IP Surveillance API
Image Service Specification

Version 2.0

Revision 1

2013-12

HIKVISION

http://www.hikvision.com/

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Contents

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:

1. **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>
```

2. **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 -->
</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:intger -->   </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” -->
</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 noice between ervery adjacent two frames. 3D nosie-reduce depend on FrameNoiseReduceLevel and InterFrameNoiseReduceLevel, FrameNoiseReduceLevel affects noise-reduce between frams, 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>/nosiseReduce //stands for noiseReduce parameters under Auto Mode
/ISAPI/Image/channels/<ID>/nosiseReduce/day //stands for noiseReduce parameters under Day Mode
/ISAPI/Image/channels/<ID>/nosiseReduce/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,"*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 iImage channel.
Query	None
Inbound Data	None
Success Return	**WhiteBalance**
PUT	
Description	It is used to configure the WhiteBalance value of a specified iImage 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 <WhiteBlanceStyle>,xs:integer, -->
  <WhiteBalanceBlue/>  <!--dep, depends on <WhiteBlanceStyle>,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, pIris"
-->
  <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>
  </OverexposeSuppress>
```

```
  <pIris>   <!—opt-->
     <pIrisType/> <!—dep, depends on <ExposureType>, xs:string, “AUTO, MANUAL” -->
     <IrisLevel> <!--dep, depends on <pIrisType>, xs:integer --> </IrisLevel>
  <pIris>
</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, 1/150, 1/215, 1/300, 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" mlns="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.isapi.org/ver20/XMLSchema">
    <enabled>   <!-- req, xs:boolean -->   </enabled>
</ 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 >
```