



LevelOne IPCAM HTTP API

Preface

This document details the LevelOne IPCAM HTTP API (Application Programming Interface) which enables applications to access and/or configure the IP Cameras manufactured by LevelOne over a TCP/IP capable network. Programmers who wish to write their own utility should follow the API specifications in this document.

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Overview

The IPCAM HTTP API is the proprietary network control protocol designed by LevelOne Technology to enable applications to access IP Cameras manufactured by LevelOne. The API allows for configuration of the settings and inquiry of current status on these IP Cameras. The API is structured and transmitted over HTTP protocols and hence it is given the name HTTP API.

The complete API is divided into several categories for ease of management. This manual contains one chapter for each API category to provide users with a full understanding of that API subset.

1. HTTP API Transaction

An HTTP API transaction begins with a request from a client application, usually a web browser. The request is received by the web server on the IP Camera device and processed by the IP Camera. Finally, it ends with a response which is sent back to the requesting client.

 **Note:** In URL syntax and in descriptions of CGI arguments, text in italics within angle brackets denotes content that should be replaced with either a value or a string. When replacing the text string, the angle brackets must also be replaced. Text within square brackets denotes content that can be omitted.

The client HTTP request is taken in two forms:

- HTTP GET: Normally used to retrieve the settings or status of the IP Camera
- HTTP POST: Normally used to configure the settings of the IP Camera

If the request is successfully received by the IP Camera, the response will contain a HTTP header with a 200 OK response code and the HTTP body with the actual response data or other value when error occurs. An example is provided for each request type below:

Illustration 1: Getting the network setting from the IP Camera

Client request

```
GET http://<IP Camera address>/network.cgi HTTP/1.0  
...
```

Server response

```
HTTP/1.0 200 OK  
Content-Type: text/plain  
  
IPAddress=192.168.1.1  
SubnetMask=255.255.255.0  
...
```

Illustration 2, Set the network setting from the IP Camera

Client request

```
POST http://<IP Camera address>/network.cgi HTTP/1.0
```

```
IPAddress=192.168.1.1
```

```
SubnetMask=255.255.255.0
```

Server response

```
HTTP/1.0 200 OK
```

```
...
```

Error Response

The IP Camera may be unable to handle the client HTTP API request due to certain conditions such as system busy, incorrect parameters, or any other reasons. An appropriate HTTP status code **400 Bad Request** will be returned, accompanied with an error code and an error string to explain the failure.

Client request

```
GET/POST ...
```

Server response

```
HTTP/1.0 200 OK
```

```
...
```

```
ErrorCode=XXX
```

```
ErrorString=Invalid IP Address
```

2. API Categories

The API categories are listed in the table below.

Table 1, API Categories

API Category	Description
Streaming	Enables users to view/configure the setting of multimedia streaming
Camera	Enables users to view/configure the camera/lens settings
Audio	Enables user to view/configure the audio devices settings
Network	Enables users to view/configure the network settings
Event	Enables users to register to receive notifications from IPCAM
Storage	Enables users to configure storage device for storing media content
System	Enables users to view/configure miscellaneous system settings
Admin	Enables users to perform administrative tasks over the IP Camera.
Capability	Provides users with the list of available features supported by the IP Camera
Motion detection	Enables users to view/configure the motion detection settings and add/delete/update detection region
Event	Enables users to view/configure the event setting and the notification setting
I/O control	Enables users to control I/O status

 Note: **Fields marked in gray are reserved.**

3. Streaming

Streaming API allows applications to

- 1) View/configure the IP Camera streaming settings
- 2) Help users view video streaming

3.1 GetChannels

ActionEvent: getChannels

URL Syntax	http://<IP>/cgi-bin/channels.cgi?action=get
Response	<pre> size = CH1.enabled= CH1.name= CH1.transportType= CH1.video.enabled= CH1.video.format.sourceDevice= CH1.video.format.codecType= CH1.video.format.constantBitrate= CH1.video.format.bitrateInKbps= CH1.video.format.resolutionWidth= CH1.video.format.resolutionHeight= CH1.video.format.frameRate= CH1.video.format.frameRate2= CH1.video.format.gop= CH1.video.format.quality= CH1.video.transport.multicastEnabled= CH1.video.transport.multicastAddress= CH1.video.transport.multicastPort= CH1.video.transport.ttl= CH1.audio.enabled= CH1.audio.format.codecType= CH1.audio.format.codecSubType= CH1.audio.transport.multicastEnabled= CH1.audio.transport.multicastAddress= CH1.audio.transport.multicastPort= CH1.audio.transport.ttl= CH1.meta.enabled= CH1.meta.format.mdAlarmEnabled= CH1.meta.transport.multicastEnabled= CH1.meta.transport.multicastAddress= CH1.meta.transport.multicastPort= CH1.meta.transport.ttl= </pre>
Comment	
HTTP Method	GET

3.2 UpdateChannels

ActionEvent: updateChannels

URL Syntax	http://<IP>/cgi-bin/channels.cgi
HTML Body	action=updateAll [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
c1Enable	[0,1]	0:disabled 1:enabled
c1Name	<String> (15)	
c1TransportType	[0-4]	0:RTSP_RTP 1:RTP_ONLY 2:HTTP 3:MSN 4:ANALYTICS
c1VideoEnabled	[0,1]	0:disabled 1:enabled
c1VideoFormatCodecType	[H264, MPEG4, MJPEG, Analytics]	Depends on Capability .
c1VideoFormatConstantBitrate	[0,1]	When constantBitrate =0, only quality can be set; constantBitrate = 1, bitrateInKbps can be set. VBR=0 CBR=1
c1VideoFormatBitrateInKbps	[64,128,256,384,512,768,1000,1500,2000,4000,6000,8000,10000,12000]	Kbps
c1VideoFormatResolutionWidth		1280x800,640x400,320x192 Based on Capability .
c1VideoFormatResolutionHeight		1280x800,640x400,320x192 Based on Capability .
c1VideoFormatFrameRate	[1-30]	HZ depends on the limit of hardware
c1VideoFormatGop	[0-30]	0(default) : 1 I-frame/second, N : 1 I-frame in N frames
c1VideoFormatQuality	[1-100]	
c1VideoTransportMulticast Enabled	[0,1]	
c1VideoTransportMulticast Address	232.0.1.0-232.255.255.255	RFC4607

c1VideoTransportMulticastPort	[1025-65534]	
c1VideoTransportTtl	[1-255]	
c1AudioEnabled	[0,1]	
c1AudioFormatCodecType	G711,AMR-NB	
c1AudioFormatCodecSubType	PCMU,AMR-MR122	G711=>PCMU AMR-NB =>AMR-MR122
c1AudioTransportMulticast Enabled	[0,1]	
c1AudioTransportMulticast Address	232.0.1.0-232.255.255.255	RFC4607
c1AudioTransportMulticastPort	[1025-65534]	
c1AudioTransportTtl	[1-255]	
c1MetaEnabled	[0,1]	
c1MetaFormatMdAlarm Enabled	[0,1]	
c1MetaTransportMulticast Enabled	[0,1]	
c1MetaTransportMulticast Address	232.0.1.0-232.255.255.255	RFC4607
c1MetaTransportMulticastPort	[1025-65534]	
c1MetaTransportTtl	[1-255]	
c2Enable	[0,1]	
c2Name	<String>	
c2TransportType	[0-4]	0:RTSP_RTP 1:RTP_ONLY 2:HTTP 3:MSN 4:ANALYTICS
c2VideoEnabled	[0,1]	
c2VideoFormatCodecType	H264, MPEG4, MJPEG,MIMIC, Analytics	Depends on Capability.
c2VideoFormatConstantBitrate	[0,1]	When constantBitrate =0, only quality can be set; constantBitrate = 1, bitrateInKbps can be set. VBR=0 CBR=1
c2VideoFormatBitrateInKbps	[64,128,256,384,512, 768,1000,1500,2000, 4000,6000,8000,10000, 12000]	Kbps
c2VideoFormatResolutionWidth		1280x800,640x400,320x192 Based on Capability.
c2VideoFormatResolution Height		1280x800,640x400,320x192 Based on Capability.
c2VideoFormatFrameRate	[1-30]	HZ depends on the limit of hardware
c2VideoFormatGop	[0-N]	0(default) : 1 I-frame/second,

		N : 1 I-frame in N frames
c2VideoFormatQuality	[1-100]	int
c2VideoTransportMulticast Enabled	[0, 1]	
c2VideoTransportMulticast Address	232.0.1.0-232.255.255.255	RFC4607
c2VideoTransportMulticastPort	[1025-65534]	
c2VideoTransportTtl	[1-255]	
c2AudioEnabled	[0,1]	
c2AudioFormatCodecType	G711,AMR-NB	
c2AudioFormatCodecSubType	PCMU,AMR-MR122	G711=>PCMU AMR-NB =>AMR-MR122
c2AudioTransportMulticast Enabled	[0,1]	
c2AudioTransportMulticast Address	232.0.1.0-232.255.255.255	RFC4607
c2AudioTransportMulticastPort	[1025-65534]	
c2AudioTransportTtl	[1-255]	
c2MetaEnabled	[0,1]	
c2MetaFormatMdAlarmEnabled	[0,1]	
c2MetaTransportMulticast Enabled	[0,1]	
c2MetaTransportMulticast Address	232.0.1.0-232.255.255.255	RFC4607
c2MetaTransportMulticastPort	[1025-65534]	
c2MetaTransportTtl	[1-255]	

Example:

Two profiles:

1. If you set stream1 and stream2 audio, you can do:

A. GetChannels:

URL: <http://192.168.1.1/cgi-bin/channels.cgi?action=get>

HTTP/1.1 200 Ok

Server: mini_httpd

Cache-Control: no-cache

Pragma: no-cache

Expires: 0

Content-Type: text/html

Connection: close

size = 2

CH1.enabled=1

CH1.name=MJPEG

CH1.transportType=0
CH1.video.enabled=1
CH1.video.format.sourceDevice=0
CH1.video.format.codecType=H264
CH1.video.format.constantBitrate=0
CH1.video.format.bitrateInKbps=1500
CH1.video.format.resolutionWidth=1280
CH1.video.format.resolutionHeight=800
CH1.video.format.frameRate=25
CH1.video.format.frameRate2=20
CH1.video.format.gop=3
CH1.video.format.quality=30
CH1.video.transport.multicastEnabled=0
CH1.video.transport.multicastAddress=234.1.2.3
CH1.video.transport.multicastPort=10004
CH1.video.transport.ttl=10
CH1.audio.enabled=1
CH1.audio.format.codecType=AMR
CH1.audio.format.codecSubType=AMR-MR122
CH1.audio.transport.multicastEnabled=0
CH1.audio.transport.multicastAddress=
CH1.audio.transport.multicastPort=10002
CH1.audio.transport.ttl=10
CH1.meta.enabled=1
CH1.meta.format.mdAlarmEnabled=0
CH1.meta.transport.multicastEnabled=0
CH1.meta.transport.multicastAddress=234.1.2.3
CH1.meta.transport.multicastPort=10004
CH1.meta.transport.ttl=10

CH2.enabled=1
CH2.name=MJPEG
CH2.transportType=2
CH2.video.enabled=1
CH2.video.format.sourceDevice=0
CH2.video.format.codecType=MJPEG
CH2.video.format.constantBitrate=0

CH2.video.format.bitrateInKbps=64
CH2.video.format.resolutionWidth=1280
CH2.video.format.resolutionHeight=800
CH2.video.format.frameRate=25
CH2.video.format.frameRate2=20
CH2.video.format.gop=0
CH2.video.format.quality=30
CH2.video.transport.multicastEnabled=0
CH2.video.transport.multicastAddress=234.1.2.3
CH2.video.transport.multicastPort=20000
CH2.video.transport.ttl=10
CH2.audio.enabled=1
CH2.audio.format.codecType=G711
CH2.audio.format.codecSubType=PCMU
CH2.audio.transport.multicastEnabled=0
CH2.audio.transport.multicastAddress=
CH2.audio.transport.multicastPort=20002
CH2.audio.transport.ttl=10
CH2.meta.enabled=1
CH2.meta.format.mdAlarmEnabled=0
CH2.meta.transport.multicastEnabled=0
CH2.meta.transport.multicastAddress=234.1.2.3
CH2.meta.transport.multicastPort=20004
CH2.meta.transport.ttl=10

B. You can set:

URL: <http://192.168.1.1/cgi-bin/channels.cgi>

HTML body: action=[updateAll](#)&

c1AudioFormatCodecType=AMR&c1AudioFormatCodecSubType=AMR-MR122&

c2AudioFormatCodecType=G711&c2AudioFormatCodecSubType=PCMU

3.3 GetStream

ActionEvent: [getStream](#)

URL Syntax	For RTSP: <a href="rtsp://<IP>/channel<index>">rtsp://<IP>/channel<index>
------------	---

	For RTSP over HTTP: <a href="rtsp://<IP>/stream/bidirect/channel<index>">rtsp://<IP>/stream/bidirect/channel<index> For MJPEG over HTTP: <a href="http://<IP>/channel<index>">http://<IP>/channel<index>
Response	
Comment	<Index> is the index number of the SChannelSetting. For example:rtsp://192.168.1.100/channel1
HTTP Method	

3.4 SetRtsp

ActionEvent: setRtsp

URL Syntax	http://<IP>/cgi-bin/rtsp.cgi
HTML Body	action=set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
port	554, [1025-65534]	0:disabled 1:enabled
authentication	[0,1,2]	0: NONE 1: BASIC 2: DIGEST
rtcp	[0,1]	0:Without SR 1:With SR

3.5 GetRtsp

ActionEvent: getRtsp

URL Syntax	http://<IP>/cgi-bin/rtsp.cgi?action=get
Response	rtsp.port=554 rtsp.authentication= rtsp.rtcp=
Comment	
HTTP Method	GET

3.6 SetAdvanceMedia

ActionEvent: setAdvanceMedia

URL Syntax	http://<IP>/cgi-bin/advanceMedia.cgi
HTML Body	action=set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
h264_vui	[0,1]	0:disabled 1:enabled
h264_sps_pps	[0,1]	0:disabled 1:enabled

3.7 GetAdvanceMedia

ActionEvent: getAdvanceMedia

URL Syntax	http://<IP>/cgi-bin/advanceMedia.cgi?action=get
Response	h264_sps_pps= h264_vui=
Comment	
HTTP Method	GET

3.8 GetinboundChannel

ActionEvent: getinboundChannel

URL Syntax	http://<IP>/cgi-bin/inboundChannel.cgi?action=get
Response	ch1.transportType=1 ch1.port=12345 ch1.codec=PCMA
Comment	
HTTP Method	GET

3.9 SetVideoRecord

ActionEvent: setVideoRecord

URL Syntax	http://<IP>/cgi-bin/videoRecord.cgi
HEML Body	action=set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	Users can enable or disable the offline recording and configure the related parameters. Offline recording records the video feed to an SD or Micro SD card when the camera detects the disconnected physical or network layer for more than a specific duration of <i>physicalTime</i> or <i>networkTime</i> . If circulateEnabled is enabled, the camera will automatically overwrite the recorded files when a specific amount of free space is left on the SD or Micro SD card.
HTTP Method	POST

Argument	Valid values	Description
circulateEnabled	[0,1]	0:disabled 1:enabled
offlineRecordEnabled	[0,1]	0:disabled 1:enabled
physicalTime		Default: 10 seconds.
networkTime		Default: 30 seconds.
storageType		Default: 0
encrypted	[0,1]	encrypted=1 , default=0
encryptType		Default:0
password	<String> (65)	

3.10GetVideoRecord

ActionEvent: getVideoRecord

URL Syntax	http://<IP>/cgi-bin/videoRecord.cgi?action=get
Response	circulateEnabled= offlineRecordEnabled= physicalTime= networkTime= storageType=
Comment	
HTTP Method	GET

3.11 InboundAudio

ActionEvent: inboundAudio

URL Syntax	<p><u>http://<IP>:<port>/cgi-bin/instream.cgi</u></p> <p>//// ----- HTTP headers -----</p> <p>Content-Type: audio/basic (indicate uLaw is used for audio compression)</p> <p>Cache-Control: no-cache (prevent caching at HTTP proxy server)</p> <p>Content-Length: 10000000 (indicate the length of the audio session)</p> <p>[Other headers...]</p> <p>//// ----- HTTP body -----</p> <p>[uLaw audio frame]</p> <p>[uLaw audio frame]</p> <p>[uLaw audio frame]</p> <p>[uLaw audio frame]</p> <p>[uLaw audio frame]</p> <p>[uLaw audio frame]</p> <p>...</p>
Response	N/A
Comment	Allow users to talk through an IP camera
HTTP Method	POST

3.12 GetSnapshot

ActionEvent: getSnapshot

URL Syntax	<u>http://<IP>/cgi-bin/media.cgi?action=getSnapshot[&channel=n]</u>
Response	<p>HTTP/1.1 200 OK</p> <p>.Content-Type: image/jpeg</p> <p>.Content-Length: 65542</p> <p>.Content-Disposition: attachment; filename="snapshot20090101_003801.jpg"</p> <p>.Connection: close</p> <p>.....JFIF.....C.</p> <p>.</p> <p>.</p> <p>.</p> <p>.</p> <p>.....</p>

Comment	channel=1~n, depends on hardware setting.
HTTP Method	GET

3.13 SetMonitorOutput

ActionEvent: setMonitorOutput

URL Syntax	http://<IP>/cgi-bin/monitorOutput.cgi
HEML Body	action=set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disabled 1:enabled
standard	<String> (32)	NTSC, PAL (Depends on the limit of hardware)

3.14 GetMonitorOutput

ActionEvent: getMonitorOutput

URL Syntax	http://<IP>/cgi-bin/monitorOutput.cgi?action=get
Response	MonitorOutput.enabled=. MonitorOutput.standard=
Comment	
HTTP Method	GET

4. Camera

Camera API allows applications to view/configure the Camera/lens setting.

6.1 SetCameraSetting

ActionEvent: setCameraSetting

URL Syntax	http://<IP>/cgi-bin/camera.cgi
HTML Body	action= setCameraSetting [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
brightness.level	[-5 - 5]	Depends on the limit of hardware
colorSaturation.level	[-5 - 5]	Depends on the limit of hardware
sharpness.level	[-5 - 5]	Depends on the limit of hardware
contrast.level	[-5 - 5]	Depends on the limit of hardware
flipEnabled	[0,1]	0:disabled 1:enabled
mirrorEnabled	[0,1]	0:disabled 1:enabled
freq	[0,1]	0, FREQ_60HZ 1, FREQ_50HZ
effectMode	[0,1]	0: Auto 1: Manual
colorMode	[0,1]	0: Color 1: Black&White
envMode	[0,1]	0: OUTDOOR 1: INDOOR
IRCutFilter.mode	[0,1,2]	0: OFF 1: ON 2: AUTO
IRLED.mode	[0,1,2]	0: OFF 1: ON 2: AUTO
Exp.mode	[0,1,2,4]	0:Sport

		1: Normal 2: Night Vision 3: AE_LOCK, // Reserve 4: User Defined
Exp.AGC.enabled	[0,1]	Exp.mode is User Defined: When Exp.AELockEnabled =0, AGC ` shutterSpeed can be set; Exp.AELockEnabled =1, disabled AGC ` shutterSpeed function. 0:disabled 1:enabled
Exp.AGC.level	[0-4]	Exp.mode is User Defined: When Exp.AELockEnabled =0, AGC ` shutterSpeed can be set; Exp.AELockEnabled =1, disabled AGC ` shutterSpeed function. depends on the limit of hardware
Exp.shutterSpeed.enabled	[0,1]	Exp.mode is User Defined: When Exp.AELockEnabled =0, AGC ` shutterSpeed can be set; Exp.AELockEnabled =1, disabled AGC ` shutterSpeed function. 0:disabled 1:enabled
Exp.shutterSpeed.level	[-2 - 4]	Exp.mode is User Defined: When Exp.AELockEnabled =0, AGC ` shutterSpeed can be set; Exp.AELockEnabled =1, disabled AGC ` shutterSpeed function. depends on the limit of hardware
Exp.AELockEnabled	[0,1]	Exp.mode is User Defined: When Exp.AELockEnabled =0, AGC ` shutterSpeed can be set; Exp.AELockEnabled =1, disabled AGC ` shutterSpeed function. 0:disabled 1:enabled

autolris.enabled	[0,1]	0:disabled 1:enabled
videoOverlay.useTimestamp	[0,1]	0:disabled 1:enabled
videoOverlay.useText	[0,1]	0:disabled 1:enabled
videoOverlay.displayString	<string> (25)	Allows [A-Z][0-9][=,-.:] and space
videoOverlay.osdWindow1.XPos	0	Text 0:Left
videoOverlay.osdWindow1.YPos	[0,1]	Text 0: Top 1: Bottom
videoOverlay.osdWindow1.transparent	[0,1,2,3]	0:0% 1:50% 2:75% 3:100%
videoOverlay.osdWindow2.XPos	0	Timestamp 0:Left
videoOverlay.osdWindow2.YPos	[0,1]	Timestamp 0: Top 1: Bottom
videoOverlay.osdWindow2.transparent	[0,3]	0:0% 1:50% 2:75% 3:100%
videoOverlay.osdPalette1.y	[0-255]	
videoOverlay.osdPalette1.Cb	[0-255]	
videoOverlay.osdPalette1.Cr	[0-255]	
videoOverlay.osdPalette2.y	[0-255]	
videoOverlay.osdPalette2.Cb	[0-255]	
videoOverlay.osdPalette2.Cr	[0-255]	
privacy.enabled	[0,1]	Depends on model name
privacy.privacyButtonEnabled	[0,1]	Depends on model name
lightSensor.thresholdLevel	[0-255]	Depends on model name
deNoise.level	[0,1,2,3]	0: auto 1: lowest 2 3: highest

6.2 GetCameraSetting

ActionEvent: getCameraSetting

URL Syntax	http://<IP>/cgi-bin/camera.cgi?action= getCameraSetting
Response	whiteBalance.mode=1 brightness.level=0

	colorSaturation.level=3 flipEnabled=0 mirrorEnabled=0 sharpness.level=0 contrast.level=1 freq=0 envMode=0 effectMode=1 colorMode=0 lightSensor.thresholdLevel=10 lightSensor.currentLevel=0 lightSensor.bufferLevel=30 mode=1 autoIris.enabled=0 videoOverlay.useTimestamp=0 videoOverlay.displayString= videoOverlay.useText=0 videoOverlay.osdPalette1.y=255 videoOverlay.osdPalette1.Cb=128 videoOverlay.osdPalette1.Cr=128 videoOverlay.osdPalette2.y=16 videoOverlay.osdPalette2.Cb=128 videoOverlay.osdPalette2.Cr=128 videoOverlay.osdWindow1.XPos=0 videoOverlay.osdWindow1.YPos=0 videoOverlay.osdWindow1.transparent=0 videoOverlay.osdWindow2.XPos=0 videoOverlay.osdWindow2.YPos=0 videoOverlay.osdWindow2.transparent=0 privacy.enabled=0 privacy.FullScreenEnabled=0 privacy.PrivacyButtonEnabled=1 privacy.PriWindow1.enabled=0 privacy.PriWindow1.x1=0 privacy.PriWindow1.y1=0 privacy.PriWindow1.x2=0 privacy.PriWindow1.y2=0 privacy.PriWindow2.enabled=0 privacy.PriWindow2.x1=0 privacy.PriWindow2.y1=0 privacy.PriWindow2.x2=0 privacy.PriWindow2.y2=0 deNoise.level=0 meteringMode.mode=1
Comment	
HTTP Method	GET

6.3 UpdateProfile

ActionEvent: UpdateProfile

URL Syntax	http://<IP>/cgi-bin/camera.cgi
HTML Body	action= UpdateProfile &apply=<0,1> [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
apply	[0,1]	0:test mode 1:apply mode
index		depends on GUI index
name	<string> (32)	
whiteBalance	[0-10]	
brightness	[-5 - 5]	Depends on the limit of hardware
colorSaturation	[-5 - 5]	Depends on the limit of hardware
contrast	[-5 - 5]	Depends on the limit of hardware
sharpness	[-5 - 5]	Depends on the limit of hardware
frequency	[0,1]	0, FREQ_60HZ 1, FREQ_50HZ
envMode	[0,1]	0: OUTDOOR 1: INDOOR
effectMode	[0,1]	0: Auto 1: Manual
colorMode	[0,1]	0: Color 1: Black&White
mirror	[0,1]	
flip	[0,1]	
deNoise	[0,1,2,3]	0: auto 1: acceptable 2 3: best
IrCutFilter	[0,1,2]	0: OFF 1: ON 2: AUTO
IrLED	[0,1,2]	0: OFF 1: ON 2: AUTO
exposure	[0,1,2,4]	0: Sport 1: Normal 2: Night Vision

		3: AE_LOCK, // Reserve 4: User Defined
--	--	---

6.4 GetLightSensor

ActionEvent: getLightSensor

URL Syntax	http://<IP>/cgi-bin/lightsensor.cgi?action= getCurrValue
Response	CurrentValue=
Comment	
HTTP Method	POST

5. Audio

Audio API allows applications to

- 1) View/adjust the audio device settings
- 2) Adjust the volume of the audio device

7.1 SetAudioDevice

ActionEvent: setAudioDevice

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML Body	action= setAudioDevice [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
muted	[0,1]	0: (un-muted) 1: (muted)
level	[1-100]	Speaker volume
mediaType	0	0,Full 1, Half duplex (Reserved)
voiceSource	[0,1]	0, MIC 1, Line in
echo	[0,1]	0:disabled 1:enabled
gain	[-97-0]	0 ~ -97 dbm is less than +29 dbm

7.2 GetAudioDevice

ActionEvent: getAudioDevice

URL Syntax	http://<IP>/cgi-bin/audio.cgi?action= getAudioDevice
Response	muted = level = mediaType= voiceSource = echo= gain=
Comment	
HTTP Method	GET

7.3 SetAudioMuteState

ActionEvent: setAudioMuteState

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML BODY	action= setAudioMuteState [&<argument>=<value>]
Response	
Comment	The device will play the audio recording
HTTP Method	POST

Argument	Valid values	Description
muted	[0,1]	0: (un-muted) 1: (muted)

7.4 GetAudioMuteState

ActionEvent: getAudioMuteState

URL Syntax	http://<IP>/cgi-bin/audio.cgi?action= getAudioMuteState
Response	muted=
Comment	
HTTP Method	GET

7.5 SetAudioVolume

ActionEvent: setAudioVolume

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML BODY	action= setAudioVolume [&<argument>=<value>]
Response	
Comment	The device will play the audio recording
HTTP Method	POST

Argument	Valid values	Description
level	[1-100]	Speaker volume

7.6 GetAudioVolume

ActionEvent: getAudioVolume

URL Syntax	http://<IP>/cgi-bin/audio.cgi?action= getAudioVolume
-------------------	---

Response	level=
Comment	
HTTP Method	GET

7.7 SetAudioDetection

ActionEvent: setAudioDetection

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML BODY	action= setAudioDetection [&<argument>=<value>]
Response	
Comment	The device will play the audio recording
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disabled 1:enabled
sensitivity	[1-10]	Sensitivity

7.8 GetAudioDetection

ActionEvent: getAudioDetection

URL Syntax	http://<IP>/cgi-bin/audio.cgi?action= getAudioDetection
Response	enabled= sensitivity=
Comment	
HTTP Method	GET

7.9 Playaudio

ActionEvent: play

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML BODY	action=play [&<argument>=<value>]
Response	
Comment	The device will play the audio recording
HTTP Method	POST

Argument	Valid values	Description
name	<String>	

7.10 Stopaudio

ActionEvent: stopaudio

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML Body	action= stopaudio [&<argument>=<value>]
Response	
Comment	The device will stop playing the audio recording
HTTP Method	POST

Argument	Valid values	Description
name	<String>	

7.11 Recordaudio

ActionEvent: record

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML Body	action= record [<argument>=<value>]
Response	
Comment	The device will start recording audio
HTTP Method	POST

Argument	Valid values	Description
name	<String> (10)	

7.12 Stoprecordaudio

ActionEvent: stoprecord

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML Body	action= stoprecord [&<argument>=<value>]
Response	
Comment	The device will stop recording audio
HTTP Method	POST

7.13 GetFilestatus

ActionEvent: getFilestatus

URL Syntax	http://<IP>/cgi-bin/audio.cgi?action= getFilestatus
Response	size= audiofile1.name= audiofile1.size= audiofile1.time= audiofile1.codecType= audiofile2.name= audiofile2.size= audiofile2.time= audiofile2.codecType=
Comment	
HTTP Method	GET

7.14 RemoveAudioFile

ActionEvent: remove

URL Syntax	http://<IP>/cgi-bin/audio.cgi
HTML Body	action= remove [&<argument>=<value>]
Response	
Comment	The device will remove file
HTTP Method	POST

Argument	Valid values	Description
name	<String>	

7.15 GetAudioSensitivity

ActionEvent: getSensitivity

URL Syntax	http://<IP>/cgi-bin/audiometer.cgi
HTML Body	action= getSensitivity
Response	sensitivity=
Comment	
HTTP Method	POST

6. Network

Network API allows applications to view/adjust the network-related settings, including IP address, WIFI network, etc.

8.1 SetBasicNetwork

ActionEvent: setBasicNetwork

URL Syntax	http://<IP>/cgi-bin/basicNetwork.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
addressType	[0,1,2,3]	0: Static IP 1: DHCP 2: PPPoE 3: 3G
ipv4Address		addressType=0 1~223 . 0~255 . 0~255 . 1~254 reject: 127.0.0.1
subnetMask		addressType=0 1~255 . 0~255 . 0~255 . 0~254
ipv4Address2nd		
subnetMask2nd		
enabledIP2nd		
gatewayAddress		addressType=0 1~223 . 0~255 . 0~255 . 1~254 reject: 127.0.0.1
dnsAddress1		addressType=0 1~223 . 0~255 . 0~255 . 1~254 reject: 127.0.0.1
dnsAddress2		addressType=0 1~223 . 0~255 . 0~255 . 1~254 reject: 127.0.0.1
pppoe.username	<String> (127)	addressType=2
pppoe.password	<String> (127)	addressType=2

8.2 GetBasicNetwork

ActionEvent: getBasicNetwork

URL Syntax	http://<IP>/cgi-bin/basicNetwork.cgi?action= get
Response	addressType= (0=Static IP,1=DHCP, 2=PPPoE, 3=3G) ipv4Address= subnetMask= ipv4Address2nd= subnetMask2nd= enabledIP2nd= gatewayAddress= dnsAddress1= dnsAddress2= pppoe.username= pppoe.password=
Comment	
HTTP Method	GET

8.3 Set3GNetwork

ActionEvent: setBasicNetwork

URL Syntax	http://<IP>/cgi-bin/threeGNetwork.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	Depends on hardware.
HTTP Method	POST

Argument	Valid values	Description
hspa.enabled	[0,1]	0:disabled 1:enabled
hspa.apn	<String> (31)	
hspa.dialnum	<String> (19)	
hspa.pincode	<String> (4)	PIN Personal Identification Number, 4 digit code used to protect the SIM
hspa.pukcode	<String> (8)	PUK Unblocking Key, 8 digit code used to unblock SIM PIN
hspa.username	<String> (127)	
hspa.password	<String> (127)	

8.4 Get3GNetwork

ActionEvent: getBasicNetwork

URL Syntax	http://<IP>/cgi-bin/threeGNetwork.cgi?action= get
Response	addressType= (0=Static IP,1=DHCP, 2=PPPoE, 3=3G) ipv4Address= subnetMask= ipv4Address2nd= subnetMask2nd= enabledIP2nd= gatewayAddress= dnsAddress1= dnsAddress2= pppoe.username= pppoe.password= hspa.apn= hspa.dialnum= hspa.pincode= hspa.username= hspa.password=
Comment	Depends on hardware.
HTTP Method	GET

8.5 SetUPnP

ActionEvent: setUPnP

URL Syntax	http://<IP>/cgi-bin/upnp.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disabled 1:enabled
name	<String> (127)	

8.6 GetUPnP

ActionEvent: getUPnP

URL Syntax	http://<IP>/cgi-bin/upnp.cgi?action= get
Response	enabled= name=

Comment	
HTTP Method	GET

8.7 SetDDNS

ActionEvent: setDDNS

URL Syntax	http://<IP>/cgi-bin/ddns.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
dyndnsEnabled	[0,1]	0:disabled 1:enabled
dyndns.wildcardEnabled	[0,1]	0:disabled 1:enabled
dyndns.username	<String> (127)	
dyndns.password	<String> (127)	
dyndns.hostname	<String> (127)	
tzodnsEnabled	[0,1]	0:disabled 1:enabled
tzodns.wildcardEnabled	[0,1]	0:disabled 1:enabled
tzodns.username	<String> (60)	
tzodns.password	<String> (64)	at least 16 characters
tzodns.hostname	<String> (60)	
noipdnsEnabled	[0,1]	0:disabled 1:enabled
noipdns.wildcardEnabled	[0,1]	0:disabled 1:enabled
noipdns.username	<String> (60)	
noipdns.password	<String> (64)	
noipdns.hostname	<String> (60)	

8.8 GetDDNS

ActionEvent: getDDNS

URL Syntax	http://<IP>/cgi-bin/ddns.cgi?action=get
Response	dyndnsEnabled=0 dyndns.wildcardEnabled= dyndns.username= dyndns.password=

	dyndns.hostname= tzodns.Enabled= tzodns.wildcardEnabled= tzodns.username= tzodns.password= tzodns.hostname= noipdns.Enabled= noipdns.wildcardEnabled= noipdns.username= noipdns.password= noipdns.hostname=
Comment	
HTTP Method	GET

8.9 SetEthernet

ActionEvent: setEthernet

Syntax	http://<IP>/cgi-bin/ethernet.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
mediaType	[0,1,2,3,4]	0:AUTO 1: 10_HALF_DUPLEX 2: 10_FULL_DUPLEX 3: 100_HALF_DUPLEX 4: 100_FULL_DUPLEX

8.10 GetEthernet

ActionEvent: getEthernet

URL Syntax	http://<IP>/cgi-bin/ethernet.cgi?action= get
Response	mediaType=
Comment	
HTTP Method	GET

8.11 SetWIFI

ActionEvent: setWIFI

URL Syntax	http://<IP>/cgi-bin/wifi.cgi
HTML Body	action= set

	[&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disabled 1:enabled (Reserve)
mode	[0,1]	0: INFRASTRUCTURE 1: ADHOC (Reserve)
operationMode	[0-10]	0: AUTO 1: 11B 2: 11A 3: 11ABG 4: 11G 5: 11ABGN 6: 11N_only 7: 11GN 8: 11AN 9: 11BGN 10: 11AGN 11: 11N_5G_only depends on the limit of hardware
channel	0	(0) Auto 1-13 for ADHOC(Reserve)
countryregion	[0-11]	Refer to Country Region table
wmm	[0,1]	0:disabled 1:enabled 802.1e QoS
SSID	<String> (33)	
preamble	[0-2]	0:Preamble Long, 1:Preamble Short, 2:Auto
rtsThreshold	[1-2347]	
fragmentationThreshold	[256-2346]	
authentication	[0,1]	0:Open 1:Share Key
channelBandWidth	[0,1]	0:Auto (20/40MHZ) 1: 20 MHZ
securityMode	[0,1,2,3]	0:None 1:WEP 2: WPAPSK 3: WPA2PSK
TxPower	[0-100]	
WPS.WPSMode	[0-2]	0:None 1:PIN 2:PBC
WPS.PINCode	<String> (64)	

WPS.wpsbtn_enabled	[0,1]	0:disabled 1:enabled
wifibrige		
wlNetworkSetting.wifiaddressType	[0-3]	0:Static 1:DHCP 2:PPPoE 3:3G
wlNetworkSetting.wifiipv4Address	<String> (16)	
wlNetworkSetting.wifisubnetMask	<String> (16)	
wlNetworkSetting.wifigatewayAddress	<String> (16)	
wlNetworkSetting.wifidnsAddress1	<String> (16)	
wlNetworkSetting.wifidnsAddress2	<String> (16)	
wlNetworkSetting.wifippoe.userName	<String> (128)	
wlNetworkSetting.wifippoe.password	<String> (128)	
WPA.algorithmType	[0,1,2]	securityMode=2(WPA2PSK) 0: TKIP 1: AES 2: TKIP_AES securityMode=3(WPA2PSK) 1: AES
WPA.sharedKey	<String> (64)	securityMode=2,3
WEP.defaultTransmitKeyIndex	[1-4]	Available when securityMode=1 (WEP)
WEP.wepKeyLength		Available when securityMode=1 (WEP) 1: 40/64 bits (10 hex digits) 2: 104/128 bits (26 hex digits)
WEP.encryptionKeyList.keyEntry1.encryptionKey	<String> (64)	Available when securityMode=1 (WEP)
WEP.encryptionKeyList.keyEntry2.encryptionKey	<String> (64)	Available when securityMode=1 (WEP)
WEP.encryptionKeyList.keyEntry3.encryptionKey	<String> (64)	Available when securityMode=1 (WEP)
WEP.encryptionKeyList.keyEntry4.encryptionKey	<String> (64)	Available when securityMode=1 (WEP)

WEP.authenticationType	[0,1,2]	Available when securityMode=1 (WEP) 0:Open System 1:Shared Key 2:Auto
------------------------	---------	--

Country Region Parameters

Region	Channels
0	36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161, 165
1	36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140
2	36, 40, 44, 48, 52, 56, 60, 64
3	52, 56, 60, 64, 149, 153, 157, 161
4	149, 153, 157, 161, 165
5	149, 153, 157, 161
6	36, 40, 44, 48
7	36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165
8	52, 56, 60, 64
9	36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140, 149, 153, 157, 161, 165
10	36, 40, 44, 48, 149, 153, 157, 161, 165
11	36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 149, 153, 157, 161

8.12 GetWIFI

ActionEvent: getWIFI

URL Syntax	http://<IP>/cgi-bin/wifi.cgi?action=get
Response	enabled= mode= operationMode= channel= countryregion= wmm= SSID= preamble= rtsThreshold= fragmentationThreshold= authentication= channelBandWidth= securityMode= TxPower= WPS.WPSMode= WPS.PINCode= WPS.wpsbtn_enabled= wifibridge= wlNetworkSetting.wifiaddressType= wlNetworkSetting.wifiipv4Address=

	wlNetworkSetting.wifisubnetMask= wlNetworkSetting.wifigatewayAddress= wlNetworkSetting.wifidnsAddress1= wlNetworkSetting.wifidnsAddress2= wlNetworkSetting.wifippoe.username= wlNetworkSetting.wifippoe.password=
Comment	
HTTP Method	GET

8.13 SetIPFilter

ActionEvent: setIPFilter

URL Syntax	http://<IP>/cgi-bin/IPFilter.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disabled 1:enabled
permissionType	[0,1]	0: Deny 1: Allow
allow.enabled1	[0,1]	0:disabled 1:enabled
allow.startIP1	<String> (16)	
allow.endIP1	<String> (16)	
allow.enabled2	[0,1]	0:disabled 1:enabled
allow.startIP2	<String> (16)	
allow.endIP2	<String> (16)	
allow.enabled N	[0,1]	0:disabled 1:enabled N =[1-10]
allow.startIP N	<String> (16)	N =[1-10]
allow.endIP N	<String> (16)	N =[1-10]
deny.enabled1	[0,1]	0:disabled 1:enabled
deny.startIP1	<String> (16)	
deny.endIP1	<String> (16)	
deny.enabled2	[0,1]	0:disabled 1:enabled
deny.startIP2	<String> (16)	
deny.endIP2	<String> (16)	
deny.enabled N	[0,1]	0:disabled

		1:enabled N =[1-10]
deny.startIP N	<String> (16)	N =[1-10]
deny.endIP N	<String> (16)	N =[1-10]

8.14 GetSiteSurvey

ActionEvent: getSiteSurvey

URL Syntax	http://<IP>/cgi-bin/sitesurvey.cgi?action= getSiteSurvey
Response	AP_size=40 AP0.SSID= AP0.Channel=1 AP0.BSSID=00:11:22:33:44:55 AP0.Security=WPA-PSK/WPA2-PSK AP0.Signal=68 AP0.Mode=11b/g/n AP0.NT=ln AP1.SSID= AP1.Channel=1 AP1.BSSID=00:1c:df:d4:12:2c AP1.Security=WPA2PSK/AES AP1.Signal=100 AP1.Mode=11b/g/n AP1.NT=ln
Comment	
HTTP Method	GET

8.15 GetWPSStatus

ActionEvent: getWPSStatus

URL Syntax	http://<IP>/cgi-bin/wps_status.cgi?action= getStatus
Response	status=
Comment	
HTTP Method	GET

8.16 GetIPFilter

ActionEvent: getIPFilter

URL Syntax	http://<IP>/cgi-bin/IPFilter.cgi?action= get
Response	enabled= permissionType= allow.size=

	allow.enabled1= allow.startIP1= allow.endIP1= allow.enabled2= allow.startIP2= allow.endIP2= deny.size= deny.enabled1= deny.startIP1= deny.endIP1= deny.enabled2= deny.startIP2= deny.endIP2=
Comment	
HTTP Method	GET

8.17 SetEasyLink

ActionEvent: setEasyLink

URL Syntax	http://<IP>/cgi-bin/Discovery.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disable 1:enable
username	<String> (64)	
type	[0,1]	Mode 0:auto 1>manual

8.18 GetEasyLink

ActionEvent: getIPFilter

URL Syntax	http://<IP>/cgi-bin/Discovery.cgi?action= get
Response	enabled= upnp_status= register_status= online= check= checkname= update=

	RefreshTime= username= weurl= type= http_port= rtsp_port= publicip= rtsp_external_port= http_external_port=
Comment	
HTTP Method	GET

8.19 Set 802.1X

ActionEvent: getIPFilter

URL Syntax	http://<IP>/cgi-bin/IEEE8021X.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disable 1:enable
authenticationProtocolType		1:EAP-TLS 3:EAP-PEAP
innerTTLSSAuthenticationMethod		1:MS-CHAP 2:MS-CHAP v2 3:PAP 4:EAP-MD5
innerEAPProtocolType		2:MS-CHAP v2
username	<String> (64)	
password	<String> (32)	
validateServerEnabled	[0,1]	0:disable 1:enable
anonymousID	<String> (64)	
autoPACProvisioningEnabled	[0,1]	0:disable 1:enable

8.20 Get 802.1X

ActionEvent: getIPFilter

URL Syntax	http://<IP>/cgi-bin/ IEEE8021X.cgi?action= get
Response	enabled= EAPOL_version= authenticationProtocolType=

	innerTTLSSAuthenticationMethod= innerEAPProtocolType= validateServerEnabled= userName= password= anonymousID= autoPACProvisioningEnabled=
Comment	
HTTP Method	GET

7. Storage

Storage API allows applications to configure the storage devices which could be reached by the IPCAM unit.

9.1 GetSDstatus

ActionEvent: getSDstatus

URL Syntax	http://<IP>/cgi-bin/sdcard.cgi?action= getSDstatus
Response	size= file1.name= file1.size= file1.time= file2.name= file2.size= file2.time=
Comment	
HTTP Method	GET

9.2 Mount

ActionEvent: mount

URL Syntax	http://<IP>/cgi-bin/sdcard.cgi?action= mount
Response	
Comment	
HTTP Method	GET

9.3 Umount

ActionEvent: umount

URL Syntax	http://<IP>/cgi-bin/sdcard.cgi?action= umount
Response	
Comment	
HTTP Method	GET

9.4 Remove File or Directory

ActionEvent: rm

URL Syntax	http://<IP>/cgi-bin/sdcard.cgi?action=rm&filename=<value>
Response	
Comment	
HTTP Method	GET

9.5 Format SD card

ActionEvent: format

URL Syntax	http://<IP>/cgi-bin/sdcard.cgi?action= format
Response	
Comment	
HTTP Method	GET/POST

System

System API allows applications to configure miscellaneous system settings which are not covered by other categories. These settings include Time, Syslog, Storage, and Device Information.



NOTE: In the future, the API may switch to rsyslog instead of syslogd.

10.1 GetDeviceInfo

ActionEvent: getDeviceInfo

URL Syntax	http://<IP>/cgi-bin/system.cgi?action= get
Response	chipVersion= sensorID= macAddress= firmwareVersion= firmwareReleaseDate= InternalName= ProductName= ModelNumber= CompanyName= Comments=
Comment	
HTTP Method	GET

10.2 SetTimeSetting

ActionEvent: setTimeSetting

URL Syntax	http://<IP>/cgi-bin/time.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
type	[0,1,2]	0:None 1:Manual 2:NTP
enabledDST	[0,1]	0:disabled 1:enabled
timezoneID	[0-26]	Table
manual.year	[2009-2038]	

manual.month	[1-12]	
manual.day	[1-31]	
manual.hour	[0-23]	
manual.minute	[0-59]	
manual.second	[0-59]	
ntp.ntpServerLoc1	<String> (128)	
ntp.ntpServerLoc2	<String> (128)	

Table: Available timezoneID

timezoneID	Value
TIME_ZONE_MIN	0
TIME_ZONE_KWAJALEIN	1
TIME_ZONE_SAMOA	2
TIME_ZONE_HAWAII	3
TIME_ZONE_ALASKA	4
TIME_ZONE_LOS_ANGELES	5
TIME_ZONE_PHOENIX	6
TIME_ZONE_MEXICO_CITY	7
TIME_ZONE_NEW_YORK	8
TIME_ZONE_SANTIAGO	9
TIME_ZONE_SAO_PAULO,	10
TIME_ZONE_NORONHA_ISLAND,	11
TIME_ZONE_PRAIA,	12
TIME_ZONE_LONDON,	13
TIME_ZONE_PARIS,	14
TIME_ZONE_CAIRO,	15
TIME_ZONE_MOSCOW,	16
TIME_ZONE_DUBAI,	17
TIME_ZONE_KARACHI,	18
TIME_ZONE_DHAKA,	19
TIME_ZONE_JAKARTA,	20
TIME_ZONE_HONG_KONG,	21
TIME_ZONE_TOKYO,	22
TIME_ZONE_SYDNEY,	23
TIME_ZONE_NOUMEA,	24
TIME_ZONE_NewZealand,	25
TIME_ZONE_MAX	26

10.3 GetTimeSetting

ActionEvent: getTimeSetting

URL Syntax	http://<IP>/cgi-bin/time.cgi?action=get
Response	type= enableDST= timezoneID=

	manual.year= manual.month= manual.day= manual.hour= manual.minute= manual.second= enableDST= timezoneID= ntp.ntpServerLoc1= ntp.ntpServerLoc2=
Comment	
HTTP Method	GET

10.4 SetSyslogSetting

ActionEvent: setSyslogSetting

URL Syntax	http://<IP>/cgi-bin/ syslog.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
localLogLevel	[0-7]	table
useRemoteLog	[0,1]	0:disabled 1:enabled
addressingFormatType	[0,1]	0:IP 1:Hostname
remoteServerAddress	<String> (128)	
remoteServerPort	[514, 1025-65534]	

Table: Available localLogLevel

timezoneID	Value
SLOG_EMERG	0
SLOG_ALERT	1
SLOG_CRIT	2
SLOG_ERR	3
SLOG_WARNING	4
SLOG_NOTICE	5
SLOG_INFO	6
SLOG_DEBUG	7

10.5 GetSyslogSetting

ActionEvent: getSyslogSetting

URL Syntax	http://<IP>/cgi-bin/syslog.cgi?action= get
Response	localLogLevel= useRemoteLog= addressingFormatType= remoteServerAddress= remoteServerPort=
Comment	
HTTP Method	GET

10.6 GetSyslogFile

ActionEvent: getSyslogFile

URL Syntax	http://<IP>/syslog.dump
Response	Content of syslog.
Comment	
HTTP Method	GET

10.7 SyslogClear

ActionEvent: syslogClear

URL Syntax	http://<IP>/cgi-bin/syslog.cgi?action=clear
Response	
Comment	Clear syslog.
HTTP Method	GET

10.8 SetOperationSetting

ActionEvent: set

URL Syntax	http://<IP>/cgi-bin/OperationSetting.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	Default=en-US
HTTP Method	POST

Argument	Valid values	Description
locale	<String> (65)	Default=en-US

10.9 GetOperationSetting

ActionEvent: get

URL Syntax	http://<IP>/cgi-bin/OperationSetting.cgi?action= get
Response	locale=
Comment	
HTTP Method	GET

8. Admin

Admin API enables applications to execute administrative tasks on the IPCAM unit. The tasks include add/delete users, upgrade firmware, rebooting the IP camera, and import/exporting configuration settings.

11.1 AddUser

ActionEvent: addUser

Syntax	http://<IP>/cgi-bin/users.cgi
HTML Body	action= add [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
index	[1 -10]	depends on GUI index
username	<String> (30)	Unique key Length limited:[4,29]
password	<String> (30)	Length limited:[4,29]
privilege	[0,1,2]	0:Viewer 1:Admin 2:Remote viewer

11.2 DeleteUser

ActionEvent: deleteUser

URL Syntax	http://<IP>/cgi-bin/users.cgi?action= delete [<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
username	<String> (30)	

11.3 GetUsers

ActionEvent: getUsers

URL Syntax	http://<IP>/cgi-bin/users.cgi?action= getUsers
-------------------	---

Response	Size= User1.index= User1.username= User1.password= User1.privilege= ... User2.username= User2.password= User2.privilege=
Comment	
HTTP Method	GET

11.4 UpdateUser

ActionEvent: updateUser

Syntax	http://<IP>/cgi-bin/users.cgi
HTML Body	action= update [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
index	[1 -10]	depends on GUI index
username	<String> (30)	Unique key Length limited:[4,29]
password	<String> (30)	Length limited:[4,29]
privilege	[0,1,2]	0:Viewer 1:Admin 2:Remote viewer

11.5 SetHTTP/HTTPS

ActionEvent: setHTTP/HTTPS

URL Syntax	http://<IP>/cgi-bin/http.cgi
HTML Body	action= setAll [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disabled 1:enabled
port	[80, 1025-65534]	

httpsEnabled	[0,1]	0:disabled 1:enabled
httpsPort	[443, 1025-65534]	

11.6 GetHTTP

ActionEvent: getHTTP

URL Syntax	http://<IP>/cgi-bin/http.cgi?action= get
Response	enabled= port=
Comment	
HTTP Method	GET

11.7 GetHTTPS

ActionEvent: getHTTPS

URL Syntax	http://<IP>/cgi-bin/https.cgi?action= get
Response	enabled= port=
Comment	
HTTP Method	GET

11.8 ResetToDefault

ActionEvent: resetToDefault

URL Syntax	http://<IP>/cgi-bin/reset.cgi?action= reset [&keepip=[0,1]&keepwifi=[0,1]]
Response	
Comment	Reset all settings to factory default
HTTP Method	GET

Argument	Valid values	Description
keepip	[0,1]	0:disabled 1:enabled
keepwifi	[0,1]	0:disabled 1:enabled depends on the limit of hardware
keeptime	[0,1]	0:disabled 1:enabled
keepeasylink	[0,1]	0:disabled 1:enabled

keeplanguage	[0,1]	0:disabled 1:enabled
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11.9 UpgradeFirmware

ActionEvent: upgradeFirmware

URL Syntax	http://<IP>/cgi-bin/upgradeFirmware.cgi
HTML Body	action= upgrade < <i>boundary</i> > < <i>firmware</i> > < <i>boundary</i> >
Response	
Comment	Upgrade the system firmware upon this request
HTTP Method	POST

11.10 Reboot

ActionEvent: reboot

URL Syntax	http://<IP>/cgi-bin/reboot.cgi?action= reboot
Response	
Comment	Reboot the system
HTTP Method	GET/POST

11.11 ImportConfigFile

ActionEvent: importConfigFile

Syntax	http://<IP>/cgi-bin/ConfigFile.cgi
HTML Body	< <i>boundary</i> > < <i>Configuration file</i> > < <i>boundary</i> >
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
filename	< <i>String</i> > (64)	

11.12 ExportConfigFile

ActionEvent: exportConfigFile

URL Syntax	http://<IP>/cgi-bin/ConfigFile.cgi?action= get
Response	
Comment	

HTTP Method	GET
--------------------	-----

9. Capability

ActionEvents

ActionEvent	Description
getCapability	Get camera's capability.
getVideoCodecs	Get video codecs
getResolutions	Get video resolutions
getAudioCodecs	Get audiocodecs

12.1 GetCapability

ActionEvent: getCapability

URL Syntax	http://<IP>/cgi-bin/capability.cgi?action= get
Response	[media] channels=2 videoCodecs=H264,MJPEG,MPEG4 audioCodecs=G711,AMR-NB resolutions=1280x800,640x400,320x192,1280x720,640x352,320x176,640x480,320x240 H264frameRate=1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30 MJPEGframeRate=1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30 MPEG4frameRate=1,2,3,4,5,6,7,8,9,10,11,12,13,14,15 bitrate=64,128,256,384,512,768,1000,1500,2000,4000,6000,8000,10000,12000 Events=MD,DI,AD,SCHEDULE Event.actions=SAVESTREAM,SNAPSHOT,EMAIL,HTTP,UDP,MULTICAST,DO Event.SaveStreamMethod=FTP,EMAIL,SAMBA Event.SnapshotMethod=FTP,EMAIL,SAMBA Event.Schedule.SaveStreamMethod=sd
Comment	
HTTP Method	GET

12.2 GetVideoCodecs

ActionEvent: getVideoCodecs

URL Syntax	http://<IP>/cgi-bin/capability.cgi?action= getVideoCodecs
Response	videoCodecs=H264,MJPEG,MPEG4
Comment	
HTTP Method	GET

12.3 GetResolutions

ActionEvent: getResolutions

URL Syntax	http://<IP>/cgi-bin/capability.cgi?action= getResolutions
Response	resolutions=1280x800,640x400,320x192
Comment	
HTTP Method	GET

12.4 GetAudioCodecs

ActionEvent: getAudioCodecs

URL Syntax	http://<IP>/cgi-bin/capability.cgi?action= getAudioCodecs
Response	audioCodecs=G711,AMR-NB
Comment	
HTTP Method	GET

12.5 GetPTZCapability

ActionEvent: getCompatibleVideoEncoder

URL Syntax	http://<IP>/cgi-bin/GetPTZCapabilities.cgi?
Response	PanTiltCap= ZoomCap= FocusCap= IrisCap= minPTZSpeed= maxPTZSpeed= ABSPTZ= PTZ.supportProtocol= PTZ.currentProtocol= PTZ.autoPan= PTZ.autoTilt= PTZ.maxPresetPerPatrol= PTZ.maxPresetNumber= PTZ.maxPatrolNumber= PTZ.maxMaskNumber= PTZ.Eflip= PTZ.AWB= PTZ.backlight= PTZ.WDR= PTZ.autoIRcut= PTZ.IRcut= PTZ.AutoIris= PTZ.continuousIris= PTZ.autoFocus= PTZ.continuousFocus= PTZ.absoluteZoom=

	PTZ.continuousZoom= PTZ.relativeZoom= PTZ.absolutePanTilt= PTZ.continuousPanTilt= PTZ.relativePanTilt=
Comment	
HTTP Method	GET

10. Motion detection

Motion detection API allows applications to view/adjust the motion detection settings.

13.1 SetMotionDetection

ActionEvent: setMotionDetection

URL Syntax	http://<IP>/cgi-bin/motiondetection.cgi
HTML Body	action= set &channelIndex=1 [&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
channelIndex	1	It match stream channel index, but it is always equal 1 now.
enabled	[0,1]	0:disabled 1:enabled
detectionInterval	>0	millisecond
region1.enabled	[0,1]	0:disabled 1:enabled
region1.sensitivity	[1-100]	
region1.threshold	[1-100]	
region1.x		Depends on resolution
region1.y		Depends on resolution
region1.x1		Depends on resolution
region1.y1		Depends on resolution
region2.enabled	[0,1]	0:disabled 1:enabled
region2.sensitivity	[1-100]	
region2.threshold	[1-100]	
region2.x		Depends on resolution
region2.y		Depends on resolution
region2.x1		Depends on resolution
region2.y1		Depends on resolution
region3.enabled	[0,1]	0:disabled 1:enabled
region3.sensitivity	[1-100]	
region3.threshold	[1-100]	
region3.x		Depends on resolution
region3.y		Depends on resolution
region3.x1		Depends on resolution

region3.y1		Depends on resolution
------------	--	-----------------------



Note:

Sensitivity: When sensitivity is a high value (such as 90), the motion detection is easily triggered.

Threshold: When threshold is a low value (such as 10), the motion detection is easily triggered.

13.2 GetMotionDetections

ActionEvent: getMotionDetections

URL Syntax	http://<IP>/cgi-bin/motiondetection.cgi?action= get
Response	<pre> size=1 MD1.enabled=0 MD1.channelIndex=1 MD1.detectionInterval=100 MD1.region.size=3 MD1.region1.enabled=0 MD1.region1.sensitivity=90 MD1.region1.threshold=10 MD1.region1.x=0 MD1.region1.y=0 MD1.region1.x1=0 MD1.region1.y1=0 MD1.region2.enabled=0 MD1.region2.sensitivity=90 MD1.region2.threshold=10 MD1.region2.x=0 MD1.region2.y=0 MD1.region2.x1=0 MD1.region2.y1=0 MD1.region3.enabled=0 MD1.region3.sensitivity=90 MD1.region3.threshold=10 MD1.region3.x=0 MD1.region3.y=0 MD1.region3.x1=0 MD1.region3.y1=0 </pre>
Comment	
HTTP Method	GET

13.3 GetMDStatus

ActionEvent: getStatus

URL Syntax	http://<IP>/cgi-bin/motiondetection.cgi?action= getStatus
-------------------	--

Response	window1= window2= window3=
Comment	
HTTP Method	GET

11.Event

Event API allows applications to

- 1) View/adjust the event settings
- 2) View/adjust the notification settings

14.1 AddEventSetting

ActionEvent: addEventSetting

URL Syntax	http://<IP>/cgi-bin/event.cgi?
HTML Body	action= addEventSetting [&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
name	<String> (128)	unique ID
enabled	[0,1]	0:disabled 1:enabled
eventID	<String> (128) MD, SCHEDULE, DI, AD, PIR, IVAPC, IVAMD, IVAFZ	1.MD : motion detection 2. SCHEDULE: schedule event, only support Save Stream to SD. 3.DI: 4.AD :audio detection 5.PIR: 6.IVAPC :IVA people count 7.IVAMD :IVA motion detection 8.IVAFZ :IVA Only support one eventID. Depends on capability. See example.
sched.type	[0,1,2]	0:Always 1:Weekly 2: Durative

sched.time	<String> (128)	
actions	<String> (128)	SAVESTREAM SNAPSHOT EMAIL LIGHTLED SPEAKER DO UDP HTTP MULTICAST UDP Depends on capability. See example.
speakerName	<String> (64)	Depends on capability. (SPEAKER)
receiverAddress1	<String> (128)	
receiverAddress2	<String> (128)	
senderAddress	<String> (128)	
senderName	<String> (64)	
subject	<String> (64)	
udp.addressType	[0-3]	0:ipv4 1:ipv6 2:dual ip 3:hostname
udp.duration		
udp.hostname	<String> (64)	
udp.ipAddress	<String> (32)	
udp.ipv6Address	<String> (48)	
udp.message	<String> (128)	
udp.portNo	[1025-65534]	
multicast.addressType	[0-2]	0:ipv4 1:ipv6 2:dual ip
multicast.ipAddress	<String> (32)	
multicast.ipv6Address	<String> (48)	
multicast.portNo	[1025-65534]	
multicast.duration		
multicast.ttl	[0-255]	
multicast.message	<String> (128)	

The syntax of actions is [*<ACTION>*:*<METHOD>*][,*<ACTION>*:*<METHOD>*]...

Example:

SAVESTREAM: [FTP, EMAIL, SAMBA, SD]

SNAPSHOT: [FTP, EMAIL, SAMBA, SD]

EMAIL: EMAIL

HTTP:NONE

UDP: NONE

UDP: NONE

MULTICAST: NONE

DO: NONE

NONE → read notifications.

Example:

Get capability:

Events=MD, SCHEDULE, DI, AD

Event.actions=SNAPSHOT, EMAIL, HTTP, UDP, MULTICAST, DO

Event.method=FTP, SMTP, SAMBA, SD

2. EventID:MD schedule type: Always

Action:

Take snapshot to

Activate Digital Output

Send HTTP Notification

Send to Email

Send UDP Notification to IP address . . .

Port

Send Multicast Notification to IP address . . .

Port

Take snapshot to → use E-mail (need to set E-mail format)

Send to Email → use E-mail (need to set E-mail format)

Activate Digital Output → read notifications.

Send HTTP Notification → read notifications.

Send UDP Notification to IP address → need to set **udp.ipAddress** 、 **udp.portNo**

Send Multicast Notification to IP address → need to set **multicast.ipAddress** 、

multicast.portNo

URL: <http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=addEventSetting&name=MD_Test&enabled=1&sched.type=0&eventID=MD&actions=SNAPS
HOT:EMAIL,EMAIL:EMAIL,DO:NONE,HTTP:NONE,UDP:NONE,MULTICAST:NONE&senderAddress
=aa@LevelOne.com&receiverAddress1=bb@LevelOne.com
&receiverAddress2=cc@LevelOne.com&senderName=LevelOne&subject=Test&udp.ipAddress=1.2.3
.4&udp.portNo=3333&multicast.ipAddress=2.3.4.5&multicast.portNo=2234

3. EventID: SCHEDULE ; schedule type: Durative
Action: save stream to SD

Time: Sun Mon Tue Wed Thu Fri Sat

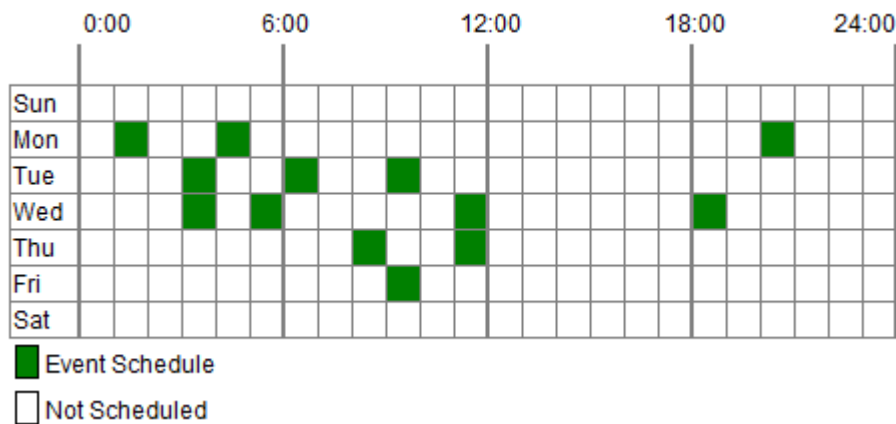
Start : Duration Minutes

URL: <http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=addEventSetting&name=123&enabled=1&sched.type=2&sched.time=0:2023-300,1:2023-300,
2:2023-300,3:2023-300,4:2023-300,5:2023-300&eventID=SCHEDULE&actions=SAVESTREAM:SD

4. EventID: DI ; schedule type: Weekly
 schedule time :



Days	Hours presented in binary format	Hours presented in Hex format
Sun	0000 0000 0000 0000 0000 0000	000000
Mon	0100 1000 0000 0000 0000 1000	480008
Tue	0001 0010 0100 0000 0000 0000	124000
Wed	0001 0100 0001 0000 0010 0000	141020
Thu	0000 0000 1001 0000 0000 0000	009000
Fri	0000 0000 0100 0000 0000 0000	004000
Sat	0000 0000 0000 0000 0000 0000	000000

URL: <http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=addEventSetting&name=sss&enabled=1&sched.type=1&sched.time=000000,480008,124000,141020,009000,004000,000000&eventID=DI&actions=DO:NONE,HTTP:NONE

5. URL: <http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=addEventSetting&name=xxx&enabled=1&sched.type=0&eventID=AD&actions=DO:NONE,HTTP:NONE

14.2 UpdateEventSetting

ActionEvent: updateEventSetting

URL Syntax	<a href="http://<IP>/cgi-bin/event.cgi">http://<IP>/cgi-bin/event.cgi
------------	---

HTML Body	action= updateEventSetting &name=<value> [&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
name	<String> (128)	unique ID
enabled	[0,1]	0:disabled 1:enabled
eventID	<String> (128) MD, SCHEDULE, DI, AD, PIR, IVAPC, IVAMD, IVAFZ	1.MD : motion detection 2. SCHEDULE: schedule event, only support Save Stream to SD. 3.DI: 4.AD :audio detection 5.PIR: 6.IVAPC :IVA people count 7.IVAMD :IVA motion detection 8.IVAFZ :IVA Only support one eventID. Depends on capability. See example.
sched.type	[0,1,2]	0:Always 1:Weekly 2: Durative
sched.time	<String> (128)	
actions	<String> (128)	SAVESTREAM SNAPSHOT EMAIL LIGHTLED SPEAKER DO UDP HTTP MULTICAST UDP Depends on capability. See example.
speakerName	<String> (64)	Depends on capability.(SPEAKER)
receiverAddress1	<String> (128)	

receiverAddress2	<String> (128)	
senderAddress	<String> (128)	
senderName	<String> (64)	
subject	<String> (64)	
udp.addressType	[0-3]	0:ipv4 1:ipv6 2:dual ip 3:hostname
udp.duration		
udp.hostname	<String> (64)	
udp.ipAddress	<String> (32)	
udp.ipv6Address	<String> (48)	
udp.message	<String> (128)	
udp.portNo	[1025-65534]	
multicast.addressType	[0-2]	0:ipv4 1:ipv6 2:dual ip
multicast.ipAddress	<String> (32)	
multicast.ipv6Address	<String> (48)	
multicast.portNo	[1025-65534]	
multicast.duration		
multicast.ttl	[0-255]	
multicast.message	<String> (128)	

14.3 RemoveEventSetting

ActionEvent: removeEventSetting

Syntax	http://<IP>/cgi-bin/event.cgi
HTML Body	action= removeEventSetting &name=<value>
Response	
Comment	
HTTP Method	POST

14.4 GetEventPolicy

ActionEvent: getEventPolicy

URL Syntax	http://<IP>/cgi-bin/event.cgi?action= getEventPolicy
-------------------	---

Response	<pre> size=4 R1enabled=1 R1name=MD_test R1eventID=MD R1sched.type=0 R1sched.time= R1actions=SAVESTREAM:FTP,SNAPSHOT:FTP R1speakerName= R1receiverAddress1= R1receiverAddress2= R1senderAddress= R1senderName= R1subject= R2enabled=1 R2name=SD_test R2eventID=SCHEDULE R2sched.type=0 R2sched.time= R2actions=SAVESTREAM:SD R2speakerName= R2receiverAddress1= R2receiverAddress2= R2senderAddress= R2senderName= R2subject= R3enabled=1 R3name=DI_test R3eventID=DI R3sched.type=1 R3sched.time=100000,100000,100000,100000,100000,100000,100000 R3actions=DO:NONE R3speakerName= R3receiverAddress1= R3receiverAddress2= R3senderAddress= R3senderName= R3subject= R4enabled=0 R4name=AD_test R4eventID=AD R4sched.type=2 R4sched.time=0:0141-300,3:0141-300,4:0141-300,6:0141-300 R4actions=SAVESTREAM:SAMBA,SNAPSHOT:SD,DO:NONE R4speakerName= R4receiverAddress1= R4receiverAddress2= R4senderAddress= R4senderName= R4subject= </pre>
Comment	

HTTP Method	GET
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14.5 SetEmailSetting

ActionEvent: setEmailSetting

URL Syntax	http://<IP>/cgi-bin/event.cgi
HTML Body	action= setEmailSetting [&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
authenticationMode1	[0,1,2]	
port1	[25, 1025-65534]	
smtpServerHostName1	<String> (64)	
password1	<String> (64)	
authenticationMode2	<String> (64)	
port2	[25,1025-65534]	
smtpServerHostName2	<String> (64)	
accountName2	<String> (64)	0:PLAIN 1:LOGIN 2: LOGIN with TLS
password2	<String> (64)	

Example:

URL: <http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=setEmailSetting&authenticationMode1=1&port1=25&smtpServerHostName1=LevelOne.com.tw&accountName1=brick&password1=12345678&authenticationMode2=1&port2=25&smtpServerHostName2=&accountName2=&password2=

14.6 GetEmailSetting

ActionEvent: getEmailSetting

URL Syntax	http://<IP>/cgi-bin/event.cgi?action= getEmailSetting
Response	authenticationMode1=1 port1=25 smtpServerHostName1= accountName1= password1= authenticationMode2=

	port2=25 smtpServerHostName2= accountName2= password2=
Comment	
HTTP Method	GET

14.7 SetFTPSetting

ActionEvent: setFTPSetting

Syntax	http://<IP>/cgi-bin/event.cgi
HTML Body	action= setFTPSetting [&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
addressType1	[0,1]	0:IPv4 address 1:hostName
hostName1	<String> (64)	
ipAddress1	<String> (32)	
port1	[21, 1025-65534]	
accountName1	<String> (64)	
password1	<String> (64)	
ftpShareDIR1	<String> (32)	
passiveMode1	[0,1]	0:enabled 1:disabled
addressType2	[0,1]	0:IPv4 address 1:hostName
hostName2	<String> (64)	
ipAddress2	<String> (32)	
port2	[21, 1025-65534]	
accountName2	<String> (64)	
password2	<String> (64)	
ftpShareDIR2	<String> (32)	
passiveMode2	[0,1]	0:enabled 1:disabled

Example:

URL:

<http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=setFTPSetting&addressType1=0&hostName1=&ipAddress1=192.168.1.11&port1=21&accountName1=brick&password1=1234567&ftpShareDIR1=other&passiveMode1=1&addressType2=0&hostName2=&ipAddress2=0.0.0.0&port2=21&accountName2=&password2=&ftpShareDIR2

=&passiveMode2=1

14.8 GetFTPSetting

ActionEvent: getFTPSetting

URL Syntax	http://<IP>/cgi-bin/event.cgi?action= getFTPSetting
Response	addressType1=0 hostName1= ipAddress1=192.168.1.11 ipv6Address1= port1=21 accountName1=brick password1=1234567 passiveMode1=1 addressType2=0 hostName2= ipAddress2=0.0.0.0 ipv6Address2= port2=21 accountName2= password2= passiveMode2=1
Comment	
HTTP Method	GET

14.9 SetAlarmMediaInfo

ActionEvent: setAlarmMediaInfo

Syntax	http://<IP>/cgi-bin/event.cgi
HTML Body	action= setAlarmMediaInfo [&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
timeBeforeEvent	[0-10]	Depends on hardware.
timeAfterEvent	[0-30]	Depends on hardware.
maxBufferSize	[128-1024]	

Example:

URL:

<http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=setAlarmMediaInfo&timeAfterEvent=5&maxBufferSize=1024

14.10 GetAlarmMedialInfo

ActionEvent: getAlarmMedialInfo

URL Syntax	http://<IP>/cgi-bin/event.cgi?action= getAlarmMedialInfo
Response	timeBeforeEvent= timeAfterEvent= maxBufferSize=
Comment	
HTTP Method	GET

14.11 SetSamba

ActionEvent: setSamba

URL Syntax	http://<IP>/cgi-bin/event.cgi
HTML Body	action= setSamba [&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
addressType	[0,1]	0:IPV4 1:hostName
hostDns	<String> (32)	
ipAddress	<String> (32)	
userName	<String> (16)	
password	<String> (16)	
workGroup	<String> (32)	
shareDIR	<String> (32)	

Example:

URL:

<http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=setSamba&addressType=0&hostDns=&ipAddress=192.168.1.111&userName=Level
One&password=12345678&workGroup=&shareDIR=tmp

14.12 GetSamba

ActionEvent: getSamba

URL Syntax	http://<IP>/cgi-bin/event.cgi?action= getSamba
Response	addressType= hostDns=

	ipAddress= userName= password= shareDIR= workGroup=
Comment	
HTTP Method	GET

14.13 SetHttp

ActionEvent: setHttp

Syntax	http://<IP>/cgi-bin/event.cgi
HTML Body	action= setHttp [&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
enabled	[0,1]	0:disabled 1:enabled
HttpUrl	<String> (128)	
Message	<String> (128)	
username	<String> (16)	
password	<String> (16)	

Example

URL:

<http://192.168.1.1/xxxx.cgi>

Message: name1=value1&name2=vlaue2

Result: http://192.168.1.1/xxxx.cgi? name1=value1&name2=vlaue2

Example:

http://192.168.1.1/notification.cgi?event=MD&camera=FB-100A

14.14 GetHttp

ActionEvent: getHttp

URL Syntax	http://<IP>/cgi-bin/event.cgi?action= getHttp
Response	enabled= username= password= HttpUrl= Message=
Comment	
HTTP Method	GET

12. I/O Control

I/O Control API allows applications to view/adjust the GPIO setting

15.1 SetGPIOSetting

ActionEvent: setGPIOSetting

URL Syntax	http://<IP>/cgi-bin/gpio.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
di1.enabled	[0,1]	
di1.port		
di1.status		
di1.triggerType	[0,1]	0:Low 1:High
di1.resetIntervalAfterTriggered		
do1.enabled		
do1.port		
do1.status		
do1.actionType		
do1.triggerType	[2,3]	2:Open 3:Ground
do1.triggerTime	>0	second

Example

di1.triggerType =1

do1.triggerType= 3

do1.triggerTime=5 second

Example:

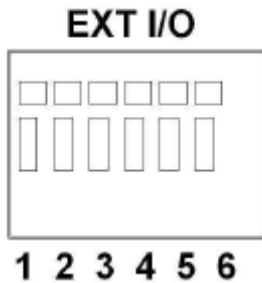
URL: http://192.168.1.1/cgi-bin/gpio.cgi

HTTP body:

action=set&di1.triggerType=1&do1.triggerType=3&do1.triggerTime=5

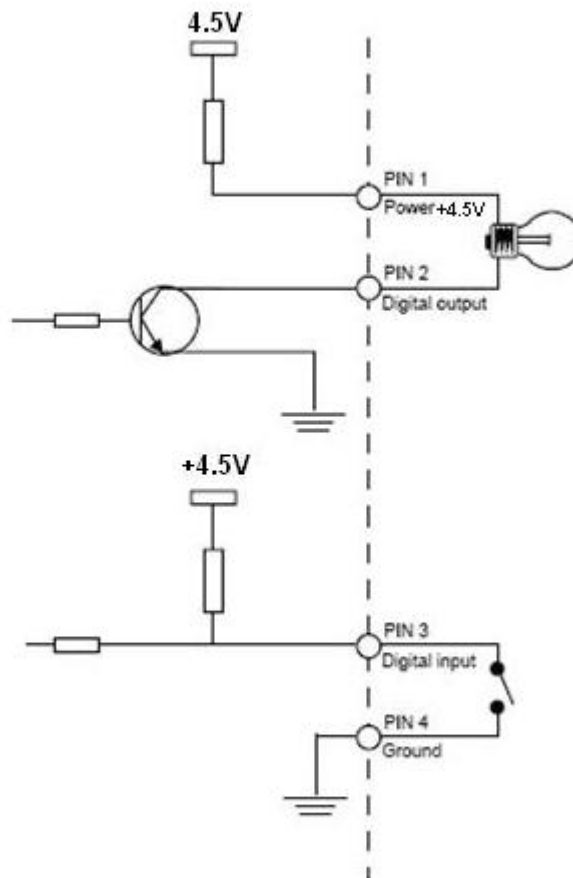
Extension I/O Terminal Block

The Network Camera provides an extension I/O terminal block to connect external input/output devices. The definition of the pins are listed below:



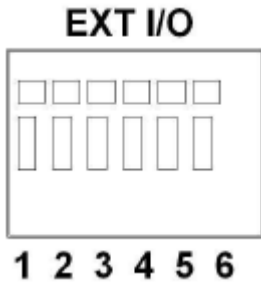
Pin	Function
1	Power +4.5V
2	Digital Output
3	Digital Input
4	Ground
5	RS-485 -
6	RS-485 +

DI/DO Diagram



For example: LED (5V)

Set DI: High DO: GROUND Result: LED light up



Line ① : Led Positive (Power +4.5V)

Line ② : Led Negative (DO)

Line ③ : DI

Line ④ : Ground

The LED will light up when the following configurations are set:

1. In the GUI DI/DO configuration settings, set Digital Input to High, Digital Output to Ground, and Duration for five seconds.

2. LED positive to pin1, and LED negative to pin2.

When the LED lights up, the Digital Input status will change to High and the Digital Output status will change to Low.

If Line 3 and Line 4 are connected, the status of Digital Input and Digital Output change to Low, the LED will fade off after 5 seconds.

When LED fades off, the Digital Input status will change to Low and Digital Output status will change to High.

15.2 GetGPIOStatus

ActionEvent: getGPIOStatus

URL Syntax	http://<IP>/cgi-bin/gpio.cgi?action= get
Response	di1.status=1(current status 0:Low , 1:High) di1.triggerType=0 di1.resetIntervalAfterTriggered=0 di1.enabled=1 do1.port=3 do1.status=1(current status 0:Low , 1:High) do1.triggerType=3 do1.actionType=0 do1.triggerTime=5 do1.enabled=1
Comment	
HTTP Method	GET

15.3 TriggerDO

ActionEvent: triggerDO

URL Syntax	http://<IP>/cgi-bin/gpio.cgi
HTML Body	action=triggerDO [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
port		
status	[high,low]	

Example:

URL: <http://192.168.1.1/cgi-bin/gpio.cgi>

HTML body: action=triggerDO&status=low

URL: <http://192.168.1.1/cgi-bin/gpio.cgi>

HTML body: action=triggerDO&status=high

15.4 TurnAllLedOff

ActionEvent: turnAllLedOff

URL Syntax	http://<IP>/cgi-bin/led.cgi
HTML Body	action=set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
level		
off	[0,1]	0:enabled 1:disabled Depends on hardware.

15.5 Getledstatus

ActionEvent: getGPIOStatus

URL Syntax	http://<IP>/cgi-bin/led.cgi?action=get
Response	level= off=
Comment	
HTTP Method	GET

13. PIR sensor and White LED

PIR sensor and White LED API allows applications to adjust the PIR sensor and white LED controls.

16.1 SetPIRsensor

ActionEvent: set (Depends on hardware)

URL Syntax	http://<IP>/cgi-bin/pirsensor.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
sensitivity	[1-10]	
enabled	[0,1]	0:enabled 1:disabled

16.2 GetPIRsenor

ActionEvent: get

URL Syntax	http://<IP>/cgi-bin/pirsensor.cgi?action= get
Response	sensitivity = enabled=
Comment	
HTTP Method	GET

16.3 Getwledall (Depends on hardware)

ActionEvent: getall

URL Syntax	http://<IP>/cgi-bin/wled.cgi?action= getall
Response	size= led1.name= led1.method = led1.active= led1.inactive= led1.duringtime=

Comment	
HTTP Method	GET

16.4 UpdateWled

ActionEvent: updateWled (Depends on hardware)

URL Syntax	http://<IP>/cgi-bin/wled.cgi
HTML Body	action= update [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	Setting whilte LED.
HTTP Method	POST

Argument	Valid values	Description
name	PIR	
method	[1,2,3]	1: ON_OFF 2: SLIDER (Reserve) 3: PULSE
duringtime	[1-10]	second
active		1:ON 10:FADE_TO_10 20:FADE_TO_20 30:FADE_TO_30 40:FADE_TO_40 50:FADE_TO_50 60:FADE_TO_60 70:FADE_TO_70 80:FADE_TO_80 90:FADE_TO_90 100:FADE_TO_100
inactive	[0,2]	0:OFF 2:FADE_TO_OFF

Example:

Setting whilte LED configuration for trigger event.

URL:

<http://192.168.1.1/cgi-bin/wled.cgi>

HTML body:

update&method=3&duringtime=5&active=100&inactive=2&name=PIR

Add configuration to event

URL:

<http://192.168.1.1/cgi-bin/event.cgi>

HTML body:

action=updateEventSetting&index=3&actions=lightled&enabled=1

16.5 SetLightCTL

ActionEvent: set

URL Syntax	http://<IP>/cgi-bin/wledctl.cgi
HTML Body	action= set [&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
method	1	1: ON_OFF
level	[0,10]	0:OFF 2:20% 4:40% 6:60% 8:80% 10:100%

16.6 GetLightCTL

ActionEvent: get

URL Syntax	http://<IP>/cgi-bin/wledctl.cgi?action= get
Response	method= level=
Comment	
HTTP Method	GET

14. PTZ

PTZ API allows applications to control the RS485 (serial port), PTZ functions and camera settings of the IP Camera.

18.1 Set Serial Port Control (optional, only for IP Cameras with RS485 port)

URL Syntax	http://<IP>/cgi-bin/ptzcom.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...]
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
protocol	VISCA MLP1 MLP2 Pelco-D Pelco-P VCL Chiper (reserved) Phillips (reserved) DSCP (reserved) AD422 (reserved) DM-P (reserved) JVC (reserved) Kalatel-485 (reserved) Kalatel-422 (reserved)	
camera	[0 -,255]	camera ID is dependent on the protocol and ID switch of camera.
baudrate	[2400, 4800, 9600]	serial port baud rate; Unit is bps
model	[0 - 65535]	camera model ID is used for PTZ driver; default is 0

18.2 PTZ control

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...]
Response	If “ query=speed ” argument is included in the request, speed= If “ query=position ” argument is included in the request,

	<p>pan= tilt= zoom=</p> <p>If “query=presetposcam” argument is included in the request, Preset Positions for camera %d</p> <p>If “query=presetposall” argument is included in the request, Preset Positions for camera %d presetposno0=preset name 1 presetposno1=preset name 2</p> <p>If “info=1” argument is included in the request, Available commands: {camera=[n]} center=[x],[y] imagewidth=[n] imageheight=[n] imagerotation=[n] move={ home up down left right upleft upright downleft downright } pan=[abspos] tilt=[abspos] zoom=[n] rpan=[offset] rtilt=[offset] rzoom=[offset] speed=[n] continuouspantiltmove=[x-speed],[y-speed] continuouszoommove=[speed] gotoserverpresetname=[name] gotoserverpresetno=[n] setserverpresetname=[name] {home=yes} setserverpresetno=[n] removeserverpresetname=[name] removeserverpresetno=[n] info=yes query={ speed position presetposcam presetposall }</p>
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on the protocol and ID switch of camera. • center : The relative coordinates (x, y) in the image. This information is used by the IP camera to calculate the relative pan & tilt motion. • areazoom : The relative coordinates (x, y, zoom) in the image. This information is used by the IP camera to calculate the relative pan & tilt motion. <ul style="list-style-type: none"> ➤ zoom : a factor of zoom / 100. ➤ Example : zoom in to 1/4 of the current field of view when zoom is 400.

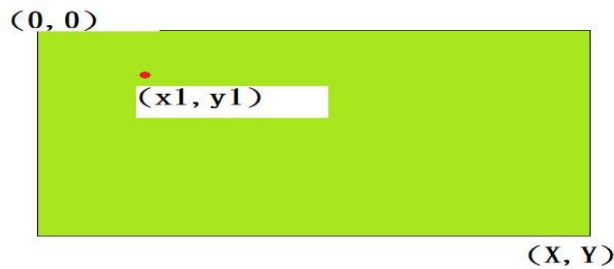
	<p>➤ Example : zoom out to five times the current field of view when zoom is 20.</p> <ul style="list-style-type: none"> • imagewidth : The width of the image resolution. This argument is required in conjunction with center or areazoom argument. • imageheight : The height of the image resolution. This argument is required in conjunction with center or areazoom argument. • move : move 5 degrees in the specified direction. • pan : absolute pan degrees • tilt : absolute tilt degrees • zoom : absolute zoom steps • focus : absolute focus steps • iris : absolute focus steps • rpan : relative pan degrees • rtilt : relative tilt degrees • rzoom : relative zoom steps • rfocus : relative focus steps • riris : relative Iris steps • continuouspantiltmove : continue span & tilt motion speed percent • continuouszoommove : continue zoom motion speed percent • continuousfocusmove : continue focus motion speed percent • continueirismove : continue Iris motion speed • speed : pan & tilt motion speed percent. Used when relative pan & tilt motion. • query : get speed, pan & tilt position, all preset points setting. • Info : get available <p>These arguments are based on the limit of hardware.</p> <ul style="list-style-type: none"> • brightness : absolute brightness steps • rbrightness : relative brightness steps • autofocus : enable/disable auto focus • autoiris : enable/disable auto Iris • continuousbrightnessmove : continue brightness motion speed • gotoserverpresetname : go to preset point name • gotoserverpresetno : go to preset point index • gotodevicepreset : go to preset point index. This argument is the same as gotoserverpresetno argument. • imagerotation : pan rotation 0°/90°/180°/270° quickly • ircutfilter : auto/enable/disable IR-cut filter • backlight : enable/disable back light compensation
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
center	[x,y]	Depend on image resolution
areazoom	[x,y, zoom Percent]	Depend on image resolution
imagewidth		Depend on image resolution
imageheight		Depend on image resolution
move	[home, up, down, left, right, upleft, upright, downleft, downright]	motion 5 degrees in the specified direction
pan	[-180 ~ 180]	Absolute pan degrees -180: pan left limit 180: pan right limit
tilt	[0 ~ 90]	Absolute tilt degrees 0: tilt down limit 90: tilt up limit
zoom	[1 ~ 9999]	Absolute zoom steps 1: zoom out limit 9999: zoom in limit
focus	[1 ~ 9999]	Absolute focus steps 1: focus far limit 9999: focus near limit
iris	[1 ~ 9999]	Absolute Iris steps 1: full Iris close 9999: full Iris open
brightness	[1 ~ 9999]	Absolute brightness steps 1: darker limit 9999: brighter limit Note: This argument is depend on hardware limit.
rpan	[-360 ~ 360]	Relative pan degrees > 0: pan right = 0: no change < 0: pan left
rtilt	[-90 ~ 90]	Relative tilt degrees > 0: tilt up = 0: no change < 0: tilt down
rzoom	[-9999 ~ 9999]	Relative zoom steps > 0: zoom in = 0: no change < 0: zoom out
rfocus	[-9999 ~ 9999]	Relative focus steps

		<p>> 0: focus far = 0: no change < 0: focus near Note: positive / negative value definition</p>
riris	[-9999 ~ 9999]	<p>Relative Iris steps > 0: Iris open = 0: no change < 0: Iris close</p>
rbrightness	[-9999 - 9999]	<p>Relative brightness steps > 0: brighter = 0: no change < 0: darker Note: This argument is depend on hardware limit.</p>
autofocus	[on, off]	<p>on: enable auto focus off: disable auto focus Note: This argument is depend on hardware limit.</p>
autoiris	[on, off]	<p>on: enable auto Iris off: disable auto Iris Note: This argument is depend on hardware limit.</p>
continuouspantiltmove	[-100 ~ 100],[-100 ~ 100]	<p>Continue pan & tilt motion speed percent > 0: pan right, tilt up = 0: stop < 0: pan left, tilt down Note: The value as speed percent</p>
continuouszoommove	[-100 ~ 100]	<p>Continue zoom motion speed percent > 0: zoom in = 0: stop < 0: zoom out Note: The value as speed percent</p>
continuousfocusmove	[-100 ~ 100]	<p>Continue focus motion speed percent > 0: focus near = 0: stop < 0: focus far Note: The value as speed percent</p>
continuousirismove	[-100 ~ 100]	<p>Continue Iris motion speed percent > 0: Iris open = 0: stop < 0: Iris close Note: The value as speed</p>

		percent
continuousbrightnessmove	[-100 ~ 100]	Continue brightness motion speed percent > 0: brighter = 0: stop < 0: darker Note: The value as speed percent Note: This argument is dependent on hardware limit.
gotoserverpresetname	<String> (31)	Note: This argument is dependent on hardware limit.
gotoserverpresetno	[0 -n]	Index 0 means home preset point. Note: This argument is dependent on hardware limit.
gotodevicepreset	[0 - n]	Index 0 means home preset point. Note: This argument is dependent on hardware limit.
speed	[1 - 100]	Relative pan & tilt motion speed percent. 1: slowest 100: fastest
imagerotation	[0, 90, 180, 270]	Pan rotation degrees quickly Note: This argument is dependent on hardware limit.
ircutfilter	[auto, on, off]	auto: enable auto IR-cut filter on: always enable IR-cut filter off: normal mode Note: This argument is dependent on hardware limit.
backlight	[on, off]	On: enable back light compensation off: disable back light compensation
query	[speed, position, presetposcam, presetposall]	speed: get relative pan & tilt motion speed percent position: get absolute pan & tilt degrees presetposcam: get camera ID presetposall: get all preset points

18.2.1 Relative Pan and Tilt Degrees Motion : Part 1 (emulated joystick mode)



Example :

The coordinates (x1,y1) will be the center point of the new image.

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] center=x1,y1 imagewidth=X imageheight=Y
Response	
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera • center: The relative coordinates (x1, y1) in the image. This information is used by IP camera to calculate the relative pan & tilt motion. • imagewidth : the width of image resolution • imageheight : the height of image resolution
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
center	[x,y]	Depend on image resolution
imagewidth		Depend on image resolution
imageheight		Depend on image resolution

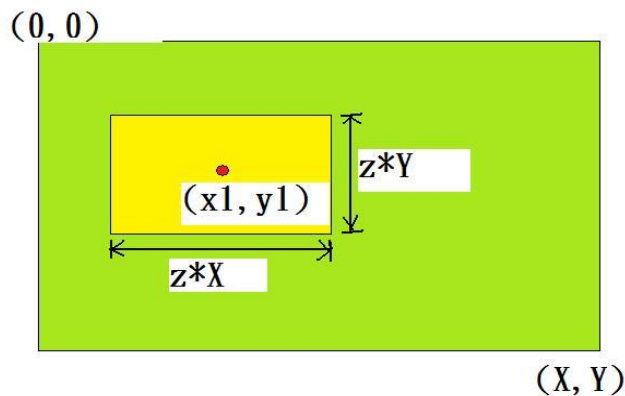
18.2.2 Relative Pan and Tilt Degrees Motion : Part 2

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] rpan= rtilt=
Response	

Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera rpan : relative pan degrees rtilt : relative tilt degrees
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
rpan	[-360 ~ 360]	Relative pan degrees > 0: pan right = 0: no change < 0: pan left
rtilt	[-90 ~ 90]	Relative tilt degrees > 0: tilt up = 0: no change < 0: tilt down

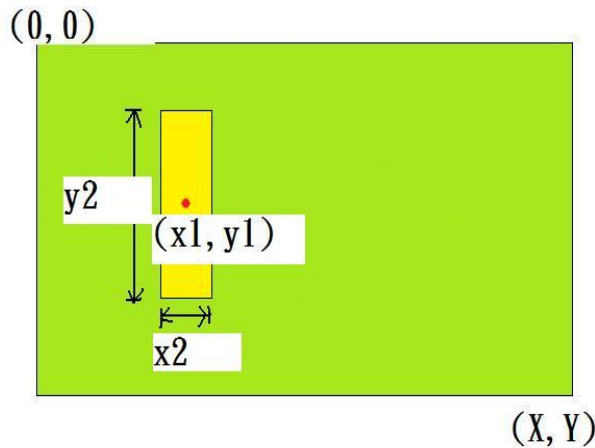
18.2.3 Relative Pan, Tilt, and Zoom Motion : Part 1



Example 1:

The coordinates (x1,y1) will be the center point of the inner rectangle. The inner rectangle will be **the** new image view range.

Example 2:



The coordinates (x1,y1) will be the center point of the inner rectangle. Let $(x2)^2 + (y2)^2 = z^2 * (X^2 + Y^2)$.
 The new image view range between example 1 and example 2 will be the same.

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] areazoom=x1,y1,100/z imagewidth=X imageheight=Y
Response Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera • areazoom: areazoom : The relative coordinates (x, y, zoom) in the image. This information is used by IP camera to calculate the relative pan & tilt motion. <ul style="list-style-type: none"> ➤ zoom : a factor of zoom / 100. ➤ Example : zoom in to 1/4 of the current field of view when zoom is 400. ➤ Example : zoom out to five times the current field of view when zoom is 20. • imagewidth : the width of image resolution • imageheight : the height of image resolution
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
areazoom	[x,y,zoom factor]	Depend on image resolution
imagewidth		Depend on image resolution
imageheight		Depend on image resolution

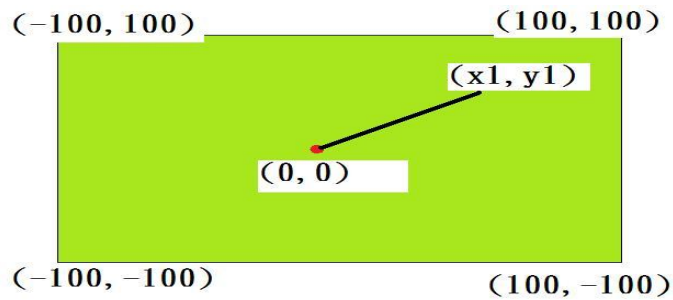
18.2.4 Relative Pan, Tilt, and Zoom Motion : Part 2

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] rpan= rtilt= tzoom=
Response	
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera • rpan : relative pan degrees • rtilt : relative tilt degrees • rzoom: relative zoom steps.
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
rpan	[-360 ~ 360]	Relative pan degrees > 0: pan right = 0: no change < 0: pan left
rtilt	[-90 ~ 90]	Relative tilt degrees > 0: tilt up = 0: no change < 0: tilt down
rzoom	[-9999 ~ 9999]	Relative zoom steps > 0: zoom in = 0: no change < 0: zoom out

18.2.5 Continuous Pan and Tilt Motion: Emulated Joystick Mode

Example :



The coordinates (x1,y1) will be the image position when the mouse button is pressed. The IP Camera will continue the pan and tilt until the mouse button is released.

Note: The x1 and y1 value will control continuous pan and tilt motion speed.

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] continuouspaniltmov=x1,y1
Response	
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera • continuouspaniltmov : continue pan & tilt motion speed percent
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
continuouspaniltmove	[-100 ~ 100],[-100 ~ 100]	Continue pan & tilt motion speed percent > 0: pan right, tilt up = 0: stop < 0: pan left, tilt down Note: The value as speed percent

18.2.6 Specified Pan and Tilt Direction Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] move=
Response	
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera

	<ul style="list-style-type: none"> • move : motion 5 degrees in the specified direction.
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
move	[home, up, down, left, right, upleft, upright, downleft, downright]	motion 5 degrees in the specified direction

18.2.7 Absolute Pan and Tilt Degrees Position

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera= pan= tilt=
Response	
Comment	<ul style="list-style-type: none"> • pan : absolute pan degrees • tilt : absolute tilt degrees
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
pan	[-180 ~ 180]	Absolute pan degrees -180: pan left limit 180: pan right limit
tilt	[0 - 90]	Absolute tilt degrees 0: tilt down limit 90: tilt up limit

18.2.8 Absolute Pan, Tilt, and Zoom Position

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...]

	Example: [camera=] pan= tilt= zoom=
Response	
Comment	<ul style="list-style-type: none"> • pan : absolute pan degrees • tilt : absolute tilt degrees • zoom : absolute zoom steps
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
pan	[-180 ~ 180]	Absolute pan degrees -180: pan left limit 180: pan right limit
tilt	[0 - 90]	Absolute tilt degrees 0: tilt down limit 90: tilt up limit
zoom	[1 - 9999]	Absolute zoom steps 1: zoom out limit 9999: zoom in limit

18.2.9 Get Absolute Pan and Tilt Degrees

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] query=position
Response	pan= tilt= zoom=
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera • pan : absolute pan degrees • tilt : absolute tilt degrees • zoom : absolute zoom steps
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
pan	[-180 ~ 180]	Absolute pan degrees -180: pan left limit

		180: pan right limit
tilt	[0 - 90]	Absolute tilt degrees 0: tilt down limit 90: tilt up limit
zoom	[1 - 9999]	Absolute zoom steps 1: zoom out limit 9999: zoom in limit

18.2.10 Absolute Focus Steps Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] focus=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera focus : absolute focus steps
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
focus	[1 - 9999]	Absolute focus steps 1: focus far limit 9999: focus near limit

18.2.11 Relative Focus Steps Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] rfocus=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera rfocus : relative focus steps zoom
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
rfocus	[-9999 ~ 9999]	Relative focus steps > 0: focus far = 0: no change < 0: focus near Note: positive / negative value definition

18.2.12 Absolute Iris Steps Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi	
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] iris=	
Response		
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera iris : absolute Iris steps 	
HTTP Method	GET/POST	

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
iris	[1 - 9999]	Absolute Iris steps 1: full Iris close 9999: full Iris open

18.2.13 Relative Iris Steps Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi	
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] riris=	
Response		
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera riris : relative Iris steps 	
HTTP Method	GET/POST	

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
iris	[-9999 ~ 9999]	Relative Iris steps > 0: Iris open = 0: no change < 0: Iris close

18.2.14 Absolute Brightness Steps Motion (Optional)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] brightness=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera brightness : absolute brightness steps
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
brightness	[1 - 9999]	Absolute brightness steps 1: darker limit 9999: brighter limit Note: This argument is dependent on hardware limit.

18.2.15 Relative Brightness Steps Motion (Optional)

Request	http://<IP>/cgi-bin/ptz.cgi? [camera=] rbrightness=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera rbrightness : relative brightness steps
Method	GET/POST

Argument	Valid values	Description
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camera	[0 - 255]	Note: only for video server
rbrightness	[-9999 ~ 9999]	Relative brightness steps > 0: brighter = 0: no change < 0: darker Note: This argument is dependent on hardware limit.

18.2.16 Continuous Zoom Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] continuouszoommove=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera continuouszoommove : continue zoom motion speed percent
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
continuouszoommove	[-100 ~ 100]	Continue zoom motion speed percent > 0: zoom in = 0: stop < 0: zoom out Note: The value as speed percent

18.2.17 Continuous Focus Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] continuousfocusmove=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera

	<ul style="list-style-type: none"> continuousfocusmove : continue focus motion speed percent
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
continuousfocusmove	[-100 ~ 100]	Continue focus motion speed percent > 0: focus near = 0: stop < 0: focus far Note: The value as speed percent

18.2.18 Continuous Iris Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] continuousirismove=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera continueirismove : continue Iris motion speed
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
continuousirismove	[-100 ~ 100]	Continue Iris motion speed percent > 0: Iris open = 0: stop < 0: Iris close Note: The value as speed percent

18.2.19 Continuous Brightness Motion

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] continuousbrightnessmove=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera continuousbrightnessmove : continue brightness motion speed

HTTP Method	GET/POST
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Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
continuousbrightnessmove	[-100 ~ 100]	Continue brightness motion speed percent > 0: brighter = 0: stop < 0: darker Note: The value as speed percent Note: This argument is dependent on hardware limit.

18.2.20 Set Auto Focus (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] autofocus=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera autofocus : enable/disable auto focus
HTTP Method	GET/POST

Argument	Valid values	Description
Camera	[0 - 255]	Note: only for video server
Autofocus	on, off	on: enable auto focus off: disable auto focus Note: This argument is dependent on hardware limit.

18.2.21 Set Auto Iris (Including AE, Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] autoiris=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera

	<ul style="list-style-type: none"> • autoiris : enable/disable auto Iris
HTTP Method	GET/POST

Argument	Valid values	Description
Camera	[0 - 255]	Note: only for video server
Autoiris	on, off	on: enable auto Iris off: disable auto Iris Note: This argument is dependent on hardware limit.

18.2.22 Set Relative Pan and Tilt Motion Speed Percent

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] speed=
Response	
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera • speed : pan & tilt motion speed percent. Used when relative pan & tilt motion.
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
speed	[1 - 100]	Relative pan & tilt motion speed percent. 1: slowest 100: fastest

18.2.23 Pan Rotation Quickly (Optional)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] imagerotation=
Response	
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera • imagerotation : pan rotation 0°/90°/180°/270° quickly
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
imagerotation	[0, 90, 180, 270]	Pan rotation degrees quickly Note: This argument is dependent on hardware limit.

18.2.24 IR-Cut Filter (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] ircutfilter=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera ircutfilter : auto/enable/disable IR-cut filter
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
ircutfilter	auto, on, off	auto: enable auto IR-cut filter on: always enable IR-cut filter off: normal mode Note: This argument is dependent on hardware limit.

18.2.25 Back Light Compensation (Optional; Not Supported)


URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] backlight=
Response	
Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera backlight : enable/disable back light compensation
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
backlight	on, off	On: enable back light compensation off: disable back light compensation

18.2.26 Go to Preset (Optional)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] gotoserverpresetname= [gotoserverpresetno=] [gotodevicepreset=]
Response	
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera • gotoserverpresetname : go to preset point name • gotoserverpresetno : go to preset point index • gotodevicepreset : go to preset point index. This argument is the same as gotoserverpresetno argument.
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
gotoserverpresetname	<String>	Note: This argument is dependent on hardware limit.
gotoserverpresetno	[0 - n]	Index 0 means home preset point. Note: This argument is dependent on hardware limit.
gotodevicepreset	[0 - n]	Index 0 means home preset point. Note: This argument is dependent on hardware limit.

 **Note:** If these arguments (gotoserverpresetname, gotoserverpresetno, gotodevicepreset) are not matched, the priority will be gotoserverpresetname > gotoserverpresetno > gotodevicepreset.

18.2.27 Get All Preset Points Position (Optional)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: [camera=] query=presetposall
Response	Preset Positions for camera %d presetposno0=preset name 1 presetposno1=preset name 2

Comment	<ul style="list-style-type: none"> camera : camera ID is dependent on protocol and ID switch of camera size : total preset points presetposno0, presetposno1, presetposno2 ... : preset point index Note: Preset point index 0 is home position.
HTTP Method	GET/POST

Argument	Valid values	Description
camera	[0 - 255]	Note: only for video server
query	Presetposall	
presetposno0, presetposno1, presetposno2, ...	[0 - n]	

18.3 Set Aperture (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	aperture=
Response	
Comment	<ul style="list-style-type: none"> aperture : aperture percent
HTTP Method	POST

Argument	Valid values	Description
aperture	[0 - 100]	aperture percent

18.4 Set Picture Freeze (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	ImageFreeze=
Response	
Comment	<ul style="list-style-type: none"> ImageFreeze : freeze on/off
HTTP Method	POST

Argument	Valid values	Description
ImageFreeze	on, off	on: disabled (default) off: enabled auto: only for preset points

18.5 Set WDR (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	wdr=
Response	

Comment	<ul style="list-style-type: none"> wdr : WDR on/off
HTTP Method	POST

Argument	Valid values	Description
wdr	on, off	on: disabled (default) off: enabled

18.6 Set Stability (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	stability=
Response	
Comment	<ul style="list-style-type: none"> Stabilizer : stability on/off
HTTP Method	POST

Argument	Valid values	Description
Stabilizer	on, off	on: disabled (default) off: enabled

18.7 Reset to Default (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	action=reset
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
action	Reset	

18.8 Alarm Ack (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptz.cgi
HTML Body	alarm=
Response	
Comment	<ul style="list-style-type: none"> alarm : alarm number
HTTP Method	POST

Argument	Valid values	Description
alarm	[0 - n]	

18.9 QueueControl (Optional; Not Supported)

URL Syntax	http://<IP>/cgi-bin/ptzqueue.cgi
HTML Body	control=
Response	
Comment	<ul style="list-style-type: none">➤ “request” requests PTZ control.➤ “drop” drops the PTZ control or leaves the queue.➤ “query” reports the current status for the client.• Note: For possessing clients with no peers existing in the queue, “request” will reset the control timer. For all other clients, “request” will have the same effect as “query”.
HTTP Method	POST

Argument	Valid values	Description
control	request drop query	

15. Preset and Patrol

Preset and Patrol API allows applications to

- 1) View/configure the settings of the Preset and Patrol function control.
- 2) Configure the settings of the auto-pan and auto-scan function control.

19.1 Preset (Optional)



Note:

- I. Preset points settings depend on the hardware limit.
- II. Preset point index 0 is reserved for the home preset position.

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	<p>[&<argument>=<value>&<argument>=<value>...]</p> <p>Example:</p> <p>[camera=]</p> <p>[setserverpresetname=]</p> <p>[setserverpresetno=]</p> <p>[home=]</p> <p>[removeserverpresetname=]</p> <p>[removeserverpresetno=]</p> <p>[setdevicepreset=]</p> <p>[setserverpresetidle=]</p>
Response	
Comment	<ul style="list-style-type: none"> • camera : camera ID is dependent on protocol and ID switch of camera. • setserverpresetname : preset point name string which is added. • setserverpresetno : preset point index which is added. • home : Make the current position as home preset point • removeserverpresetname : preset point name string which is removed • removeserverpresetno : preset point index which is removed • setdevicepreset : preset point index which is added. This argument is the same as setserverpresetno. • setserverpresetidle : When idle time arrives, go to the home preset point. This argument is only used for home preset point settings.

HTTP Method	POST
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Argument	Valid values	Description
camera	[0 - 255]	
setserverpresetname	<String> (31)	
setserverpresetno	[1 - n]	
home	yes	
removeserverpresetname	<String> (31)	
removeserverpresetno	[1 - n]	
setdevicepreset	[1 - n]	
setserverpresetidle	[0 - 65535]	Unit is seconds. Note: 0 will disable idle time counter.

19.1.1 New Preset Point Position

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: setserverpresetname=
Response	
Comment	<ul style="list-style-type: none"> • setserverpresetname : preset point name string which is added.
HTTP Method	POST

Argument	Valid values	Description
setserverpresetname	<String> (31)	

19.1.2 New Home Position

 **Note:** The home position is saved as preset point index 0.

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: setserverpresetname= home=yes [setserverpresetidle=]
Response	
Comment	<ul style="list-style-type: none"> • setserverpresetname : preset point name string which is added. • home : Make the current position as home preset point • setserverpresetidle : When idle time is arrived, go to the


	<p>home preset point. This argument is only used for home preset point settings.</p> <ul style="list-style-type: none"> • Note: If new non-home preset point (home = no), this argument will be ignored.
HTTP Method	POST

Argument	Valid values	Description
setserverpresetname	<String> (31)	
home	Yes	
setserverpresetidle	[0 - 65535]	Unit is seconds. Note: 0 will disable idle time counter.

19.1.3 Modify Preset Point Position

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	<p>[&<argument>=<value>&<argument>=<value>...]</p> <p>Example:</p> <p>[setserverpresetname=] setserverpresetno= [setdevicepreset=] [setserverpresetidle=]</p>
Response Comment	<ul style="list-style-type: none"> • setserverpresetname : preset point name string which is modified. • setserverpresetno : preset point index which is modified. • setdevicepreset : preset point index which is modified. This argument is the same as setserverpresetno. • setserverpresetidle : When idle time arrives, go to the home preset point. This argument is only used for home preset point settings. • Note: If modify non-home preset point (setserverpresetno != 0), this argument will be ignored.
HTTP Method	POST

Argument	Valid values	Description
setserverpresetname	<String> (31)	
setserverpresetno	[0 - n]	Preset point idnex 0 is home position.
setdevicepreset	[0 - n]	
setserverpresetidle	[0 - 65535]	Unit is seconds. Note: 0 will disable idle time counter.

 **Note:** If arguments setserverpresetname, setserverpresetno, and setdevicepreset do not map to the same preset point, the preset point to use will be setserverpresetno > setdevicepreset >

setserverpresetname in order of preference.

19.1.4 Remove Preset Point Position

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: removeserverpresetname= [removeserverpresetno=]
Response	
Comment	<ul style="list-style-type: none"> • removeserverpresetname : preset point name string which is removed • removeserverpresetno : preset point index which is removed
HTTP Method	POST

Argument	Valid values	Description
removeserverpresetname	<String> (31)	
removeserverpresetno	[0 - n]	Preset point idnex 0 is home position.

Note: If arguments removeserverpresetname and removeserverpresetno do not map to the same preset point, the preset point mapped by removeserverpresetname will be used in preference to removeserverpresetno for this operation.

19.1.5 Go to Preset Point Position

See chapter PTZ → PTZ control → Go to Preset Point Position

19.1.6 Get All Preset Points

See chapter PTZ → PTZ control → Get All Preset Points Position

19.2 Auto-Scan (Optional): Not Supported

19.2.1 Starting Auto-Scan (Pan Patrol)

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=startscan name=

Response	
Comment	Associates the current tilt position as auto scan line. <ul style="list-style-type: none"> • action : • name : auto scan line name
HTTP Method	POST

Argument	Valid values	Description
action	Startscan	
name	<String> (31)	

19.2.2 Stopping Auto-Scan (Pan Patrol)

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=stopscan
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
action	Stopscan	

19.2.3 Adding a Starting Point to Auto-Pan (Pan Patrol between Two Points)

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=addpan1 name=
Response	
Comment	Associates the current position as a starting position of auto pan. <ul style="list-style-type: none"> • action : name : auto pan line name
HTTP Method	POST

Argument	Valid values	Description
action	addpan1	
name	<String> (31)	

19.2.4 Adding an Ending Point to Auto-Pan (Pan Patrol between Two Points)

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=addpan2 name=
Response	
Comment	Associates the current position as an ending position of auto pan. <ul style="list-style-type: none"> • action : name : auto pan line name
HTTP Method	POST

Argument	Valid values	Description
action	addpan1	
name	<String> (31)	

19.3 Auto-Pan (Pan Patrol between Two Points, Optional) : Not Supported

19.3.1 Starting Auto-Pan (Pan Patrol between Two Points)

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=startpan name= speed= direction=
Response	
Comment	<ul style="list-style-type: none"> • Camera : camera ID • name : auto pan line name • speed : auto pan speed percent • direction: pan direction is right or left.
HTTP Method	POST

Argument	Valid values	Description
action	Startpan	
name	<String> (31)	
speed	[0,100]	Auto pan speed percent 0: slowest 100: fastest
direction	[0,1]	0: pan right 1: pan left

19.3.2 Stopping auto pan (pan patrol between two points)

URL Syntax	http://<IP>/cgi-bin/ptzconfig.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=stoppan
Response	
Comment	
HTTP Method	POST

Argument	Valid values	Description
action	Stoppan	

19.4 Preset Patrol (Optional)

19.4.1 New Preset Patrol

URL Syntax	http://<IP>/cgi-bin/param.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=update root_GuardTour_G0_Name= [root_GuardTour_G0_RandomEnabled=] root_GuardTour_G0_TimeBetweenSequences= root_GuardTour_G0_Tour_T0_PresetNbr= root_GuardTour_G0_Tour_T0_MoveSpeed= root_GuardTour_G0_Tour_T0_WaitTime= root_GuardTour_G0_Tour_T0_WaitTimeViewType= root_GuardTour_G0_Tour_T0_Position= root_GuardTour_G0_Tour_T1_PresetNbr= root_GuardTour_G0_Tour_T1_MoveSpeed= root_GuardTour_G0_Tour_T1_WaitTime= root_GuardTour_G0_Tour_T1_WaitTimeViewType= root_GuardTour_G0_Tour_T1_Position= root_GuardTour_G0_Tour_T2_PresetNbr= root_GuardTour_G0_Tour_T2_MoveSpeed= root_GuardTour_G0_Tour_T2_WaitTime= root_GuardTour_G0_Tour_T2_WaitTimeViewType=

	root_GuardTour_G0_Tour_T2_Position=
Response Comment	<ul style="list-style-type: none"> • action : • root_GuardTour_G0_Name : preset patrol line name • root_GuardTour_G0_RandomEnabled : random view order • root_GuardTour_G0_TimeBetweenSequences : preset patrol pause time before running again. • root_GuardTour_G0_Tour_T0_PresetNbr, root_GuardTour_G0_Tour_T1_PresetNbr, root_GuardTour_G0_Tour_T2_PresetNbr, ... : preset point index for this view point of preset patrol line. • root_GuardTour_G0_Tour_T0_MoveSpeed, root_GuardTour_G0_Tour_T1_MoveSpeed, root_GuardTour_G0_Tour_T2_MoveSpeed, ... : motion speed for this view point of preset patrol line. • root_GuardTour_G0_Tour_T0_WaitTime, root_GuardTour_G0_Tour_T1_WaitTime, root_GuardTour_G0_Tour_T2_WaitTime, ... : dwell time for this view point of preset patrol line. • root_GuardTour_G0_Tour_T0_WaitTimeViewType, root_GuardTour_G0_Tour_T1_WaitTimeViewType, root_GuardTour_G0_Tour_T2_WaitTimeViewType, ... : dwell time unit for this view point of preset patrol line. • root_GuardTour_G0_Tour_T0_Position, root_GuardTour_G0_Tour_T1_Position, root_GuardTour_G0_Tour_T2_Position, ... : view point order for this view point of preset patrol line.
HTTP Method	POST

Argument	Valid values	Description
Action	update	
root_GuardTour_G0_Name	<String> (31)	
root_GuardTour_G0_RandomEnabled	no, yes	Note: depend on H/W support
root_GuardTour_G0_TimeBetweenSequences	[0 - 9999]	Unit is minutes.
root_GuardTour_G0_Tour_T0_PresetNbr, root_GuardTour_G0_Tour_T1_PresetNbr, root_GuardTour_G0_Tour_T2_PresetNbr, ...	[0 - n]	
root_GuardTour_G0_Tour_T0_MoveSpeed, root_GuardTour_G0_Tour_T1_MoveSpeed, root_GuardTour_G0_Tour_T2_	[1 - 100]	

MoveSpeed, ...		
root_GuardTour_G0_Tour_T0_WaitTime, root_GuardTour_G0_Tour_T1_WaitTime, root_GuardTour_G0_Tour_T2_WaitTime, ...	[1 - 3600]	Note: max 3600 seconds
root_GuardTour_G0_Tour_T0_WaitTimeViewType, root_GuardTour_G0_Tour_T1_WaitTimeViewType, root_GuardTour_G0_Tour_T2_WaitTimeViewType, ...	[Seconds, Minutes]	
root_GuardTour_G0_Tour_T0_Position, root_GuardTour_G0_Tour_T1_Position, root_GuardTour_G0_Tour_T2_Position, ...	[1 - n]	Note: the view order must be in ascending order starting with 1.

19.4.2 Modify Preset Patrol

URL Syntax	http://<IP>/cgi-bin/param.cgi
HTML Body	<p>[&<argument>=<value>&<argument>=<value>...]</p> <p>Example:</p> <p>action=update</p> <p>group=</p> <p>root_GuardTour_G0_Name= [root_GuardTour_G0_RandomEnabled=] root_GuardTour_G0_TimeBetweenSequences= root_GuardTour_G0_Tour_T0_PresetNbr= root_GuardTour_G0_Tour_T0_MoveSpeed= root_GuardTour_G0_Tour_T0_WaitTime= root_GuardTour_G0_Tour_T0_WaitTimeViewType= root_GuardTour_G0_Tour_T0_Position= root_GuardTour_G0_Tour_T1_PresetNbr= root_GuardTour_G0_Tour_T1_MoveSpeed= root_GuardTour_G0_Tour_T1_WaitTime= root_GuardTour_G0_Tour_T1_WaitTimeViewType= root_GuardTour_G0_Tour_T1_Position= root_GuardTour_G0_Tour_T2_PresetNbr= root_GuardTour_G0_Tour_T2_MoveSpeed= root_GuardTour_G0_Tour_T2_WaitTime=</p>

	root_GuardTour_G0_Tour_T2_WaitTimeViewType= root_GuardTour_G0_Tour_T2_Position=
Response Comment	<ul style="list-style-type: none"> • action : • group : preset patrol line index • root_GuardTour_G0_Name : preset patrol line name • root_GuardTour_G0_RandomEnabled : random view order • root_GuardTour_G0_TimeBetweenSequences : preset patrol pause time before running again. • root_GuardTour_G0_Tour_T0_PresetNbr, root_GuardTour_G0_Tour_T1_PresetNbr, root_GuardTour_G0_Tour_T2_PresetNbr, ... : preset point index for this view point of preset patrol line. • root_GuardTour_G0_Tour_T0_MoveSpeed, root_GuardTour_G0_Tour_T1_MoveSpeed, root_GuardTour_G0_Tour_T2_MoveSpeed, ... : motion speed for this view point of preset patrol line. • root_GuardTour_G0_Tour_T0_WaitTime, root_GuardTour_G0_Tour_T1_WaitTime, root_GuardTour_G0_Tour_T2_WaitTime, ... : dwell time for this view point of preset patrol line. • root_GuardTour_G0_Tour_T0_WaitTimeViewType, root_GuardTour_G0_Tour_T1_WaitTimeViewType, root_GuardTour_G0_Tour_T2_WaitTimeViewType, ... : dwell time unit for this view point of preset patrol line. • root_GuardTour_G0_Tour_T0_Position, root_GuardTour_G0_Tour_T1_Position, root_GuardTour_G0_Tour_T2_Position, ... : view point order for this view point of preset patrol line.
HTTP Method	POST

Argument	Valid values	Description
Action	update	
Group	group=GuardTour.G0, group=GuardTour.G1, group=GuardTour.G2,	
root_GuardTour_G0_Name	<String> (31)	
root_GuardTour_G0_RandomEnabled	[no, yes]	Note: depend on H/W support
root_GuardTour_G0_TimeBetweenSequences	[0 - 9999]	Unit is minutes.
root_GuardTour_G0_Tour_T0_PresetNbr, root_GuardTour_G0_Tour_T1_PresetNbr, root_GuardTour_G0_Tour_T2_PresetNbr	[0 - n]	

resetNbr, ...		
root_GuardTour_G0_Tour_T0_MoveSpeed, root_GuardTour_G0_Tour_T1_MoveSpeed, root_GuardTour_G0_Tour_T2_MoveSpeed, ...	[1 - 100]	
root_GuardTour_G0_Tour_T0_WaitTime, root_GuardTour_G0_Tour_T1_WaitTime, root_GuardTour_G0_Tour_T2_WaitTime, ...	[1 - 3600]	Note: max 3600 seconds
root_GuardTour_G0_Tour_T0_WaitTimeViewType, root_GuardTour_G0_Tour_T1_WaitTimeViewType, root_GuardTour_G0_Tour_T2_WaitTimeViewType, ...	[Seconds, Minutes]	
root_GuardTour_G0_Tour_T0_Position, root_GuardTour_G0_Tour_T1_Position, root_GuardTour_G0_Tour_T2_Position, ...	[1 - n]	Note: the view order must be in ascending order starting with 1.

Note: If these arguments (group and root_GuardTour_G0_Name) are not matched, the argument priority will be group > root_GuardTour_G0_Name.

19.4.3 Remove Preset Point

URL Syntax	http://<IP>/cgi-bin/param.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=remove group=
Response	
Comment	<ul style="list-style-type: none"> • action : • group : preset patrol line index
HTTP Method	POST

Argument	Valid values	Description
action	remove	
group	root.GuardTour.G0, root.GuardTour.G1, root.GuardTour.G2,	

19.4.4 Go to Preset Patrol

URL Syntax	http://<IP>/cgi-bin/param.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=go group=root.GuardTour.G0
Response	
Comment	<ul style="list-style-type: none"> • action : • group : preset patrol line index
HTTP Method	POST

Argument	Valid values	Description
Action	go	
Group	root.GuardTour.G0, root.GuardTour.G1, root.GuardTour.G2,	

19.5 Stop Preset Patrol

URL Syntax	http://<IP>/cgi-bin/param.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=stop group=root.GuardTour.G0
Response	
Comment	<ul style="list-style-type: none"> • action : • group : preset patrol line index
HTTP Method	POST

Argument	Valid values	Description
Action	stop	
Group	root.GuardTour.G0, root.GuardTour.G1, root.GuardTour.G2,	

19.6 Record Patrol (Optional) : Not Supported

19.6.1 Start Recording Patrol Line

URL Syntax	http://<IP>/cgi-bin/patrol.cgi
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HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=set name=
Response	
Comment	Use this function to start to record the patrol line setting. <ul style="list-style-type: none"> • Action : • name : recording patrol line name
HTTP Method	POST

Argument	Valid values	Description
action	Set	
name	<String> (31)	

19.6.2 Stop Recording Patrol Line

Request	http://<IP>/cgi-bin/patrol.cgi? action=end
Response	
Comment	Use this function to stop to record the patrol line setting. <ul style="list-style-type: none"> • action :
Method	POST

Argument	Valid values	Description
action	End	

19.6.3 Go to Record Patrol Line

URL Syntax	http://<IP>/cgi-bin/patrol.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=go name=
Response	
Comment	Use this function to start to record the patrol line setting. <ul style="list-style-type: none"> • Action : • name : recording patrol line name
HTTP Method	POST

Argument	Valid values	Description
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action	Go	
name	<String> (31)	

19.6.4 Stop Recording Patrol Line

URL Syntax	http://<IP>/cgi-bin/patrol.cgi
HTML Body	[&<argument>=<value>&<argument>=<value>...] Example: action=stop
Response	
Comment	Use this function to stop to record the patrol line setting.
HTTP Method	POST

Argument	Valid values	Description
action	Stop	

16. Modification History

Revision	Date	Originator	Comments
0		Steve	Initial version 1.0
1	2009/9/9	Kenny	add API: 1.getSnapshot 2.getRtsp and setRtsp 3.getVideoCodecs getResolutions getAudioCodecs 4.getinboundChannel 5.Event Notify to HttpServer modify API: 1.getcapability 2.setAudioDevice 3.setGPIOSetting getGPIOStatus
2	2009/9/28	Kenny	1. Remove parameter level from whiteBalance Structure. 2. Add SshutterSpeedSetting and SgainSetting structure and api 3. Modify getCameraSetting and setCameraSetting
3	2009/11/12	Kenny	1. Add PTZ API and parameter 2. Check other API and parameter.
4	2009/11/17	Kenny	1. Modify IO control error. 2. Modify AppendixA InboundChanel url error
5	2009/11/18	Kenny	1. Add IO control information table.
6	2009/11/27	Kenny	1. Modify setCameraSetting getCameraSetting setEffect getEffect API
7	2010/2/2	Gimmy	1. add Intelligence API
8	2010/2/11	kenny	1. 5.13 setVideoRecord 2. 5.14 getVideoRecord 3. 6.19 setIRCutFilter 4. 6.20 getIRCutFilter 5. 6.27 setCameraSetting 6. 6.28 getCameraSetting 7. 6.35 setlightSensor 8. 6.36 getlightSensor 9. 8.13 setWPSBtEnabled 10. 10.8 setOperationSetting 11. 10.9 getOperationSetting 12. 15.3 triggerDO 13. 15.4 turnAllLedOff
	2010/06/29		1. Add PTZ and Preset chapters

17. AppendixA RTSP

This document specifies the external RTSP-based application programming interface of the camera and video servers. The RTSP URL is `rtsp://<server name>/channelX` where `<server name>` is the IP address of the server. The DESCRIBE, SETUP, OPTIONS, PLAY, PAUSE and TEARDOWN methods are supported. The RTSP protocol is described in RFC 2326.