI/Image/channels/<ID>/EIS		General Resource v2.0
GET		
Description	It is used to get the electronic-image-stabilizer configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	EIS	
PUT		
Description	It is used to set the the electronic-image-stabilizer configuration of a specified image channel.	
Query	None	
Inbound Data	EIS	
Success Return	ResponseStatus	
Notes:		
/ISAPI/Image/channels/<ID>/EIS //stands for EIS parameters under Auto Mode		
/ISAPI/Image/channels/<ID>/EIS/day // stands for EIS parameters under Day Mode		
/ISAPI/Image/channels/<ID>/EIS/night // stands for EIS parameters under Night Mode		

EIS XML Block

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

3.31 /ISAPI/Image/channels/<ID>/HLC

//ISAPI/Image/channels/<ID>/HLC		General Resource v2.0
GET		
Description	It is used to get the high-light-compensation configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	HLC	
PUT		
Description	It is used to set the high-light-compensation configuration of a specified image channe.	
Query	None	
Inbound Data	HLC	
Success Return	ResponseStatus	
Notes:		
//ISAPI/Image/channels/<ID>/HLC //stands for HLC parameters under Auto Mode //ISAPI/Image/channels/<ID>/HLC/day //stands for HLC parameters under Day Mode //ISAPI/Image/channels/<ID>/HLC/night //stands for HLC parameters under Night Mode		

HLC XML Block

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

3.32 /ISAPI/Image/channels/<ID>/zoomLimit

/ISAPI/Image/channels/<ID>/ZoomLimit		General Resource	v2.0
GET			
Description	It is used to get the zoomlimitconfiguration of a specified Image channel.		
Query	None		
Inbound Data	None		
Success Return	ZoomLimit		
PUT			
Description	It is used to set the zoomlimit value of the camera		
Query	None		
Inbound Data	ZoomLimit		

Success Return	ResponseStatus
Notes:	

ZoomLimit XML Block

```
<ZoomLimit version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ZoomLimitRatio> <!-- opt xs:integer --> </ZoomLimitRatio>
</ZoomLimit >
```

3.33 /ISAPI/Image/channels/<ID>/corridor

/ISAPI/Image/channels/<ID>/corridor		General Resource v2.0
GET		
Description	It is used to get the high-light-compensation configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	corridor	
PUT		
Description	It is used to get the high-light-compensation configuration of a specified image channel.	
Query	None	
Inbound Data	corridor	
Success Return	ResponseStatus	
Notes:		

corridor XML Block

```
<corridor version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <mirror opt="off,left,right,up,down,center"> <!-- req, xs:string --> </mirror>
</ corridor >
```

3.34 /ISAPI/Image/channels/<ID>/dehaze

/ISAPI/Image/channels/<ID>/dehaze		General Resource v2.0
GET		
Description	It is used to decrease haze of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	Dehaze	

PUT	
Description	It is used to decrease haze of a specified image channel.
Query	None
Inbound Data	Dehaze
Success Return	ResponseStatus
Notes: /ISAPI/Image/channels/<ID>/dehaze //stands for dehaze parameters under Auto Mode /ISAPI/Image/channels/<ID>/dehaze/day // stands for dehaze parameters under Day Mode /ISAPI/Image/channels/<ID>/dehaze/night // stands for dehaze parameters under Night Mode	

Dehaze XML Block

```
<Dehaze version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DehazeMode/> <!--opt, xs:string, "open,close,auto -->
  <DehazeLevel> <!-- opt, xs:integer --> </DehazeLevel>
</Dehaze>
```

3.35 /ISAPI/Image/channels/<ID>/capturemode

/ISAPI/Image/channels/<ID>/capturemode		General Resource v2.0
GET		
Description	It is used to get the capture mode of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	CaptureMode	
PUT		
Description	It is used to set the capture mode of a specified image channe.	
Query	None	
Inbound Data	CaptureMode	
Success Return	ResponseStatus	
Notes:		
1-640*480@30fps, 2-4CIF@30fps, 3-720P@25fps, 4-720P@30fps, 5-720P@60fps, 6-1280*960@15fps, 7-1280*960@25fps, 8-1280*960@30fps, 9-1280*1024@30fps, 10-1600*900@15fps, 11-1600*1200@15fps, 12-1080P@15fps, 13-1080P@25fps, 14-1080P@30fps, 15-1080P@50fps, 16-1080P@60fps, 17-2048*1536@15fps, 18-2048*1536@20fps, 19-2048*1536@24fps, 20-2048*1536@25fps, 21-2048*1536@30fps, 22-2560*2048@25fps, 23-2560*2048@30fps, 24-2560*1920@7.5fps, 25-3072*2048@30fps		

CaptureMode XML Block

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

3.36 /ISAPI/Image/channels/<ID>/IrLight

/Image/channels/<ID>/IrLight		General Resource	v2.0
GET		Viewer	
Description	It is used to get the IR Light configuration for a specified Image channel.		
Query	None		
Inbound Data	None		
Success Return	IrLight		
PUT		Operator	
Description	It is used to configure IR Light for a specified Image channel.		
Query	None		
Inbound Data	IrLight		
Success Return	ResponseStaus ResponseStatus		
Notes:			
if the value of brightness is 0, it stands for close			

IrLight XML Block

```
<IrLight version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
  <mode> <!--req, xs:string,"auto,manual" --> </mode>
  <brightnessLevel> <!--dep, xs:integer --> </brightnessLevel>
  <sensitivityLevel> <!--dep, xs:integer --><sensitivityLevel>
  <brightnessLimit> <!--dep,opt, xs:integer, --> </brightnessLimit>
  <triggerMode> <!--dep,opt, xs:string, "camera, photosensitive" --> </triggerMode>
</IrLight >
```

3.37 /ISAPI/Image/channels/<ID>/imageCap

/ISAPI/Image/channels/ID/imageCap		General Resource v2.0
GET		
Description	It is used to get the list of image capabilities for the device.	
Query	None	
Inbound Data	NULL	

Success Return	ImageCap
Notes:	

ImageCap XML Block

```
<ImageCap version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
  <isSupportRegionalExposure> <!-- opt, xs:boolean--> </isSupportRegionalExposure>
  <isSupportRegionalFocus> <!--opt, xs:boolean--> </isSupportRegionalFocus>
</ImageCap>
```

3.38 /ISAPI/Image/channels/<ID>/regionalExposure

/ISAPI/Image/channels/ID/regionalExposure		General Resource	v2.0
PUT			
Description	It is used to configure the regional exposure parameters of specific channel.		
Query	None		
Inbound Data	RegionalExposure		
Success Return	ResponseStatus		
Notes:			

RegionalExposure XML Block

```
<RegionalExposure version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
  <StartPoint><!--0-1000-->
    <positionX> <!-- req, xs:integer --> </positionX>
    <positionY> <!-- req, xs:integer --> </positionY>
  </StartPoint>
  <EndPoint><!--0-1000-->
    <positionX> <!-- req, xs:integer --> </positionX>
    <positionY> <!-- req, xs:integer --> </positionY>
  </EndPoint>
</RegionalExposure>
```

3.39 /ISAPI/Image/channels/<ID>/regionalFocus

/ISAPI/Image/channels/ID/regionalFocus		General Resource	v2.0
PUT			
Description	Focus on specific region of one channel.		

Query	None
Inbound Data	RegionalFocus
Success Return	ResponseStatus
Notes:	

RegionalFocus XML Block

```
<RegionalFocus version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
  <StartPoint><!--0-1000-->
    <positionX><!-- req, xs:integer --> </positionX>
    <positionY><!-- req, xs:integer --> </positionY>
  </StartPoint>
  <EndPoint><!--0-1000-->
    <positionX><!-- req, xs:integer --> </positionX>
    <positionY><!-- req, xs:integer --> </positionY>
  </EndPoint>
</RegionalFocus>
```

3.40 /ISAPI/Image/channels/<ID>/mountingScenario

/ISAPI/Image/channels/<ID>/mountingScenario		General Resource	v2.0
GET			
Description	It is used to get mounting scenario mode of a camera.		
Query	None		
Inbound Data	None		
Success Return	MountingScenario		
PUT			
Description	It is used to set mounting scenario mode of a camera.		
Query	None		
Inbound Data	MountingScenario		
Success Return	ResponseStatus		
Notes:			
The image parameters should be obtained again when mounting scenario mode changes.			

MountingScenario XML Block

```
<MountingScenario version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode><!--req,xs:string,"indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"--></mode>
</MountingScenario>
```

3.41 /ISAPI/Image/channels/<ID>/mountingScenario/capabilities

/ISAPI/Image/channels/<ID>/mountingScenario/capabilities		General Resource	v2.0
GET			
Description	It is used to get Mounting Scenario capability.		
Query	None		
Inbound Data	None		
Success Return	<MountingScenario>		
Notes:			
indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4			

MountingScenario XML Block

```
<MountingScenario version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode
    opt="indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"><!--req,xs:
    string,--></mode>
</MountingScenario>
```

3.42 /ISAPI/Image/channels/<ID>/lensDistortionCorrection

/ISAPI/Image/channels/<ID>/lensDistortionCorrection		General Resource	v2.0
GET			
Description	It is used to get the LensDistortionCorrection configuration of a specified image channel.		
Query	None		
Inbound Data	None		
Success Return	LensDistortionCorrection		
PUT			
Description	It is used to get the LensDistortionCorrection configuration of a specified image channel.		
Query	None		
Inbound Data	LensDistortionCorrection		
Success Return	ResponseStatus		
Notes:			

corridor XML Block

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

3.43 /ISAPI/Image/channels/<ID>/displayParamSwitch

/ISAPI/Image/channels/<ID>/displayParamSwitch		General Resource	v2.0
GET			
Description	It is used to get the DisplayParamSwitch configuration of a specified image channel.		
Query	None		
Inbound Data	None		
Success Return	DisplayParamSwitch		
PUT			
Description	It is used to set the DisplayParamSwitch configuration of a specified image channel.		
Query	None		
Inbound Data	DisplayParamSwitch		
Success Return	ResponseStatus		
Notes:			

DisplayParamSwitch XML Block

```
<DisplayParamSwitch version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode><!--req, xs:string, "disable,linkPreset,timingSwitch"--></mode>
  <LinkPresetList> <!-- dep, depend linkPreset -->
    <LinkPreset>
      <id> <!-- req, xs:string; id --> </id>
      <presetID> <!-- req, xs:string;id --> </presetID>
      <linkEnabled> <!-- req, xs:boolean --> </linkEnabled>
      <PeriodList size="4"> <!-- req -->
        <Period>
          <id> <!-- req, xs:string; id --> </id>
          <enabled> <!-- req, xs:boolean --> </enabled>
          <TimeRange> <!-- req -->
            <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
            <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
          </TimeRange>
        </Period>
      </PeriodList>
    </LinkPreset>
  </LinkPresetList>
  <linkScene><!--req,xs:string,"indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,m
```

```

ode4"--></linkScene>
    </Period>
  </PeriodList>
</LinkPreset>
</LinkPresetList>
<TimingSwitch> <!-- dep, depend timingSwitch -->
  <PeriodList size="4"> <!-- req -->
    <Period>
      <id> <!-- req, xs:string; id --> </id>
      <enabled> <!-- req, xs:boolean --> </enabled>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>

      <linkScene><!--req,xs:string,"indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mod
e3,mode4"--></linkScene>
    </Period>
  </PeriodList>
</TimingSwitch>
</DisplayParamSwitch>

```

3.44 /ISAPI/Image/channels/<ID>/displayParamSwitch/capabilities

/ISAPI/Image/channels/<ID>/displayParamSwitch/capabilities		General Resource v2.0
es		
GET		
Description	It is used to get Display Parameter Switch capability.	
Query	None	
Inbound Data	None	
Success Return	<DisplayParamSwitch>	
Notes:		

DisplayParamSwitch XML Block

```

<DisplayParamSwitch version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode opt="disable,linkPreset,timingSwitch"><!--req, xs:string, --></mode>
  <LinkPresetList size="10"> <!-- dep, depend linkPreset Enabled -->
    <LinkPreset>
      <id> <!-- req, xs:string; id --> </id>

```

```

    <presetID min="1" max="10"> <!-- req, xs:string;id --> </presetID>
    <linkEnabled> <!-- req, xs:boolean --> </linkEnabled>
    <PeriodList size="4"> <!-- req -->
        <Period>
            <id> <!-- req, xs:string; id --> </id>
            <enabled> <!-- req, xs:boolean --> </enabled>
            <TimeRange> <!-- req -->
                <beginTime> <!-- req, xs:time, ISO8601 time -->
</beginTime>
                    <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
                </TimeRange>
            <linkScene
opt="indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"><!--req,xs:
string,--></linkScene>
        </Period>
    </PeriodList>
</LinkPreset>
</LinkPresetList>
<TimingSwitch> <!-- dep,depend timingSwitch Enabled-->
    <PeriodList size="4"> <!-- req -->
        <Period>
            <id> <!-- req, xs:string; id --> </id>
            <enabled> <!-- req, xs:boolean --> </enabled>
            <TimeRange> <!-- req -->
                <beginTime> <!-- req, xs:time, ISO8601 time -->
</beginTime>
                    <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
                </TimeRange>
            <linkScene
opt="indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"><!--req,xs:
string,--></linkScene>
        </Period>
    </PeriodList>
</TimingSwitch>
</DisplayParamSwitch>

```

3.45 /ISAPI/Image/channels/<ID>/supplementLight

/ISAPI/Image/channels/<ID>/supplementLight		General Resource v2.0
GET		
Description	It is used to get the SupplementLight's configuration of a	

	specified image channel.
Query	None
Inbound Data	None
Success Return	SupplementLight
PUT	
Description	It is used to configure the SupplementLight's configuration of a specified image channel.
Query	None
Inbound Data	SupplementLight
Success Return	ResponseStatus
Notes:	

SupplementLight XML Block

```
<SupplementLight version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode><!--opt,xs:string," schedule,off,on,auto"--></mode>
  <Schedule>
    <TimeRange><!-- req -->
      <beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
      <endTime><!-- req, xs:time, ISO8601 time --></endTime>
    </TimeRange>
  </Schedule>
  <brightnessLimit><!--dep,xs:integer,"0~100" --></brightnessLimit>
</SupplementLight>
```

3.46 /ISAPI/Image/channels/<ID>/capabilities

/ISAPI/Image/channels/<ID>		General Resource v2.0
GET		
Description	It is used to get a specific channel Image configuration.	
Query	None	
Inbound Data	None	
Success Return	ImageChannel	
PUT		
Description	It is used to update Image configuration for a specific channel.	
Query	None	
Inbound Data	ImageChannel	
Success Return	ResponseStatus	
Notes:		
/ISAPI/Image/channels/<ID>: front-end image parameters under Auto Mode		
/ISAPI/Image/channels/<ID>/day front-end image parameters under Day Mode		

ImageChannel XML Block

```
<ImageChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!-- req, xs:integer --></id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <videoInputID> <!-- req, xs:integer --> </videoInputID>
  <Focusconfiguration/> <!-- opt -->
  <LensInitialization/> <!-- opt -->
  <ImageFlip/> <!-- opt -->
  <ImageFreeze/> <!-- opt -->
  <proportionalpan/> <!-- opt -->
  <WDR/> <!-- opt -->
  <BLC/> <!-- opt -->
  <NoiseReduce/> <!-- opt -->
  <ImageEnhancement/> <!-- opt -->
  <DSS/> <!-- opt -->
  <WhiteBlance/> <!-- opt -->
  <Exposure/> <!-- opt -->
  <Sharpness/> <!-- opt -->
  <gammaCorrection/> <!-- opt -->
  <powerLineFrequency/> <!-- opt -->
  <Color/> <!-- opt -->
  <IrcutFilter/> <!-- opt -->
  <Scene/> <!-- opt -->
  <EPTZ/> <!-- opt -->
  <EIS/> <!-- opt -->
  <HLC/> <!-- opt -->
  <ZoomLimit/> <!-- opt -->
  <corridor/> <!-- opt -->
  <Dehaze/> <!-- opt -->
  <ImageMode/> <!--opt, xs:string, "standard, indoor, outdoor, dimLight" -->
  <enableImageLossDetection> <!-- opt, Boolean --> </enableImageLossDetection>
  <CaptureMode/> <!-- opt -->
  <IrLight/> <!-- opt -->
  <LensDistortionCorrection/> <!-- opt -->
  <SupplementLight/>
</ImageChannel>
```

3.47 /ISAPI/Image/channels/<ID>/shutter

GET	
Description	It is used to get the Shutter value of a specified image channel.
Query	None
Inbound Data	None
Success Return	Shutter
PUT	
Description	It is used to configure the Shutter value of a specified image channel.
Query	None
Inbound Data	Shutter
Success Return	ResponseStatus
Notes:	
PUT method is enabled only when <ExposureType> is ShutterFirst	

Shutter XML Block

```
<Shutter version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ShutterLevel> <!-- dep,depends on <ExposureType>, xs:string, "1/1, 1/2, 1/3, 1/6,
1/12, 1/25, 1/50, 1/75, 1/100, 1/120, 1/125, 1/150, 1/175, 1/215, 1/225, 1/300, 1/400, 1/425,
1/600, 1/1000, 1/1250, 1/1750, 1/2500, 1/3500, 1/6000, 1/10000," -->
<ShutterLevel></Shutter>
```

3.48 /ISAPI/Image/channels/<ID>/exposure

/ISAPI/Image/channels/<ID>/exposure		General Resource v2.0
GET		
Description	It is used to get the exposure mode of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	Exposure	
PUT		
Description	It is used to configure the exposure mode of a specified image channel.	
Query	None	
Inbound Data	Exposure	
Success Return	ResponseStatus	
Notes:		
/ISAPI/Image/channels/<ID>/exposure //stands for exposure parameters under Auto Mode		
/ISAPI/Image/channels/<ID>/exposure/day //stands for exposure parameters under Day Mode		

/ISAPI/Image/channels/<ID>/exposure/night //stands for exposure parameters under Night Mode

Exposure XML Block

```
<Exposure version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ExposureType/> <!--req, xs:string, "auto, IrisFirst, ShutterFirst, gainFirst, manual, plris,
T5280-PQ1,T5289-PQ1,T1140-PQ1,T2712-PQ1" -->
  <autoIrisLevel><!--dep,xs:integer> <autoIrisLevel>
  <OverexposeSuppress> <!--opt-->
    <enabled> <!--req, xs:boolean --> </enabled>
    <Type> <!--dep, depends on <enabled>, xs:string, "AUTO, MANUAL" --> </Type>
    <DistanceLevel> <!--dep, depends on <Type>, xs: integer --> </DistanceLevel>
    <shortIRDistanceLevel>
      <!--dep, depends on <Type>, xs: integer -->
    </shortIRDistanceLevel>
    <longIRDistanceLevel>
      <!--dep, depends on <Type>, xs: integer -->
    </longIRDistanceLevel>
  </OverexposeSuppress>
  <plris> <!--opt-->
    <plrisType/> <!--dep, depends on <ExposureType>, xs:string, "AUTO, MANUAL" -->
    <IrisLevel> <!--dep, depends on <plrisType>, xs:integer --> </IrisLevel>
  </plris>
</Exposure>
```

3.49 /ISAPI/Image/channels/<ID>/lensDistortionCorrection

/ISAPI/Image/channels/<ID>/lensDistortionCorrection		General Resource	v2.0
GET			
Description	It is used to get the LensDistortionCorrection configuration of a specified image channel.		
Query	None		
Inbound Data	None		
Success Return	LensDistortionCorrection		
PUT			
Description	It is used to get the LensDistortionCorrection configuration of a specified image channel.		
Query	None		
Inbound Data	LensDistortionCorrection		
Success Return	ResponseStatus		

Notes:

corridor XML Block

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

3.50 /ISAPI/Image/channels/<ID>/displayParamSwitch

h

/ISAPI/Image/channels/<ID>/displayParamSwitch		General Resource	v2.0
GET			
Description	获取前端参数切换配置参数信息		
Query	None		
Inbound Data	None		
Success Return	DisplayParamSwitch		
PUT			
Description	设置前端参数切换配置参数信息		
Query	None		
Inbound Data	DisplayParamSwitch		
Success Return	ResponseStatus		
Notes:			

DisplayParamSwitch XML Block

```
<DisplayParamSwitch version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode><!--req, xs:string, "disable,linkPreset,timingSwitch"--></mode>
  <LinkPresetList> <!-- dep, 依赖于 linkPreset 节点 -->
    <LinkPreset>
      <id> <!-- req, xs:string; id --> </id>
      <presetID> <!-- req, xs:string;id --> </presetID>
      <linkEnabled> <!-- req, xs:boolean --> </linkEnabled>
      <PeriodList size="4"> <!-- req -->
        <Period>
          <id> <!-- req, xs:string; id --> </id>
          <enabled> <!-- req, xs:boolean --> </enabled>
          <TimeRange> <!-- req -->
            <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
            <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
          </TimeRange>
        </Period>
      </PeriodList>
    </LinkPreset>
  </LinkPresetList>
</DisplayParamSwitch>
```

```

<linkScene><!--req,xs:string,"indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"--></linkScene>
    </Period>
</PeriodList>
</LinkPreset>
</LinkPresetList>
<TimingSwitch><!-- dep, 依赖于 timingSwitch 节点 -->
    <PeriodList size="4"><!-- req -->
        <Period>
            <id><!-- req, xs:string; id --></id>
            <enabled><!-- req, xs:boolean --></enabled>
            <TimeRange> <!-- req -->
                <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
                <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
            </TimeRange>

        <linkScene><!--req,xs:string,"indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"--></linkScene>
            </Period>
        </PeriodList>
    </TimingSwitch>
</DisplayParamSwitch>

```

3.51 /ISAPI/Image/channels/<ID>/displayParamSwitch/capabilities

/ISAPI/Image/channels/<ID>/displayParamSwitch/capabilities		General Resource	v2.0
GET			
Description	It is used to get Display Parameter Switch capability.		
Query	None		
Inbound Data	None		
Success Return	<DisplayParamSwitch>		
Notes:			

DisplayParamSwitch XML Block

```

<DisplayParamSwitch version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <mode opt="disable,linkPreset,timingSwitch"><!--req, xs:string, --></mode>
    <LinkPresetList size="10"><!-- dep, 依赖于linkPresetEnabled节点 -->

```

```

<LinkPreset>
  <id> <!-- req, xs:string; id --> </id>
  <presetID min="1" max="10"> <!-- req, xs:string;id --> </presetID>
  <linkEnabled> <!-- req, xs:boolean --> </linkEnabled>
  <PeriodList size="4"> <!-- req -->
    <Period>
      <id> <!-- req, xs:string; id --> </id>
      <enabled> <!-- req, xs:boolean --> </enabled>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->
</beginTime>
          <endTime>    <!-- req, xs:time, ISO8601 time --> </endTime>
        </TimeRange>
      <linkScene
opt="indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"><!--req,xs:
string,--></linkScene>
    </Period>
  </PeriodList>
</LinkPreset>
</LinkPresetList>
<TimingSwitch> <!-- dep, 依赖于 timingSwitchEnabled 节点 -->
  <PeriodList size="4"> <!-- req -->
    <Period>
      <id> <!-- req, xs:string; id --> </id>
      <enabled> <!-- req, xs:boolean --> </enabled>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->
</beginTime>
          <endTime>    <!-- req, xs:time, ISO8601 time --> </endTime>
        </TimeRange>
      <linkScene
opt="indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"><!--req,xs:
string,--></linkScene>
    </Period>
  </PeriodList>
</TimingSwitch>
</DisplayParamSwitch>

```

3.52 /ISAPI/Image/channels/<ID>/mountingScenario

/ISAPI/Image/channels/<ID>/mountingScenario		General Resource	v2.0
GET			
Description	It is used to get mounting scenario mode of a camera.		
Query	None		
Inbound Data	None		
Success Return	MountingScenario		
PUT			
Description	It is used to set mounting scenario mode of a camera.		
Query	None		
Inbound Data	MountingScenario		
Success Return	ResponseStatus		
Notes:			
The image parameters should be obtained again when mounting scenario mode changes.			
indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4			
室内、室外、白天、夜晚、清晨、傍晚、模式 1、模式 2、模式 3、模式 4			

MountingScenario XML Block

```
<MountingScenario version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode><!--req,xs:string,"indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"--></mode>
</MountingScenario>
```

3.53 /ISAPI/Image/channels/<ID>/mountingScenario/capabilities

/ISAPI/Image/channels/<ID>/mountingScenario/capabilities		General Resource	v2.0
GET			
Description	It is used to get Mounting Scenario capability.		
Query	None		
Inbound Data	None		
Success Return	<MountingScenario>		
Notes:			
indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4			
室内、室外、白天、夜晚、清晨、傍晚、模式1、模式2、模式3、模式4			

MountingScenario XML Block

```
<MountingScenario version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">  
  <mode  
    opt="indoor,outdoor,day,night,morning,nightfall,mode1,mode2,mode3,mode4"><!--req,xs:  
    string,--></mode>  
</MountingScenario>
```