

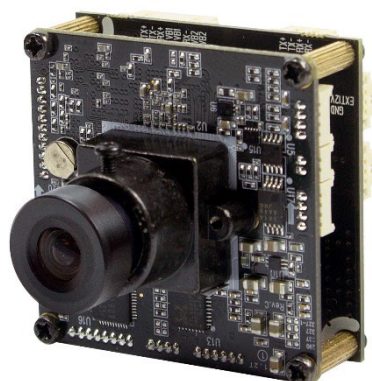


HTTP API

24M2.17IP

Revision B

02/23/2022



24M2.17IP

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1. Overview

1.1. Description

This document specifies the external HTTP-based API (Application Programming Interface) of the NVT (Network Video Transmitter)

This HTTP-based application programming interface provides the functionality for requesting single and multi-part images and for getting and setting internal parameter values. The image and requests are handled by the built-in web server

1.2. History

Version	Date	Comment
2.00	2015-12-14	Renewal API
2.01	2016-Jan-15	Change config.txt - remove model_customer field. Use only model field. Fix some typo text
2.02	2016-Jan-20	Change video_src format from WIDTHxHEIGHT@FRAMERATE to WIDTHxHEIGHT_FRAMERATE
2.03	2016-May-15	Add smart IR (dnn_smart_ir) API Add slow shutter(sense-up) API Add PTZ control command Add PTZ preset and device API
2.04	2017-July-17	Add video STREAM security API Add VCA event trigger API Add timer event trigger API Add day and night event trigger API Add export configuration security API Add notification event action API Add remove_user parameter to user.php Add video_snapshot_source parameter to stream.php Add night image appearance parameter (brightness_night/contrast_night/saturation_night)
2.05	2018-Apr-10	Add Playback API
2.06	2018-May-21	Support Hisilicon Platform (H Series)
2.07	2018-Nov-20	Add DIS API
2.08	2018-Dec-04	Add HTTPS redirect, Log Server and 4 Eyes Principle
2.09	2019-July-22	Add Fisheye API and HTTP digest login
2.10	2019-Oct-22	Add Preset and Tour
2.11	2020-May-17	Update Fisheye API to support fisheye zoom.
2.12	2020-July-23	Add pushaf parameter in ptz focus control
2.13	2020-Aug-04	Add get/set zoom position API in ptz control
2.18	2021-Feb-03	Update Event Map
2.19	2021-Feb-18	Add OSD position/size control
2.20	2021-Feb-26	Update Event Map

2. Syntax and Resources

2.1. General syntax

In URL syntax and descriptions, angle brackets denote content that should be replaced with either a value or a string. For example, <server_address> **MUST** be replaced by the string server IP address or host name.

The basic parameter for operation is 'app'.

Expression	Value	Description
app= <value>	get, set	Get the value of each parameter Set the parameter with value

Request syntax:

```
http://<server_address>/  
    <function directory>/  
    <PHP_URI>.<extension>?  
    [<parameter>= <value> [&<parameter>= <value>]...]
```

Response syntax:

```
res= <code> [[&<parameter>= <value>] [&<parameter>= <value>]...]
```

2.2. Return Value

If the request has succeeded, it returns '200 OK'. Otherwise, it returns specific error code, for example 400 (RFC 2616). The 4xx class of status code is intended for cases in which the client seems to have erred. The request could not be understood by the server due to malformed syntax or unavailable resource. It returns '400 Bad Request'. Some resources require user authentication. In case the request could not be accessed by the user authentication level, it MAY return one of these: '401 Unauthorized', '403 Forbidden', '404 Not Found' and '405 Method Not Allowed'.

Returned parameters are delimited by special character '&' (26h). They MAY have list of values. Some of list are delimited by special character '|' (7Ch) or '\n' (ah).

2.3. Resources

[Table 2- 1] Group(Path) of resources

Resource		PHP	Description
Video & Image (/setup/video)		/source.php	Video source(capture) setting
		/stream.php	Video stream(encoder) setting
		/image.php	Image appearance setting
		/pmask.php	Privacy Mask setting
		/digital_zoom.php	Digital Zoom setting
		/dis.php	Digital Image Stabilizer setting
		/fisheye.php	Fisheye setting
Audio (/setup/audio)		/audio.php	Audio encoder/decoder setting
Event (/setup/event)	Trigger (/trigger)	/tamper.php	Video tampering setting
		/motion.php	Video motion detection setting
		/vca,php	VCA setting
		/alarmin.php	Alarm input trigger setting
		/manual.php	Manual trigger setting
		/network.php	Network disconnect trigger setting
		/system.php	System booting trigger setting
		/timer.php	Timer trigger setting
		/daynight.php	DayNight change trigger setting
	Action (/action)	/alarmout.php	Alarm output setting
		/email.php	E-mail(SMTP) setting
		/ftp.php	FTP and JPEG server setting
		/record.php	Event recording setting
		/video.php	Video boost setting
		/notification.php	Notification to server setting
	Rule (/rule)	/map.php	Event processing setting (Add/Modify/Delete event map)
		/onvif.php	ONVIF event mapping setting
PTZ (/setup/ptz)		/control.php	PTZ control setting
Record		/record.php	Record setting

(/setup/record)			
System (/setup/system)	Security (/security)	/user.php	User (Add/Modify/Delete) setting
		/https.php	HTTP/HTTPS connection setting
		/ipfilter.php	IP filtering (allow/deny) setting
		/onvif.php	ONVIF(WS Security) setting
	Network (/network)	/tcpip.php	IPv4 TCP/IP setting (IP,Subnet,Gateway,DNS,Port, ...)
		/ddns.php	DDNS server setting
		/rtp.php	RTP and multicast setting
		/upnp.php	UPNP setting
		/zeroconf.php	Zeroconf setting
		/bonjour.php	Bonjour setting
	-	/restart.php	Restart the device
		/reset.php	Reset all parameters, except the IP parameters
		/time.php	Date and time setting
		/default.php	Reset all parameters to the factory settings
		/update.php	Upgrade the device with the new firmware
		/backup.cgi	Backup current configurations to the file
		/restore.cgi	Restore configurations from backup file

3. Login

3.1. HTTP Digest

All HTTP API requests are based on the HTTP digest. It means, in every time when client device sends a request to server (IP Camera), all HTTP requests(GET/POST/etc) message have to get "Authenticate:" field in the header of HTTP request.

Login follows the spec. of HTTP Digest Login.

3.2. Hash algorithm

MD5 is used for encryption of password in the HTTP digest.

3.3. Digest way.

3.3.1. How to use hash algorithm

ha1 = MD5("\$username:\$realm:\$password")

ha2 = MD5("\$method:\$uri")

encrypted password(response) = MD5("\$ha1:\$nonce:\$nc:\$cnonce:\$qop:\$ha2")

It consists of 2 steps

3.3.2. First step

1) Getting 'realm' / 'qop' / 'nonce' / 'opaque' from sever

For getting authenticate initial parameters from server, just send HTTP request like in the syntax below which refers to '[Table 2-1](#) Group(Path) of resource'

Syntax:

```
http://<server_address>/setup/<resource path>/<php file path>?app=(get|set)
```

Example: fisheye resource

```
http://<server_address>/setup/video/fisheye?app=get
```

Example) HTTP digest 'Request' Message at the first step

```
GET /setup/video/fisheye.php?app=get HTTP/1.1
Host: 192.168.0.55
Connection: close
```

Example) HTTP digest '*Response*' Message:

```
x-content-security-policy:allow 'self'
x-frame-options:SAMEORIGIN
x-content-type-options:nosniff
expires:Thu, 19 Nov 1981 08:52:00 GMT
cache-control:no-store, no-cache, must-revalidate
pragma:no-cache
set-cookie:PHPSESSID=deleted; expires=Thu, 01-Jan-1970 00:00:01 GMT; Max-Age=0; path=/
www-authenticate:Digest realm="ICB-
12MFishEye",qop="auth",nonce="5d35f0adef395",opaque="06af8c5becfd25a36a81b2fd954c9b95"
content-type:text/html; charset=UTF-8
content-length:0
connection:close
date:Mon, 22 Jul 2019 17:21:49 GMT
server:WintenDo
```

3.3.3. Second step

1) Sending a request with encrypted password by MD5

Password is encrypted by MD5 hash algorithm based on HTTP digest way so that HTTP digest function generates a 'response' with password and some parameters, which are generated by the client and server (realm' & 'qop' & 'nonce' & 'opaque'" and "username & password & nc & cnonce & uri).

Encrypted password is called 'response' in HTTP digest and it is written into HTTP request message as 'Authenticate' field when sending a request to server.

Syntax:

```
http://<server_address>/setup/<resource path>/<php file
path>?app=(get|set)[[&<parameter>=<value>]...]
```

Example: fisheye resource

```
http://<server address>/setup/video/fisheye?app=set&fisheye\_mount\_type=wall&fisheye\_pane\_layout=1p
```

Example) HTTP digest *Request* Message:

```
GET /setup/video/fisheye.php?app=set&fisheye_mount_type=wall&fisheye_pane_layout=1panorama
HTTP/1.1
Authorization: Digest realm="ICB-
12MfishEye",qop="auth",nonce="5d36f2c4bf83e",opaque="06af8c5becfd25a36a81b2fd954c9b95",
username="admin", algorithm=MD5, nc=00000001, cnonce="5d2ea62900000022",
response="0d385f9e7a49a5d11578e30e3c742ccd", uri="/config.txt"
```

Host: 192.168.0.55
Connection: close

[Table 3- 0] Mandatory item list in HTTP digest request

Item list	Parameter	Description
realm	Character string	From server
nonce	Hex number	From server
qop	'auth'	From server
opaque	Hex number	From server
username	User ID	Set by client
algorithm	MD5	Set by client
cnonce	Hex number	Set by client
uri	'/config.txt'	Set by client
response	Generated from upper items	Set by client

3.3.4. After success of request

If HTTP digest request successes then client can use 'realm' & 'nonce' & 'qop' & 'opaque' until the request fails, and if request fails then client should try to do the steps from the beginning again.

4. API Groups

4.0. Information

This CGI request is to get the camera information.

Syntax:

```
http://<server_address>/setup/info.php?app=get
```

Example: Request of getting the video source parameters and values

```
http://192.168.0.10/setup/info.php?app=get
```

[Table 3- 1] Parameters of information

Argument	Type	Mode	Description [Value]
manufacturer	string	RO	Camera manufacturer
model	string	RO	Camera model number
firmware	string	RO	Firmware version number
mac	string	RO	Device MAC address [00:18:EE:FF:FF:FF]
ip_address	string	RO	Device IP address [192.168.x.x]
linklocal_address	string	RO	Device link local address [169.254.x.x]
video_mode	string	RO	Analog output mode ["NTSC", "PAL"]
tm	string	RO	Time [hh:mm:ss] (24hr time)
dt	string	RO	Date [yyyy-mm-dd]

4.1. Video & Image

The Video & Image CGI request is to configure custom video encoder and image appearances.

4.1.1. Source

This CGI request is to get and set the video source parameters and values.

Syntax:

```
http://<server_address>/setup/video/source.php?app=(get|set)
```

Example: Request of getting the video source parameters and values

```
http://192.168.0.10/setup/video/source.php?app=get
```

[Table 3- 2] Parameters of video source

Argument	Type	Mode	Description [Value]
video_src_list_ntsc	string	RO	Supported NTSC video source list
video_src_list_pal	string	RO	Supported PAL video source list=
video_src	string	RW	Current video source mode [4000x3000_20fps] [3840x2160_30fps] [3840x2160_25fps] [2560x1944_30fps] [2560x1944_25fps] [2048x1536_30fps] [2048x1536_25fps] [1920x1080_30fps] [1920x1080_25fps]
video_mode	String	RW	Current video signal mode [NTSC], [PAL]

4.1.2. Stream

This CGI request is to get and set the video stream parameters and values.

Syntax:

```
http://<server_address>/setup/video/stream.php?app=(get|set)
```

Example: Request of getting the video stream parameters and values

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```
http://192.168.0.10/setup/video/source.php?app=get
```

Response of setting stream parameters and values

```
res=200&valid=1
```

[Note]

1. The 'valid' value set to 1 when the requested resolution and frame rate are valid.
2. If the 'valid' value is 0, then the video resolution and frame rate will be reset to the best condition.

[Table 3- 3] Parameters of video stream

Argument	Type	Mode	Description [Value]
video_enc_cnt	integer	RO	Total video encoder count
video_enc#_codec_list	string	RO	Supported video codec and profile list
video_enc#_res_list	string	RO	Supported video resolution list
video_enc#_fps_list	integer	RO	Supported video frame rate list
video_enc#_ratecontrol_list	string	RO	Supported video rate control list
video_enc#_maxbr	integer	RO	Available maximum bit rate (Kbps)
video_enc#_minbr	integer	RO	Available minimum bit rate (Kbps)
video_enc#_maxgov	integer	RO	Available maximum GOV
video_enc#_mingov	integer	RO	Available minimum GOV
video_enc#_enable	boolean	RO	Current video encoder state of

			running [1] : Enabled (running) [0] : Disabled (not running)
video_enc#_codec	string	RW	Video codec and profile [H265MP] : H.265 Main Profile [H264HP] : H.264 High Profile [H264MP] : H.264 Main Profile [H264BP] : H.264 Base Profile [MJPEG] : Motion JPEG
video_enc#_res	string	RW	Video resolution (WIDTHxHEIGHT) [4000x3000] ~ [320x180]
video_enc#_fps	integer	RW	Video frame rate [30] ~ [1]
video_enc#_bitrate	integer	RW	Video bit rate (kbps) [video_enc#_minbr ~ video_enc#_maxbr]
video_enc#_ratecontrol	string	RW	Video bit rate control mode [cbr] : Constant Bit-Rate Control [vbr] : Variable Bit-rate Control
video_enc#_gov	integer	RW	Video GOV [video_enc#_mingov ~ video_enc#_maxgov]

video_enc#_bitrate_quality	integer	RW	Video Bitrate Quality [10] ~ [1]
video_snapshot_source	string	RW	The source of JPEG snapshot stream [stream1] : Use stream1 for Snapshot [stream3] : Use stream3 for snapshot

[Note]

1. # means video stream number
2. video_enc#_bitrate_quality is available for H series.

4.1.3. Image

This CGI request is to get and set the image parameters and values.

Syntax:

```
http://<server_address>/setup/video/image.php?<group>=group_name&
    <app>=(get|set)[&[<parameter>=value]]
```

Example: Request for getting the image parameters and values

```
http://192.168.0.10/setup/video/image.php?group=dnn&app=get
```

Example: Response for getting image parameters and values

```
res=200&http_port=80&dnn_mode_list=auto|day|night&dnn_min_time=3&dnn_max
_time=60&dnn_def_time=5&dnn_mode=auto&dnn_time=5
```

Example: Request for setting the image parameters and values

```
http://192.168.0.10/setup/video/image.php?group=dnn&app=set&dnn_mode=auto
```

Example: Response for setting the image parameters and values

```
res=200
```

[Table 3- 4] Group of image.php

Group Name	Description
------------	-------------

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basic	Basic(Brightness, Contrast, Hue, ...)image appearance group
osd	OSD(On Screen Display) group
ae	AE group
awb	AWB group
af	AF group
dnn	Day and Night group
wdr	WDR group
blc	BLC group
nr	Noise Reduction group
corridor	Corridor group
ldc	LDC (Lens Distortion Correction) group
defect	Defect(Dead Pixel) compensation group

[Table 3- 5] Parameters of basic group

Argument	Type	Mode	Description [Value]
max_brightness	integer	RO	Maximum brightness
min_brightness	integer	RO	Minimum brightness
max_contrast	integer	RO	Maximum contrast
min_contrast	integer	RO	Minimum contrast
max_saturation	integer	RO	Maximum saturation
min_saturation	integer	RO	Minimum saturation
max_hue	integer	RO	Maximum hue
min_hue	integer	RO	Minimum hue
max_sharpness	integer	RO	Maximum sharpness
min_sharpness	integer	RO	Minimum sharpness
def_brightness	integer	RO	Default brightness
def_contrast	integer	RO	Default contrast
def_saturation	integer	RO	Default saturation
def_hue	integer	RO	Default Hue

def_sharpness	integer	RO	Default sharpness
brightness	integer	RW	Brightness value [min_brightness ~ max_brightness]
contrast	integer	RW	Contrast value [min_contrast ~ max_contrast]
saturation	integer	RW	Saturation value [min_saturation ~ max_saturation]
brightness_night	integer	RW	Brightness value for night scene [min_brightness ~ max_brightness]
contrast_night	integer	RW	Contrast value for night scene [min_contrast ~ max_contrast]
saturation_night	integer	RW	Saturation value for night scene [min_saturation ~ max_saturation]
hue	integer	RW	Hue value [min_hue ~ max_hue]
sharpness	integer	RW	Sharpness value [min_sharpness ~ max_sharpness]
flip	boolean	RW	

			Enable/Disable image flip [0] : Disable [1] : Enable
mirror	boolean	RW	Enable/Disable image mirror [0] : Disable [1] : Enable

[Table 3- 6] Parameters of osd group

Argument	Type	Mode	Description [Value]
osd_text_enable	boolean	RW	Enable/Disable text OSD function [0] : Disable [1] : Enable
osd_text_content	string	RW	OSD text string [Max 16 length]
osd_dt_enable	boolean	RW	Enable/Disable date and time OSD function [0] : Disable [1] : Enable
osd_af_enable	boolean	RW	Enable zoom/focus OSD function [0] : Disable [1] : Enable
osd_af_mode	string	RW	Zoom/Focus OSD display mode [onpush] : Display OSD on push [always] : Display OSD always
osd_text_pos_x_percent	Integer	RW	Change OSD text Position on x axis [Left (0) - Right (100)]

osd_text_pos_y_percent	Integer	RW	Change OSD text Position on y axis [Top (0) - Bottom (100)]
osd_dt_pos_x_percent	Integer	RW	Change OSD date & time Position on x axis [0 (Right) – 100 (Left)]
osd_dt_pos_y_percent	Integer	RW	Change OSD date & time Position on y axis [0 (Top) – 100 (Bottom)]
osd_text_size	Integer	RW	Change OSD Text size [7 (small) – 100 (large)]
osd_dt_size	Integer	RW	Change OSD Date & Time size [7 (small) – 58 (large)]
osd_color	String	RW	Change OSD color. [White], [Black], [Yellow], [Cyan], [Green], [Magenta], [Red], [Blue]

[Table 3- 7] Parameters of ae group

Argument	Type	Mode	Description [Value]
video_src	string	RO	Current video source mode
exposure_mode_list	string	RO	Supported exposure mode list
exposure_priority_list	string	RO	Supported exposure priority mode list
exposure_shutter_list	string	RO	Supported exposure shutter list
exposure_gain_list	string	RO	Supported exposure gain list
exposure_min_shutter_list	string	RO	Supported minimum exposure shutter list
exposure_max_shutter_list	string	RO	Supported maximum exposure shutter list
exposure_min_gain_list	string	RO	Supported minimum exposure gain list
exposure_max_gain_list	string	RO	Supported maximum exposure gain list
exposure_mode	string	RW	Exposure mode

			[auto] : AE(Automatic Exposure) [manual] : ME(Manual Exposure)
exposure_priority	integer	RW	Exposure priority mode [frame] : Frame rate priority [noise] : Low noise priority
exposure_shutter	integer	RW	Exposure shutter in manual mode [30000] : 1/30000 sec [15000] : 1/15000 sec [10000] : 1/10000 sec [6000] : 1/6000 sec [3000] : 1/3000 sec [1500] : 1/1500 sec [1000] : 1/1000 sec (default) [720] : 1/720 sec [540] : 1/540 sec [360] : 1/360 sec [240] : 1/240 sec [120] : 1/120 sec [90] : 1/90 sec [60] : 1/60 sec [30] : 1/30 sec
exposure_gain	float	RW	Exposure gain in manual mode [1.2] : 1.2 dB [2.4] : 2.4 dB [5.0] : 5.0 dB [10.0] : 10.0 dB [15.0] : 15.0 dB [20.0] : 20.0 dB [30.0] : 30.0 dB [40.0] : 40.0 dB [50.0] : 50.0 dB [54.0] : 54.0 dB
exposure_min_shutter	integer	RW	Exposure min shutter in auto mode

			[30000] : 1/30000 sec [15000] : 1/15000 sec [10000] : 1/10000 sec [6000] : 1/6000 sec [3000] : 1/3000 sec [1500] : 1/1500 sec [1000] : 1/1000 sec [720] : 1/720 sec [540] : 1/540 sec [360] : 1/360 sec [240] : 1/240 sec [120] : 1/120 sec [90] : 1/90 sec [60] : 1/60 sec [30] : 1/30 sec
exposure_max_shutter	integer	RW	Exposure max shutter in auto mode [30000] : 1/30000 sec [15000] : 1/15000 sec [10000] : 1/10000 sec [6000] : 1/6000 sec [3000] : 1/3000 sec [1500] : 1/1500 sec [1000] : 1/1000 sec [720] : 1/720 sec [540] : 1/540 sec [360] : 1/360 sec [240] : 1/240 sec [120] : 1/120 sec [90] : 1/90 sec [60] : 1/60 sec [30] : 1/30 sec
exposure_min_gain	integer	RW	Exposure min gain in auto mode [1.2] : 1.2 dB [2.4] : 2.4 dB [5.0] : 5.0 dB [10.0] : 10.0 dB [15.0] : 15.0 dB

			[20.0] : 20.0 dB [30.0] : 30.0 dB [40.0] : 40.0 dB [50.0] : 50.0 dB [54.0] : 54.0 dB
exposure_max_gain	integer	RW	Exposure max gain in auto mode [1.2] : 1.2 dB [2.4] : 2.4 dB [5.0] : 5.0 dB [10.0] : 10.0 dB [15.0] : 15.0 dB [20.0] : 20.0 dB [30.0] : 30.0 dB [40.0] : 40.0 dB [50.0] : 50.0 dB [54.0] : 54.0 dB
exposure_auto_iris	boolean	RW	Enable/Disable auto iris [1] : Enable [0] : Disable
exposure_dss	integer	RW	Exposure slow shutter (sense-up) [0] : Off [1~10] : Sensup (x1 ~ x10)

[Table 3- 8] Parameters of awb group

Argument	Type	Mode	Description [Value]
wb_mode_list	string	RO	Supported white balance list
wb_min_gain	string	RO	Minimum Cb/Cr gain
wb_max_gain	string	RO	Maximum Cb/Cr gain
wb_mode	string	RW	White Balance mode [outdoor] : ATW outdoor [auto] : Automatic [shade] : Shade [clearsky] : Clear Sky [fluorescent] : Fluorescent

			[bulb] : Bulb [manual] : Manual
wb_r_gain	int	RW	[1-255] manual red gain
wb_g_gain	int	RW	[1-255] manual green gain
wb_b_gain	int	RW	[1-255] manual blue gain

[Table 3- 9] Parameters of af group (optional feature)

Argument	Type	Mode	Description [Value]
focus_mode_list	string	RO	Supported focus mode list
focus_speed_min	integer	RO	Minimum zoom-focus moving speed
focus_speed_max	integer	RO	Maximum zoom-focus moving speed
focus_mode	string	RW	Focus mode [auto] : Automatic mode [manual] : Manual mode
focus_speed	integer	RW	Focus speed [focus_speed_min ~ focus_speed_max]
focus_dnn	boolean	RW	Enable/Disable D&N sync focus [0] : Disable [1] : Enable
focus_fix	boolean	RW	Enable/Disable focus lens lock [0] : Disable [1] : Enable
focus_calib	boolean	WO	[1] : Start AF lens calibration

[Table 3- 10] Parameters of dnn (Day and Night_group

Argument	Type	Mode	Description [Value]
dnn_mode_list	string	RO	Supported day and night mode list
dnn_def_time	integer	RO	Default day and night switching Time
dnn_min_time	integer	RO	Minimum day and night switching time
dnn_max_time	integer	RO	Maximum day and night switching time
dnn_def_dn_threshold	integer	RO	Default day to night threshold
dnn_min_dn_threshold	integer	RO	Minimum day to night threshold
dnn_max_dn_threshold	integer	RO	Maximum day to night threshold
dnn_def_nd_threshold	integer	RO	Default night to day threshold
dnn_min_nd_threshold	integer	RO	Minimum night to day threshold
dnn_max_nd_threshold	integer	RO	Maximum night to day threshold
dnn_mode	string	RW	Day and night mode [auto] : Automatic mode [day] : Day mode [night] : Night mode [ext] : External sync mode
dnn_time	integer	RW	Day and night switching time [dnn_min_time ~ dnn_max_time]
dnn_dn_threshold	integer	RW	Day to Night threshold [dnn_min_dn_threshold ~ dnn_max_dn_threshold]
dnn_nd_threshold	integer	RW	Night to Day threshold [dnn_min_nd_threshold ~ dnn_max_dn_threshold]

dnn_smart_ir	boolean	RW	Enable/Disable smart IR [0] : Disable [1] : Enable
--------------	---------	----	--

[Note]

1. Thresholds of day and night are only working for auto mode (dnn_mode=auto)
2. dnn_nd_threshold must be greater enough than dnn_dn_threshold to prohibit hunting.
3. dnn_smart_ir is available for H series.

[Table 3- 11] Parameters of wdr group

Argument	Type	Mode	Description [Value]
video_src	string	RO	Current video source mode
wdr_mode_list	string	RO	Supported WDR mode list
defog_mode_list	string	RO	Supported defog mode list
wdr_min_level	integer	RO	Supported minimum WDR level
wdr_max_level	integer	RO	Supported maximum WDR level
wdr_true_enable	boolean	RW	Enable/Disable true WDR mode [1] : Enable multi exposure WDR [0] : Disable multi exposure WDR
wdr_mode	string	RW	WDR mode [on] : WDR mode on [off]: WDR mode off
wdr_level	integer	RW	WDR level [wdr_min_level ~ wdr_max_level]
defog_mode	string	RW	Defog mode [on] : Defog mode on [off] : Defog mode off [auto] : Defog mode auto
defog_level	integer	RW	Defog level

[Table 3- 12] Parameters of blc group

Argument	Type	Mode	Description [Value]
blc_mode_list	string	RO	Supported BLC mode list
hlc_mode_list	string	RO	Supported HLC mode list
blc_mode	string	RW	BLC mode [on] : BLC mode on [off] : BLC mode off
blc_level	integer	RW	BLC level [blc_min_level ~ blc_max_level]
hlc_mode	string	RW	HLC mode [on] : HLC mode on [off] : HLC mode off
hlc_level	integer	RW	HLC level [hlc_min_level ~ hlc_max_level]

[Table 3- 13] Parameters of nr (Noise Reduction) group

Argument	Type	Mode	Description [Value]
nr_mode_list	string	RO	Supported NR mode list
nr_min_level	integer	RO	Minimum NR level
nr_max_level	integer	RO	Maximum NR level
nr3d_mode	boolean	RW	3D-NR mode [on] : 2D-NR mode on [off] : 2D-NR mode off
nr3d_level	integer	RW	3D-NR level [nr_min_level ~ nr_max_level]

[Table 3- 14] Parameters of corridor group

Argument	Type	Mode	Description [Value]
video_src	string	RO	Current video source mode
corridor_mode_list	string	RO	Supported corridor mode list
corridor_enable	boolean	RW	Enable/Disable corridor [0] : Disable [1] : Enable
corridor_mode	string	RW	Corridor mode [90degree] : 90 degree [270degree] : 270 degree

[Table 3- 15] Parameters of ldc group

Argument	Type	Mode	Description [Value]
ldc_mode_list	string	RO	Supported ldc mode list
ldc_min_level	integer	RO	Minimum LDC level
ldc_max_level	integer	RO	Maximum LDC level
ldc_mode	string	RW	LDC mode [on] : LDC mode on [off] : LDC mode off

[Table 3- 16] Parameters of defect group

Argument	Type	Mode	Description [Value]
compensation	string	WO	Defect compensation type [whitepixel]
strength	integer	WO	Compensation strength [1 ~ 63]

4.1.4. Privacy Mask

This CGI request is to get and set the privacy mask parameters and values. The masked areas would be shown as black or specific color.

Syntax:

```
http://<server_address>/setup/video/pmask.php?app=(get|set)[[&<parameter>=<value>]  
...]
```

Example: Request for getting the privacy mask parameters and values

```
http://192.168.0.10/setup/video/pmask.php?app=get
```

Example: Request to save the privacy mask parameters and values

```
http://192.168.0.10/setup/video/pmask.php?app=set&method=save&masking_enable=1
```

Example: Request to create the privacy mask region

```
http://192.168.0.10/setup/video/pmask.php?app=set&method=create&masking_name=Ne  
w&masking_left=800&masking_top=380&masking_right=1116&masking_bottom=716
```

Example: Request to remove the privacy mask region

```
http://192.168.0.10/setup/video/pmask.php?app=set&method=delete&masking_id=1
```

Example: Request to modify the privacy mask region

```
http://192.168.0.10/setup/video/pmask.php?app=set&method=modify&masking_id=1&ma  
sking_left=800&masking_top=480&masking_right=1100&masking_bottom=716
```

[Table 3- 17] Parameters of privacy mask

Argument	Type	Mode	Description [Value]
masking_max_count	integer	RO	Supported privacy mask count
method	string	WO	Operation to configure privacy mask [create] : Create the region [modify] : Modify the region [delete] : Delete the region
masking_enable	boolean	RW	Enable/Disable privacy mask [0] : Disable [1] : Enable
masking_color	string	RW	Privacy Masking color [Black] [White] [Yellow] [Cyan] [Magenta] [Green] [Red] [Blue]
masking#_id	integer	RW	Masking id of region to delete or modify
masking#_name	string	RW	Masking name of region
masking#_left	integer	RW	Masking left position of region
masking#_top	integer	RW	Masking top position of region
masking#_right	integer	RW	Masking right position of region
masking#_bottom	integer	RW	Masking bottom position of region

[Note]

1. # means privacy mask number
2. The requests of deleting and modifying the region **MUST** specify the region ID.

3. The position of mask can be rest only if digital zoom is inactive.

4.1.5. Digital Zoom

This CGI request is to get and set the digital zoom parameters and values.

Syntax:

```
http://<server_address>/setup/video/digital_zoom.php?app=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the digital zoom parameters and values

```
http://192.168.0.10/setup/video/digital_zoom.php?app=get
```

[Table 3- 18] Parameter for digital zoom

Argument	Type	Mode	Description [Value]
dz_enable	boolean	RW	Enable/Disable digital zoom [0] : Disable [1] : Enable
dz_level	integer	RW	Digital zoom level [100] : X1 [105] : X1.05 [110] : X1.1 [115] : X1.15 [120] : X1.2 [140] : X1.4 [160] : X1.6 [180] : X1.8 [200] : X2 [300] : X3 [400] : X4 [500] : X5 [600] : X6 [700] : X7 [800] : X8

4.1.6. DIS (Digital Image Stabilization)

This CGI request is to get and set DIS parameters and values.

Syntax:

```
http://<server_address>/setup/video/dis.php?app=(get|set)[[&<parameter>=<value>]...]
```

Example: Request of getting the DIS parameters and values

```
http://192.168.0.10/setup/video/dis.php?app=get
```

[Table 3- 19] Parameters of DIS (optional)

Argument	Type	Mode	Description [Value]
dis_enable	boolean	RW	Enable/Disable DIS [0] : Disable [1] : Enable

4.1.7. Fisheye

This CGI request is to get and set DIS parameters and values.

Mount types are ceiling/wall/floor.

Pane layouts for each mount type are below

Wall case : 1original / 1panorama / 1panorama + 2normal

Ceiling case : 1original / 1panorama / 1panorama + 2normal / 4normal

Floor case : 1original / 1panorama / 1panorama + 2normal / 4normal

Syntax:

```
http://<server_address>/setup/video/fisheye.php?app=(get|set)[[&<parameter>=<value>]
...]
```

2) Request for getting the configuration parameters

All configuration parameters are gotten by this one request.

Example: request of getting the fisheye ALL Read Only parameters and values

```
http://192.168.0.10/setup/video/fisheye.php?app=get
```

[Table 3- 20] All Read Only Configuration Parameters of fisheye to VIEWER

Argument	Type	Mode	Description [Value]
viewer_video	string	RO	Stream number used for viewer on the Web-UI [stream2],[stream3],[stream4]
viewer_codec	string	RO	Codec of stream used for viewer on the Web-UI [JPEG]
viewer_width	integer	RO	Resolution of width for viewer on the Web-UI [640]
viewer_height	integer	RO	Resolution of height for viewer on the Web-UI [480]

viewer_crop_width	integer	RO	Capture resolution of width for image sensor
viewer_crop_height	integer	RO	Capture resolution of height for image sensor

[Table 3- 21] All Read Only Configuration Parameters of fisheye to INSTALLATION & DISPLAY layout

Argument	Type	Mode	Description [Value]
fisheye_mount_type	string	RO	Mount type [ceiling],[wall],[floor]
fisheye_pane_layout	string	RO	If mount type is ceiling/floor [1original] [1panorama] [1panorama2normal] [2panorama] [4normal] If mount type is wall [1original] [1panorama] [1panorama2normal]

[Table 3- 22] All Read Only Configuration Parameters of fisheye to Wall Mount & (1Panorama) Pane

Argument	Type	Mode	Description [Value]
wall_pano1_pan	integer	RO	invalid
wall_pano1_tilt	integer	RO	Vertical view angle degree [12 ~ 348], center:180
wall_pano1_zoom_h	integer	RO	invalid
wall_pano1_zoom_v	integer	RO	invalid

[Table 3- 23] All Read Only Configuration Parameters of fisheye to Wall Mount & (1Panorama + 2Normal) Pane layout

Argument	Type	Mode	Description [Value]
wall_pano1n_pan	integer	RO	invalid
wall_pano1n_tilt	integer	RO	Vertical view angle degree [12 ~ 348], center:180

wall_ pano1n _zoom_h	integer	RO	invalid
wall_ pano1n _zoom_v	integer	RO	invalid
wall_ normal2 _pan	integer	RO	Horizontal view angle degree [12 ~ 348], center:180
wall_ normal2 _tilt	integer	RO	Vertical view angle degree [12 ~ 348], center:180
wall_ normal2 _zoom_h	integer	RO	invalid
wall_ normal3 _pan	integer	RO	Horizontal view angle degree [12 ~ 348], center:180
wall_ normal3 _tilt	integer	RO	Vertical view angle degree [12 ~ 348], center:180
wall_ normal3 _zoom_h	integer	RO	Invalid

[Table 3- 24] All Read Only Configuration Parameters of fisheye to Ceiling Mount & (1Panorama) Pane layout

Argument	Type	Mode	Description [Value]
ceiling_ pano1 _pan	integer	RO	Rotation degree of half circle [0°~360°]
ceiling_ pano1 _tilt	integer	RO	invalid
ceiling_ pano1 _zoom_h	integer	RO	invalid
ceiling_ pano1 _zoom_v	integer	RO	invalid
ceiling_ pano1 _radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
ceiling_ pano1 _radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]

[Table 3- 25] All Read Only Configuration Parameters of fisheye to Ceiling Mount & (1Panorama + 2Normal) Pane layout

Argument	Type	Mode	Description [Value]
ceiling_ pano1n _pan	integer	RO	Rotation degree of half circle [0°~360°]
ceiling_ pano1n _tilt	integer	RO	invalid
ceiling_ pano1n _zoom_h	integer	RO	invalid

ceiling_ pano1n _zoom_v	integer	RO	invalid
ceiling_ pano1n _radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
ceiling_ pano1n _radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]
ceiling_ pnormal2 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
ceiling_ pnormal2 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
ceiling_ pnormal2 _zoom_h	integer	RO	invalid
ceiling_ pnormal3 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
ceiling_ pnormal3 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
ceiling_ pnormal3 _zoom_h	integer	RO	invalid

[Table 3- 26] All Read Only Configuration Parameter of fisheye to ceiling Mount & (2Panorama) Pane layout

Argument	Type	Mode	Description [Value]
ceiling_ pano1p _pan	integer	RO	Rotation degree of half circle [0°~360°]
ceiling_ pano1p _tilt	integer	RO	invalid
ceiling_ pano1p _zoom_h	integer	RO	invalid
ceiling_ pano1p _zoom_v	integer	RO	invalid
ceiling_ pano1p _radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
ceiling_ pano1p _radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]
ceiling_ pano2 _pan	integer	RO	Rotation degree of half circle [0°~360°]
ceiling_ pano2 _tilt	integer	RO	invalid
ceiling_ pano2 _zoom_h	integer	RO	invalid

ceiling_ pano2 _zoom_v	integer	RO	invalid
ceiling_ pano2 _radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
ceiling_ pano2 _radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]

*[Table 3- 27] All Read Only Configuration Parameter of fisheye to Ceiling Mount & (4Normal)
Pane layout*

Argument	Type	Mode	Description [Value]
ceiling_ normal1 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
ceiling_ normal1 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
ceiling_ normal1 _zoom_h	integer	RO	invalid
ceiling_ normal2 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
ceiling_ normal2 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
ceiling_ normal2 _zoom_h	integer	RO	invalid
ceiling_ normal3 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
ceiling_ normal3 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
ceiling_ normal3 _zoom_h	integer	RO	invalid
ceiling_ normal4 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
ceiling_ normal4 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
ceiling_ normal4 _zoom_h	integer	RO	invalid

[Table 3- 28] All Read Only Parameters of fisheye to Floor Mount & (1Panorama) Pane layout

Argument	Type	Mode	Description [Value]
floor_ano1_pan	integer	RO	Rotation degree of half circle [0°~360°]
floor_ano1_tilt	integer	RO	invalid
floor_ano1_zoom_h	integer	RO	invalid
floor_ano1_zoom_v	integer	RO	invalid
floor_ano1_radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
floor_ano1_radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]

[Table 3- 29] All Read Only Configuration Parameters of fisheye to Floor Mount & (1Panorama + 2Normal) Pane layout

Argument	Type	Mode	Description [Value]
floor_ano1n_pan	integer	RO	Rotation degree of half circle [0°~360°]
floor_ano1n_tilt	integer	RO	invalid
floor_ano1n_zoom_h	integer	RO	invalid
floor_ano1n_zoom_v	integer	RO	invalid
floor_ano1n_radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
floor_ano1n_radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]
floor_pnormal2_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
floor_pnormal2_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
floor_pnormal2_zoom_h	integer	RO	invalid
floor_pnormal3_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
floor_pnormal3_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180

floor_ pn ormal3_zoom_h	integer	RO	invalid
--------------------------------	---------	----	---------

[Table 3- 30] All Read Only Configuration Parameters of fisheye to Floor Mount & (2Panorama) Pane layout

Argument	Type	Mode	Description [Value]
floor_ pano1p _pan	integer	RO	Rotation degree of half circle [0°~360°]
floor_ pano1p _tilt	integer	RO	invalid
floor_ pano1p _zoom_h	integer	RO	invalid
floor_ pano1p _zoom_v	integer	RO	invalid
floor_ pano1p _radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
floor_ pano1p _radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]
floor_ pano2 _pan	integer	RO	Rotation degree of half circle [0°~360°]
floor_ pano2 _tilt	integer	RO	invalid
floor_ pano2 _zoom_h	integer	RO	invalid
floor_ pano2 _zoom_v	integer	RO	invalid
floor_ pano2 _radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
floor_ pano2 _radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]

[Table 3- 31] All Read Only Configuration Parameters of fisheye to Floor Mount & (4Normal) Pane layout

Argument	Type	Mode	Description [Value]
floor_ normal1 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
floor_ normal1 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
floor_ normal1 _zoom_h	integer	RO	invalid
floor_ normal2 _pan	integer	RO	Outward direction degree for normal view area from center point

			[0°~360°], Horizontal left=0°
floor_ normal2 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
floor_ normal2 _zoom_h	integer	RO	invalid
floor_ normal3 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
floor_ normal3 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
floor_ normal3 _zoom_h	integer	RO	invalid
floor_ normal4 _pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
floor_ normal4 _tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
floor_ normal4 _zoom_h	integer	RO	invalid

3) Request for setting

Setting of mount, pane and position are supported simultaneously for setting of configurations.

All parameters(arguments) are can be set separately

Example:

- Set mount type & pane layout

```
http://192.168.0.10/setup/video/fisheye.php?app=set&fisheye_mount_type=ceiling&fisheye_pane_layout=2panorama
```

```
http://192.168.0.10/setup/video/fisheye.php?app=set&fisheye_mount_type=ceiling&fisheye_pane_layout=4normal
```

- Set view area position of 4 areas, when the current configuration of pane and mount type is 4normal of ceiling

```
http://192.168.0.10/setup/video/fisheye.php?app=set&normal1_pan=0&
normal1_tilt=300&normal2_pan=90&normal2_tilt=300&normal3_pan=180&
normal3_tilt=300&normal4_pan=270& normal4_tilt=300
```

- Set mount mode , pane layout and view area #2/#3 position

```
http://192.168.0.10/setup/video/fisheye.php?app=set&fisheye_mount_type=ceiling&fisheye
_pane_layout=2panorama&normal2_pan=90&normal2_tilt=300&normal3_pan=180&norm
al3_tilt=300
```

[Table 3- 32] Mount & Pane layout type

Argument	Type	Mode	Description [Value]
fisheye_mount_type	string	RO	Mount type [ceiling],[wall],[floor]
fisheye_pane_layout	string	RO	If mount type is ceiling/floor [1original] [1panorama] [1panorama2normal] [2panorama] [4normal] If mount type is wall [1original] [1panorama] [1panorama2normal]

[Table 3- 33] View area position of 1panorama

Argument	Type	Mode	Description [Value]
pano1_pan	integer	RO	Rotation degree of half circle [0°~360°]
pano1_radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
pano1_radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]

[Table 3- 34] View area position of 1panorama + 2normal

Argument	Type	Mode	Description [Value]
----------	------	------	---------------------

pano1_pan	integer	RO	Rotation degree of half circle [0°~360°]
pano1_radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
pano1_radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]
normal2_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
normal2_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
normal3_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
normal3_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180

[Table 3- 35] View area position of 2panorama

Argument	Type	Mode	Description [Value]
pano1_pan	integer	RO	Rotation degree of half circle [0°~360°]
pano1_radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
pano1_radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]
pano2_pan	integer	RO	Rotation degree of half circle [0°~360°]
pano2_radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
pano2_radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]

[Table 3- 36] View area position of 1panorama + 2normal

Argument	Type	Mode	Description [Value]
pano1_pan	integer	RO	Rotation degree of half circle [0°~360°]
pano1_radius_in	integer	RO	Inner radius of half circle [0 ~ Outer radius]
pano1_radius_out	integer	RO	Outer radius of half circle [0 ~ 1500]
normal2_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
normal2_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
normal3_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
normal3_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180

[Table 3- 37] View area position of 4 normal

Argument	Type	Mode	Description [Value]
normal1_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
normal1_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
normal2_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
normal2_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180
normal3_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
normal3_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180

normal4_pan	integer	RO	Outward direction degree for normal view area from center point [0°~360°], Horizontal left=0°
normal4_tilt	integer	RO	Outward depth from center point for Outward direction [180~320], center:180

4.1.8. Video Out

This CGI request is to get and set the analog video out parameters and values.

Syntax:

```
http://<server_address>/setup/video/videoout.php?app=(get|set)
```

Example: Request of getting video out parameters and values

```
http://<server_address>/setup/video/videoout.php?app=get
```

[Table 3-97] Parameters of Video Out

Argument	Type	Mode	Description [Value]
vout_mode_list	list	RO	Enable/Disable event recording [0] : Disable [1] : Enable
vout_on	bool	RW	Enable/Disable video out [0] : Disable [1] : Enable
vout_mode	str	RW	Select mode from vout_mode_list [CVBS]: CVBS

4.2. Audio & Record

4.2.1. Audio

This CGI request is to get and set the audio parameters and values.

Syntax:

```
http://<server_address>/setup/audio/audio.php?app=(get|set)
```

Example: Request of getting the audio parameters and values

```
http://192.168.0.10/setup/audio/audio.php?app=get
```

[Table 3- 38] Parameters of audio (optional feature)

Argument	Type	Mode	Description [Value]
audio_enc_codec_list	string	RO	Supported audio codec list
audio_enc_bitrate_list	string	RO	Supported audio bit rate list
audio_enc_samplerate_list	string	RO	Supported audio sample rate list
audio_in_gain_list	string	RO	Supported audio input gain list
audio_out_gain_list	string	RO	Supported audio output gain list
audio_enc_enable	boolean	RW	Enable/Disable audio [0] : Disable [1] : Enable
audio_enc_codec	string	RW	Audio encoding codec type [G711U] : G.711 u-law [G711A] : G.711 a-law
audio_enc_bitrate	integer	RW	Audio encoding bitrate (Kbps) [64] : 64Kbps
audio_enc_samplerate	integer	RW	Audio encoding sample rate (kHz) [8000] : 8kHz

audio_in	string	RW	Audio input amplifier type [internal] : internal amplifier [external] : external amplifier
audio_in_gain	integer	RW	Input amplifier gain (dB) * S2 series (CXD4135) [-12] : -12dB [-9] : -9dB [-6] : -6dB [-3] : -3dB [0] : 0dB [3] : 3dB [6] : 6dB [9] : 9dB [12] : 12dB * S3 series (CXD4145) [-0.5] : -0.5 dB [0.0] : 0.0 dB [0.5] : 0.5 dB [1.0] : 1.0 dB [1.5] : 1.5 dB [2.0] : 2.0 dB [2.5] : 2.5 dB [3.0] : 3.0 dB
audio_out_gain	integer	RW	Output amplifier gain (dB) * S2 series (CXD4135) [-24] : -24dB [-21] : -21dB [-18] : -18dB [-15] : -15dB [-12] : -12dB [-9] : -9dB [-6] : -6dB [-3] : -3dB [0] : 0dB [3] : 3dB [6] : 6dB [9] : 9dB

			* S3 series (CXD4145) [-0.5] : -0.5 dB [0.0] : 0.0 dB [0.5] : 0.5 dB [1.0] : 1.0 dB [1.5] : 1.5 dB [2.0] : 2.0 dB [2.5] : 2.5 dB [3.0] : 3.0 dB
audio_in_mute	boolean	RW	Enable/Disable mute of input [0] : Disable [1] : Enable
audio_out_mute	boolean	RW	Enable/Disable mute of output [0] : Disable [1] : Enable
audio_2way	boolean	RW	Enable/Disable bi-directional audio [0] : Disable [1] : Enable
audio_2way_use	boolean	RO	State usage of bi-directional Audio channel [1] : using [0] : not using

[Note]

1. If there is a client which is using bi-directional audio function, audio_2way_use value is 1.
2. High dB value means loud sound.

4.2.2. Record

This CGI request is to get and set the parameters and values for the record function.

Example:

[http://192.168.0.10/setup/record.php?app=\(get|set\)\[\[&<parameter>=<value>\]...\]](http://192.168.0.10/setup/record.php?app=(get|set)[[&<parameter>=<value>]...])

Argument	Type	Mode	Description [Value]
group	string	WO	[record] : record group [schedule] : schedule group [recycling] : recycle group
record group			
record_overwrite	boolean	RW	[0] : off [1] : on
record_continuous_enable	boolean	RW	[0] : off [1] : on
record_continuous_video	integer	RW	[#] : number of stream selected for recording
schedule group			
record_schedule	boolean	RW	[0] : off [1] : on
record_schedule_list	string	RW	[0 h ₀₋₂₃ \n 1 h ₀₋₂₃ \n 2 h ₀₋₂₃ \n 3 h ₀₋₂₃ \n 4 h ₀₋₂₃ \n 5 h ₀₋₂₃ \n 6 h ₀₋₂₃ \n] where (0-6) corresponds to (Sunday-Saturday) and h ₀₋₂₃ is a set of 24 boolean values representing if record during corresponding hour of the day (delimited by commas no spaces). Newline at end of each h ₂₃ .
recycling group			
record_recycling	boolean	RW	[0] : off [1] : on
record_recycling_month	integer	RW	[0-12] : # of months
record_recycling_day	integer	RW	[0-30] : # of days
record_recycling_hour	integer	RW	[0-23] : # of hours

```
record_schedule_list=0|0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
```

2|1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1

4|1,1

6|1,1

4.3. Event Trigger

4.3.1. Motion Detection

This CGI request is to get and set the VMD (Video Motion Detection) parameters and values.

Syntax:

```
http://<server_address>/setup/event/trigger/motion.php?app=(get|set)[&<parameter>=<value>]...
```

Example: Request of getting the motion detection parameters and values

```
http://192.168.0.10/setup/event/trigger/motion.php?app=get
```

Example: Response of getting the motion detection parameters and values

```
res=200&http_port=80&https_port=443&md_min_sensitivity=1&md_max_sensitivity=100&md_def_sensitivity=80&md_min_threshold=1&md_max_threshold=100&md_def_threshold=2&md_max_include_cnt=4&md_max_exclude_cnt=4&md_min_time=1&md_max_time=180&md_def_time=3&md_rgn_max_width=1920&md_rgn_max_height=1080&md_enable=1&md_sensitivity=80&md_rgn_count=1&md_rgn1_id=1&md_rgn1_name=New1&md_rgn1_type=1&md_rgn1_thre=2&md_rgn1_time=3&md_rgn1_left=153&md_rgn1_top=96&md_rgn1_right=774&md_rgn1_bottom=756&
```

Example: Request of save motion detection parameter.

```
http://192.168.0.10/setup/event/trigger/motion.php?app=set&method=save&md_enable=1
```

Example: Response of save motion detection parameter.

```
res=200&ch=1&md_enable=1&md_sensitivity=80&md_rgn_count=0
```

Example: Request of create motion detection region.

```
http://192.168.0.10/setup/event/trigger/motion.php?app=set&method=create&md_rgn_name=New2&md_rgn_type=1&md_rgn_thre=2&md_rgn_time=30&md_rgn_left=100&md_rgn_top=50&md_rgn_right=230&md_rgn_bottom=140
```

Example: Response of create motion detection region.

```
res=200&method=create&md_rgn_id=2&md_rgn_name=New2&md_rgn_type=1&md_rgn_thre=2&md_rgn_time=30&md_rgn_left=100&md_rgn_top=50&md_rgn_right=230&md_rgn_bottom=140
```

Example: Request of delete motion detection region.

```
http://192.168.0.10/setup/event/trigger/motion.php?app=set&method=delete&md_rgn_id=1
```

Example: Response of delete motion detection region.

```
res=200&method=delete&md_rgn_id=1
```

Example: Request of modify motion detection region.

```
http://192.168.0.10/setup/event/trigger/motion.php?app=set&method=modify&md_rgn_id
```

```
=1&md_rgn_name=MOTION&md_rgn_left=400&md_rgn_top=50&md_rgn_right=1100&md_rgn_bottom=500
```

Example: Response of create motion detection region.

```
res=200&method=modify&md_rgn_id=1&md_rgn_name=MOTION&md_rgn_type=1&md_rgn_thre=2&md_rgn_time=3&md_rgn_left=400&md_rgn_top=50&md_rgn_right=1470&md_rgn_bottom=801
```

[Table 3- 40] Parameters of motion detection

Argument	Type	Mode	Description [Value]
md_min_sensitivity	integer	RO	Minimum sensitivity
md_max_sensitivity	integer	RO	Maximum sensitivity
md_def_sensitivity	integer	RO	Default sensitivity
md_min_threshold	integer	RO	Minimum threshold
md_max_threshold	integer	RO	Maximum threshold
md_def_threshold	integer	RO	Default threshold
md_max_include_cnt	integer	RO	Number of motion detection region
md_max_exclude_cnt	integer	RO	Number of motion mask region
md_rgn_count	integer	RO	Number of motion detection mask
md_min_time	integer	RO	Minimum motion detection dwell time
md_max_time	integer	RO	Maximum motion detection dwell time
md_def_time	integer	RO	Default motion detection dwell time
md_rgn_max_width	integer	RO	Width of motion detection

			resolution
mg_rgn_max_height	integer	RO	Height of motion detection resolution
method	string	RW	Operation to configure motion detection region and mask [create] : Create the motion detection region or mask [modify] : Modify the motion detection region or mask [delete] : Delete the motion detection region or mask
md_enable	boolean	RW	Enable/Disable motion detection [0] : Disable [1] : Enable
md_sensitivity	integer	RW	Sensitivity of specified region
md_rgn#_id	integer	RW	Region ID of specified region or mask
md_rgn#_name	string	RW	Region name of specified region or mask
md_rgn#_type	integer	RW	Property of specified area [1] : Include(region) [2] : Exclude(mask)
md_rgn#_thre	integer	RW	Threshold of specified region
md_rgn#_time	integer	RW	Dwell time of specified region (second)
md_rgn#_left	integer	RW	Coordinates X of the left top of the specified region
md_rgn#_top	integer	RW	Coordinates Y of the left top of the specified region
md_rgn#_right	integer	RW	Coordinates X of the right

			bottom of the specified region
md_rgn#_bottom	integer	RW	Coordinates Y of the right bottom of the specified region

[Note]

1. # means motion detection region or mask number
2. The requests of deleting and modifying the region **MUST** specify the region ID.

4.3.2. Tamper

This CGI request is to get and set the Tamper parameters and values.

Syntax:

```
http://<server_address>/setup/event/trigger/tamper.php?app=(get|set)[[&<p
arameter>=<value>]...]
```

Example: Request for getting the VCA parameters and values

```
http://192.168.0.10/setup/event/trigger/tamper.php?app=get
```

[Table 3- 41] Parameters of Tamper

Argument	Type	Mode	Description [Value]
tamper_enable	boolean	RW	[0] : off [1] : on
tamper_time	integer	RW	[1, 3, 5, 10, 20, 50, 100, 150, 180] : dwell time in seconds

4.3.3. Alarm In

This CGI request is to get and set the alarm-in event trigger parameters and values.

Syntax:

```
http://<server_address>/setup/event/trigger/alarmin.php?app=(get|set)[[&<parameter>=<
value>]...]
```

Example: Request for getting the video tampering event parameters and values

```
http://192.168.0.10/setup/event/trigger/alarmin.php?app=get
```

[Table 3- 42] Parameters of alarm in

Argument	Type	Mode	Description [Value]
alarm_in_count	integer	RO	Number of alarm input port
alarm_in_min_time	integer	RO	Minimum alarm input event dwell Time
alarm_in_max_time	integer	RO	Maximum alarm input event dwell time
alarm_in_def_time	integer	RO	Default alarm input event dwell time
alarm_in_#_enable	boolean	RW	Enable/Disable alarm input [0] : Disable [1] : Enable
alarm_in_#_type	string	RW	Type of alarm input device [NO] : Normal Open [NC] : Normal Closed
alarm_in_#_time	integer	RW	Dwell time of alarm input event (second) [alarm_in_min_time ~ alarm_in_max_time]

[Note]

1. # means alarm input number

4.3.4. Manual Trigger

This CGI request is to get and set the user's manual trigger parameters and values.

Syntax:

```
http://<server_address>/setup/event/trigger/manual.php?app=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the user's manual trigger parameters and values

```
http://192.168.0.10/setup/event/trigger/manual.php?app=get
```

[Table 3- 43] Parameters of manual trigger

Argument	Type	Mode	Description [Value]
trigger_count	integer	RO	Number of manual triggers
trigger_min_time	integer	RO	Minimum manual trigger event dwell time
trigger_max_time	integer	RO	Maximum manual trigger event dwell time
trigger_def_time	integer	RO	Default manual trigger event dwell time
trigger#_enable	boolean	RW	Enable/Disable manual trigger event [0] : Disable [1] : Enable
trigger#_time	integer	RW	Dwell time of manual trigger (second) [trigger_min_time, ~ trigger_max_time]
make_trigger	integer	WO	Generate manual trigger number

			[1 ~ trigger_count]
--	--	--	---------------------

[Note]

1. If the device is needed to do some event action manually by user, trigger function is useful.
2. # means trigger number
3. The 'make_trigger' argument is action argument. So, it MAY be used alone.

4.3.5. Network Loss

This CGI request is to get and set the network loss trigger parameters and values.

Syntax:

```
http://<server_address>/setup/event/trigger/network.php?app=(get|set)[[&<parameter> = <value>]...]
```

Example: Request of getting the network loss trigger parameters and values

```
http://192.168.0.10/setup/event/trigger/network.php?app=get
```

[Table 3- 44] Parameters of network loss

Argument	Type	Mode	Description [Value]
netloss_min_time	integer	RO	Minimum network loss event dwell time
netloss_max_time	integer	RO	Maximum network loss event dwell time
netloss_def_time	integer	RO	Default network loss event dwell time
netloss_enable	boolean	RW	Enable/Disable network loss [0] : Disable [1] : Enable
netloss_time	integer	RW	Dwell time of network loss (second) [netloss_min_time ~ netloss_max_time]

4.3.6. System Booting

This CGI request is to get and set the system booting trigger parameters and values.

Syntax:

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```
http://<server_address>/setup/event/trigger/system.php?app=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the system booting trigger parameters and values

```
http://192.168.0.10/setup/event/trigger/system.php?app=get
```

[Table 3- 45] Parameters of system booting

Argument	Type	Mode	Description [Value]
onboot_min_time	integer	RO	Minimum booting event dwell time
onboot_max_time	integer	RO	Maximum booting event dwell time
onboot_def_time	integer	RO	Default booting event dwell time
onboot_enable	boolean	RW	Enable/Disable booting event [0] : Disable [1] : Enable
onboot_time	integer	RW	Dwell time of booting event (second) [onboot_min_time ~ onboot_max_time]

4.3.7. Timer

This CGI request is to get and set the timer trigger parameters and values.

Syntax:

```
http://<server_address>/setup/event/trigger/timer.php?app=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the timer trigger parameters and values

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<http://192.168.0.10/setup/event/trigger/timer.php?app=get>

[Table 3- 46] Parameters of timer

Argument	Type	Mode	Description [Value]
timer_interval_enable	boolean	RW	Enable/Disable timer event [0] : Disable [1] : Enable
timer_interval_h	integer	RW	Timer interval period (Hour)
timer_interval_m	integer	RW	Timer interval period (Minute)
timer_interval_s	integer	RW	Timer interval period (Second)

4.3.8. Day and Night

This CGI request is to get and set the day&night switch trigger parameters and values.

Syntax:

```
http://<server_address>/setup/event/trigger/daynight.php?app=(get|set)[[&<parameter> = <value>]...]
```

Example: Request for getting the day&night trigger parameters and values

```
http://192.168.0.10/setup/event/trigger/daynight.php?app=get
```

[Table 3- 47] Parameters of day & night

Argument	Type	Mode	Description [Value]
dn_switch_enable	boolean	RW	Enable/Disable day&night event [0] : Disable [1] : Enable
dn_switch_mode	string	RW	The trigger type of day & night switching [both] : Day <-> Night [day] : Night -> Day [night]: Day -> Night
dn_switich_time	integer	RW	Dwell time of day & night (second)

4.3.9. Audio Detect

This CGI request is to get and set the audio input and output parameters and values.

Example:

`http://192.168.0.10/setup/event/trigger/audiodetect.php?app=(get|set)[[&<parameter>=<value>]...]`

Argument	Type	Mode	Description [Value]
audio_detect_enable	boolean	RW	Enable/Disable audio detect trigger [0] : Disable [1] : Enable
audio_detect_time	string	RW	Amount of time trigger will remain active after trigger is activated (seconds). [1, 3, 5, 10, 20, 30, 50, 100, 150, 180]
audio_detect_level	integer	RW	DAudio level required to activate the trigger. [0 – 100]
audio_level	integer	RO	Returns the most recently sampled audio level (?app=get&method=audio_level)

4.4. Event Action

4.4.1. Record

This CGI request is to get and set the event recording parameters.

Syntax:

```
http://<server_address>/setup/event/action/record.php?<group>=group_name&
    <app>=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the event recording parameters and values

```
http://192.168.0.10/setup/event/action/record.php?app=get
```

[Table 3- 48] Parameters of event recording

Argument	Type	Mode	Description [Value]
record_event_enable	boolean	RW	Enable/Disable event recording [0] : Disable [1] : Enable
record_event_video	integer	RW	Record video stream number [1] : Stream1 [2] : Stream2 [3] : Stream3
record_event_pre_time	integer	RW	Record pre buffering time [0 ~ 10] sec
record_event_time	integer	RW	Record time [60, 120, 180] sec

[Note]

1. The video codec for recording only support H.264

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4.4.2. Alarm Out

This CGI request is to get and set the alarm output port parameters.

Syntax:

```
http://<server_address>/setup/event/action/alarmout.php?<group>=group_name
&<app>=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the alarm output port parameters and values

```
http://192.168.0.10/setup/event/action/alarmout.php?app=get
```

[Table 3- 49] Parameters of alarm output

Argument	Type	Mode	Description [Value]
alarm_out_count	integer	RO	Number of alarm output ports
alarm_out_enable	boolean	RW	Enable/Disable alarm output [0] : Disable [1] : Enable
alarm_out_type	string	RW	Type of alarm output [NO] : Normal Open [NC] : Normal Closed

4.4.3. FTP Upload

This CGI request is to get and set the FTP server uploading and JPEG image parameters.

Syntax:

```
http://<server_address>/setup/event/action/ftp.php?<group>=group_name
&<app>=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the FTP server uploading and JPEG image parameters and values

```
http://192.168.0.10/setup/event/action/ftp.php?app=get
```

[Table 3- 50] Parameters of FTP uploading

Argument	Type	Mode	Description [Value]
ftp_enable	boolean	RW	Enable/Disable ftp event output [0] : Disable [1] : Enable
ftp_server	string	RW	FTP server address Max length is 63.
ftp_port	integer	RW	FTP server port [1 ~ 65535]
ftp_path	string	RW	Remote directory for uploading JPEG images Max length is 250
ftp_mode	integer	RW	FTP server mode [0] : Active mode [1] : Passive mode
ftp_user	string	RW	FTP server user login id

ftp_pass	string	RW	FTP server user login password
ftp_anonymous	boolean	RW	FTP server login mode [0] : Non anonymous [1] : Anonymous
jpg_pre_max_timeout	integer	RO	Maximum pre-alarm event time before JPEG file uploading
jpg_pre_timeout	integer	RW	Pre-alarm event time before JPEG file uploading (second) [1 ~ jpg_pre_max_timeout]
jpg_pre_max_fps	integer	RO	Maximum uploading image count per second before event
jpg_pre_fps	integer	RW	Uploading image count per second before event [1 ~ jpg_pre_max_fps]
jpg_pst_max_timeout	integer	RO	Maximum post alarm event time after JPEG file uploading
jpg_pst_timeout	integer	RW	Post-alarm event time after JPEG file uploading (second) [1 ~ jpg_pst_max_timeout]
jpg_pst_max_fps	integer	RW	Maximum uploading image count per second after event
jpg_pst_fps	integer	RW	Uploading image count per second after event [1 ~ jpg_pst_fps]
jpg_base_name	string	RW	Prefix of upload image file name

jpg_suffix_name	integer	RW	Suffix of upload image file name
-----------------	---------	----	----------------------------------

4.4.4. E-Mail

This CGI request is to get and set the SMTP setting parameters to send e-mail.

Syntax:

```
http://<server_address>/setup/event/action/email.php?<group>=group_name
&<app>=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the SMTP parameters and values

```
http://192.168.0.10/setup/event/action/email.php?app=get
```

[Table 3- 51] Parameters for email group

Argument	Type	Mode	Description [Value]
smtp_enable	boolean	RW	Enable/Disable using email sending [0] : Disable [1] : Enable
smtp_sender	string	RW	Mail address of sender Max length is 63.
smtp_interval	integer	RW	Interval time of sending mail [1 ... 86400] seconds
smtp_limit	integer	RW	Aggregate events for sending mail [1 ... 100]
smtp_server	string	RW	SMTP server URL address MAX length is 63

smtp_auth_enable	boolean	RW	Enable/Disable authentication of SMTP Login [1 - Enable, 0 - Disable]
smtp_auth_type	integer	RW	Type of SMTP server authentication [0 - AUTH LOGIN] [1 - AUTH PLAIN]
smtp_user	string	RW	User ID of SMTP server login Max length is 31
smtp_pass	string	RW	Password of SMTP server login Max length is 31
smtp_receiver_list1	string	RW	E-mail receiver address Max length is 31
smtp_receiver_list2			
smtp_receiver_list3			
smtp_receiver_list4			
smtp_receiver_list5			
smtp_receiver_list6			
smtp_receiver_list7			
smtp_receiver_list8			
method	string	w	E-mail sending test [Test]
smtp_receiver	string	rwr	Receiver address for sending test
smtp_use_server	boolean	RW	Send event notification mail through SMTP server or not [1 - Use, 0 - Not use]
smtp_server_port	integer	RW	SMTP server port [1 ... 65535]

4.4.5. Video Boost

This CGI request is to get and set the video boosting parameters

Syntax:

```
http://<server_address>/setup/event/action/video.php?<group>=group_name
&<app>=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the video boosting parameters and values

```
http://192.168.0.10/setup/event/action/video.php?app=get
```

[Table 3- 52] Parameters for video boost

Argument		Type	Mode	Description [Value]
video_src		string	RO	Video Source (Capture mode) (WIDTHxHEIGHT_FRAMERATE) Ex) [1920x1080_30fps] [1920x1080_25fps]
video_enc#_enable		boolean	RO	Current video encoder state of running [1] : Enabled (running) [0] : Disabled (not running)
video_enc#_fps_list		string	RO	Supported video frame rate list
video_enc#_fps		integer	RO	Video frame rate [60] ~ [1]
video_enc#_codec		string	RO	Video codec and profile

				[H264HP] : H.264 High Profile [H264MP] : H.264 Main Profile [H264BP] : H.264 Base Profile [MJPEG] : Motion JPEG
video_enc#_maxbr		integer	RO	Available maximum bit rate (Kbps)
video_enc#_minbr		integer	RO	Available minimum bit rate (Kbps)
video_enc#_bitrate		integer	RO	Video bit rate (kbps) [ch#_strm#_minbr ~ ch#_strm#_maxbr]
boost_video#_enable		boolean	RW	Enable/Disable video boost function [1] : Enable [0] : Disable
boost_video#_fps		integer	RW	Video frame rate on event [60] ~ [1]
boost_video#_bps		integer	RW	Video bit rate (kbps) on event [ch#_strm#_minbr ~ ch#_strm#_maxbr]
boost_video#_quality		integer	RW	Video quality on event [1 ~ 99]

[Note]

1. # means video encoder number

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2. The boost of bitrate come into action only if VBR control mode
3. The boost of frame rate come into action only H.264 codec.

4.4.6. Notification Server

This CGI request is to get and set the notification message to server parameters

Syntax:

```
http://<server_address>/setup/event/action/notification.php?<group>=group_name&<app>=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the notification message to server parameters and values

```
http://192.168.0.10/setup/event/action/notification.php?app=get
```

[Table 3- 53] Parameters of notification

Argument	Type	Mode	Description [Value]
notification_enable	boolean	RW	Enable/Disable notifying server [0] : Disable [1] : Enable
server_type	string	RW	Type of notification server [http] : HTTP server type [tcp] : TCP server type [udp] : UDP server type
server_addr	string	RW	The address of server
server_port	integer	RW	The port number of server
server_user	string	RW	The username of server
server_pass	string	RW	The password of server
server_url	string	RW	The URL of server
send_cr	boolean	RW	Enable/Disable sending carriage return [0] : Disable [1] : Enable
send_lf	boolean	RW	Enable/Disable sending line feed

			[0] : Disable [1] : Enable
method	string	W	"test" sends test message to server with selected settings
test_message	string	RW	The test message text used with method=test

4.5. Event Rule

4.5.1. Event Map

- The **map.php** CGI request shows the event rule list.

Syntax:

```
http://<server_address>/setup/event/rule/map.php?app=get
```

Example: Request of getting event rule list

```
http://192.168.0.10/setup/event/rule/map.php?app=get
```

Example: Response for getting event rule parameters and values

```
res=200&event_list=0600|New Event|Manual(1)|FTP&event_in_cnt=1&event_max
_cnt=9
res=200&event_list=New Rule 1|0200|AlarmIn(1)|1|0900|Audio_Detect|AlarmOut1
New Rule 2|0400|Manual(1)|0|0000|-|Record&event_in_cnt=2&event_max_cnt=14
```

[Table 3- 54] Parameters of events map

Argument	Type	Mode	Description
event_list	string	RO	List of event map
event_in_cnt	integer	RO	Number of used event input
event_max_cnt	integer	RO	Number of available events

The event map is consisted of event ID, event name, event type and event actions. Each event item is delimited by '/'

The event ID has 4 numbered characters, ABCD. The first two characters, AB mean the event input type as below. And the next two characters, CD, mean the actual event source ID.

The event name is a string to point the event. The event type is a string to describe the event. The event out is a string to describe the event action.

Each item of an event is delimited by '|'.

[Table 3- 55] Format of event list

Syntax	<pre> <event_name> <event_id> <event_in_id> <event_in_name> <event_in_verify> <event_in_verify_id> <event_in_verify_name> <event_out_name>\n <event_name> <event_id> <event_in_id> <event_in_name> <event_in_verify> <event_in_verify_id> <event_in_verify_name> <event_out_name>\n ... </pre>
Example	<pre> event_list=New Rule 1 0200 AlarmIn(1) 1 0900 Audio_Detect AlarmOut1\nNew Rule 2 0400 Manual(1) 0 0000 - Record </pre>

[Table 3- 56] Event ID in Event Map

AB	Description	CD	Description
01	On Boot	00	N/A
02	Alarm Input	00	Alarm Input 1
		01	Alarm Input 2
03	Motion Detection	00	Motion Region ID 1
		01	Motion Region ID 2
		02	Motion Region ID 3
		03	Motion Region ID 4
04	Manual Trigger	00	Manual Trigger 1
		01	Manual Trigger 2
		02	Manual Trigger 3
		03	Manual Trigger 4
05	Video Loss	00	N/A
06	Network Disconnect	00	N/A
07	Video Analytics	00	Analytics Rule 1
		01	Analytics Rule 2
		02	Analytics Rule 3

08	PIR	00	N/A
09	Audio Detect	00	N/A
10	Tamper	00	N/A
11	Timer	00	N/A
12	Day and Night Switch	00	N/A
13	Temperature	00	N/A

- The **event_pop.php** CGI request is to add/modify/remove event rule from list.

The request MUST be written with method parameter. The modify and remove operations MUST be written with event_in_id parameter. The 'add' operation with app=set MUST be written with event_in_id parameter. The 'add' operation needs other parameters for correct event map.

Example: Request for getting event pop parameters and values

```
http://192.168.0.10/setup/event/rule/event_pop.php?app=get&method=add
```

Example: Response for getting event pop parameters and values

```
res=200&event_out_smtp_list1=&...&event_in_verify_cnt=17
```

Example: Request to set new event rule

```
http://192.168.0.10/setup/event/rule/event_pop.php?app=set&method=add&event_name=New_Rule&event_in_id=0200&event_out_alarm1=1&event_out_record=1
```

Example: Response from setting new event rule

```
res=200
```

Example: Request to modify previous event rule

```
http://192.168.0.10/setup/event/rule/event_pop.php?app=set&method=add&event_name=Modify_Rule&event_in_id=0200&event_out_notification=1&event_out_notification_messa
```

```
ge=event notification message
```

Example: Response from modifying previous event rule

```
res=200
```

Example: Request to remove saved event rule

```
http://192.168.0.10/setup/event/rule/event_pop.php?app=set&method=remove&event_in_id=0200
```

Example: Response from removing saved event rule

```
res=200
```

[Table 3- 57] Parameters of event rule

Parameter	Type	Mode	Description
method	string	RW	Event Map Operations [add] : add new event map [modify] : modify event map [remove] : remove event map
event_out_smtp_list#	string	RW	E-Mail Address for Event Out
event_in_id_list#	string	RW	Event ID for the specified number in the list Refer to [Table 3-56]
event_in_id	string	RW	Event In ID Refer to [Table 3-56]
event_in_name_list#	string	RW	Event In Type Name for the specified number in the list
event_in_name	string	RW	Event In Name
event_in_cnt	integer	RW	Number of event input in the list

event_in_verify_id_list#	string	RW	Second Event ID for the specified number in the list Refer to [Table 3-56]
event_in_verify_name_list#	string	RW	Second Event In Type Name for the specified number in the list
event_in_verify	string	RW	Event In ID Refer to [Table 3-56]
event_in_verify_id	string	RW	Second Event In ID Refer to [Table 3-56]
event_out_smtp_en#	boolean	RW	Sending Event E-Mail to the specified Address or not
event_out_smtp_title	string	RW	E-Mail Title for that Event
event_out_smtp_msg	string	RW	E-Mail Message for that Event
event_out_alarm	boolean	RW	Usage of Alarm Out or not for that Event
event_out_ftp	boolean	RW	Usage of FTP for that Event
event_out_smtp	boolean	RW	Usage of SMTP for that Event
event_out_record	boolean	RW	Usage of recording for that Event
event_name	string	RW	Event Name
event_id	integer	RW	Event Rule ID

4.5.2. ONVIF Map

This CGI request is to get and set the ONVIF event mapping parameters.

Syntax:

```
http://<server_address>/setup/event/rule/onvif.php?<group>=group_name
&<app>=(get|set)[[&<parameter>=<value>]...]
```

Example: Request for getting the ONVIF event mapping parameters and values

```
http://192.168.0.10/setup/event/rule/onvif.php?app=get
```

Example: Response for getting the ONVIF event mapping parameters and values

```
res=200&onvif_emap_cnt=2&onvif_emap_list=tns1:VideoSource/MotionAlarm|256
tns1:Device/Trigger/DigitalInput|16
```

Each item of list is delimited by '\n' and each field of item is delimited by '|'.

[Table 3- 58] Parameters of ONVIF event mapping

Parameter	Type	Mode	Description
onvif_emap_cnt	integer	RO	Max ONVIF event mapping count
onvif_emap_list	string	RW	List of ONVIF event mapping

[Table 3- 59] Event ID in ONVIF Map

Parameter	Value
ONVIF_EMAP_MASK_ONBOOT	0x00000001
ONVIF_EMAP_MASK_NETLOSS	0x00000002
ONVIF_EMAP_MASK_ALARM	0x00000010
ONVIF_EMAP_MASK_MOTION	0x00000100
ONVIF_EMAP_MASK_TAMPER	0x00001000
ONVIF_EMAP_MASK_MANUAL	0x000F0000
ONVIF_EMAP_MASK_MANUAL_1	0x00010000
ONVIF_EMAP_MASK_MANUAL_2	0x00020000
ONVIF_EMAP_MASK_MANUAL_3	0x00040000
ONVIF_EMAP_MASK_MANUAL_4	0x00080000

4.6. System

4.6.1. User

This CGI request is to get and set the user parameters and values

Syntax:

```
http://<server_address>/setup/system/security/user.php?<app>=(get|set)[&<
parameter>=<value>]...]
```

Example: Request for getting user parameters and values

```
http://192.168.0.10/setup/system/security/user.php?app=get
```

[Table 3- 60] Parameters of user

Parameter	Type	Mode	Description
user_count	integer	RO	Number of registered users
list	string	RW	List of registered users Refer to [Table 3-60]
method	string	RW	User operations [add] : Add new user to list [modify] : Modify exist user [remove] : Remove exist user
user_name	string	RW	User ID
user_pass	string	RW	Password
remove_user	string	WO	User ID to remove
group	integer	RW	Authority level to access [1] : guest [2] : operator [3] : administrator
ptz_enable	boolean	RW	Enable/Disable ptz accessing

			authority to the user [0] : Disable [1] : Enable
--	--	--	--

[Note]

1. It cannot register more than 10 users

[Table 3- 61] List of registered users

Syntax	<code><userid_1> <level_1> <PTZ_access_1>\n</code> <code><userid_2> <level_2> <PTZ_access_2>\n</code> ... <code><userid_n> <level_n> <PTZ_access_n>\n</code>
Example	admin 1 1\nuser2 2 0\nuser3 3 1\n

Example: Request to add one user to the list

```
http://192.168.0.10/setup/system/security/user.php?app=set&method=add&user_name=user_a&user_pass=1111&group=2&ptz_enable=1
```

Example: Request to modify the user from the list

```
http://192.168.0.10/setup/system/security/user.php?app=set&method=modify&user_name=user_a&user_pass=1111&group=3&ptz_enable=1
```

Example: Request to remove the user from the list

```
http://192.168.0.10/setup/system/security/user.php?app=set&method=remove&user_name=user_a
```

4.6.2. HTTPS

This CGI request is to get and set the HTTP/HTTPS connection policy parameters and values

Syntax:

```
http://<server_address>/setup/system/security/https.php?<app>=(get|set)[[&
<parameter>=<value>]...]
```

Example: Request for getting user parameters and values

```
http://192.168.0.10/setup/system/security/https.php?app=get
```

[Table 3- 62] Parameters of https connection

Parameter	Type	Mode	Description
https_mode	integer	RW	HTTP/HTTPS mode [0] : HTTP mode [1] : HTTPS mode [2] : HTTP & HTTPS mode
redirect_https	boolean	RW	Enable/Disable redirect http to https [0] : Disable [1] : Enable
private_cert_name	string	R	Uploaded certificate filename by user
private_cert_time	string	R	certificate file upload time

[Note]

1. Default HTTP port number is 80
2. Default HTTPS port number is 443

(1) Certificate Upgrade

The ssl_upload.php is used to upgrade the certificate file. After the device has been upgraded with a new certificate file, http data is encrypted using the new certificate.

The file content is provided in the HTTP body according to the format given in RFC 1867. The body is created automatically by the browser if using HTML form with input type "file".

Syntax:

```
http://<server_address>/setup/system/security/ssl_upload.php?app=set
```

Body:

```
POST /setup/system/security/ssl_upload.php HTTP/1.1
Accept: text/html, application/xhtml+xml, */*
Accept: application/json
Cache-Control: no-cache
X-Requested-With: XMLHttpRequest
Content-Type: multipart/form-data; boundary=-----7e2171f10cc8
Referer: http://192.168.0.144/setup/system/security.php
Accept-Language: ko-KR
Accept-Encoding: gzip, deflate
User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; Trident/7.0; rv:11.0) like Gecko
Host: 192.168.0.144
Content-Length: 3247
Connection: Keep-Alive
Cookie: PHPSESSID=drf0rkrdbhbd186epot0rnet71
--<boundary>
Content-Disposition: form-data; name="sslfile"; filename="server.pem"
Content-Type: text/plain
< firmware file content >
--<boundary>
```

4.6.3. IP Filters

This CGI request is to get and set the IP filtering policy parameters and values

Syntax:

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```
http://<server_address>/setup/system/security/ipfilter.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request for getting user parameters and values

```
http://192.168.0.10/setup/system/security/ipfilter.php?app=get
```

[Table 3- 63] Parameters of IP filtering

Parameter	Type	Mode	Description
ipfilter_enable	boolean	RW	Enable/Disable IP filtering [0] : Disable [1] : Enable
ipfilter_count	integer	RO	Number of IP filtering groups
ipfilter#_enable	boolean	RW	Enable/Disable IP filtering for the specified group [0] : Disable [1] : Enable
ipfilter#_policy	integer	RW	Policy (Allow/Deny access) for the specified group [0] : DENY [1] : ALLOW
ipfilter#_startip	string	RW	Start IP address for the specified group
ipfilter#_endip	string	RW	End IP address for the specified group

4.6.4. ONVIF

This CGI request is to get and set ONVIF security (WS-Security) parameters and values

Syntax:

```
http://<server_address>/setup/system/security/onvif.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request for getting user parameters and values

```
http://192.168.0.10/setup/system/security/onvif.php?app=get
```

[Table 3- 64] Parameters of ONVIF security

Parameter	Type	Mode	Description
onvif_ws_security	integer	RW	ONVIF WS(Web Service) security [0] : Disable [1] : Enable

4.6.5. STREAM

This CGI request is to get and set video STREAM security parameters and values

Syntax:

```
http://<server_address>/setup/system/security/stream.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request for getting user parameters and values

```
http://192.168.0.10/setup/system/security/stream.php?app=get
```

[Table 3- 65] Parameters of STREAM security

Parameter	Type	Mode	Description
snapshot_security	boolean	RW	JPEG snapshot security [0] : Disable [1] : Enable
rtsp_security	boolean	RW	RTSP security [0] : Disable [1] : Enable
jpegpush_security	boolean	RW	HTTP JPEG-PUSH security [0] : Disable [1] : Enable

4.6.6. EXPORT

This CGI request is to get and set configuration EXPORT security parameters and values

Syntax:

```
http://<server_address>/setup/system/security/export.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request for getting EXPORT security values

```
http://192.168.0.10/setup/system/security/export.php?app=get
```

[Table 3- 66] Parameters of EXPORT security

Parameter	Type	Mode	Description
export_security	boolean	RW	Configuration export security [0] : Disable [1] : Enable
export_key	string	RW	The key to export or import configuration

4.6.7. Date & Time

This CGI request is to get and set date & time parameters and values

Syntax:

```
http://<server_address>/setup/system/time.php?<app>=(get|set)[&<parameter>=<value>]...]
```

Example: Request for getting date & time parameters and values

```
http://192.168.0.10/setup/system/time.php?app=get
```

Example: Response for getting date and time parameters and values

```
res=200&tsyncmode=1&dt=1970-01-01&tm=19:44:38&tzone=26&dst_enable=0&ntp_server=time.nist.gov&ntp_interval=720&date_format=1&time_format=1
```

[Table 3- 67] Parameters for date and time

Parameter	Type	Mode	Description
tsyncmode	integer	RW	Date and Time synchronization mode [0] : Set manually [2] : Sync with NTP server
dt	string	RO	Current Date
		RW	Manual Date to set
tm	string	RO	Current Time
		RW	Manual Time to set
tzone	integer	RW	Time zone Refer to [Table 3-66]
dst_enable	boolean	RW	Enable/Disable DST (Daylight Saving Time)

			[0] : Disable [1] : Enable
ntp_server	string	RW	NTP Server URL
ntp_interval	integer	RW	NTP Interval (mimutes) [60] : 60 minute [120] : 120 minute [180] : 180 minute [360] : 360 minute [720] : 720 minute [1440] : 1440 minute
date_format	integer	RW	Date Format [1] : YYYY-MM-DD [2] : MM-DD-YYYY [3] : DD-MM-YYYY
time_format	integer	RW	Time Format [1] : 24 Hours [2] : 12 Hours (AM/PM)

[Table 3- 68] Time Zone Value and Property

Value	Time Zone	City
0	GMT-12:00	International Date Line West
1	GMT-11:00	Midway Island, Samoa
2	GMT-10:00	Hawaii
3	GMT-09:00	Alaska
4	GMT-08:00	Pacific Time (US & Canada); Tijuana
5	GMT-07:00	Arizona
6	GMT-07:00	Chihuahua, La Paz, Mazatlan
7	GMT-07:00	Mountain Time (US & Canada)
8	GMT-06:00	Central America
9	GMT-06:00	Central Time (US & Canada)
10	GMT-06:00	Guadalajara, Mexico City, Monterrey

11	GMT-06:00	Saskatchewan
12	GMT-05:00	Bogota, Lima, Quito
13	GMT-05:00	Eastern Time (US & Canada)
14	GMT-05:00	Indiana (East)
15	GMT-04:00	Atlantic Time (Canada)
16	GMT-04:00	Caracas, La Paz
17	GMT-04:00	Santiago
18	GMT-03:30	Newfoundland
19	GMT-03:00	Brasilia
20	GMT-03:00	Buenos Aires, Georgetown
21	GMT-03:00	Greenland
22	GMT-02:00	Mid-Atlantic
23	GMT-01:00	Azores
24	GMT-01:00	Cape Verde Is.
25	GMT	Casablanca, Monrovia
26	GMT	Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London
27	GMT+01:00	Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
28	GMT+01:00	Belgrade, Bratislava, Budapest, Ljubljana, Prague
29	GMT+01:00	Brussels, Copenhagen, Madrid, Paris
30	GMT+01:00	Sarajevo, Skopje, Warsaw, Zagreb
31	GMT+01:00	West Central Africa
32	GMT+02:00	Athens, Beirut, Istanbul, Minsk
33	GMT+02:00	Bucharest
34	GMT+02:00	Cairo
35	GMT+02:00	Harare, Pretoria
36	GMT+02:00	Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius
37	GMT+02:00	Jerusalem
38	GMT+03:00	Baghdad
39	GMT+03:00	Kuwait, Riyadh
40	GMT+03:00	Moscow, St. Petersburg, Volgograd
41	GMT+03:00	Nairobi
42	GMT+03:30	Tehran
43	GMT+04:00	Abu Dhabi, Muscat

44	GMT+04:00	Baku, Tbilisi, Yerevan
45	GMT+04:30	Kabul
46	GMT+05:00	Ekaterinburg
47	GMT+05:00	Islamabad, Karachi, Tashkent
48	GMT+05:30	Chennai, Kolkata, Mumbai, New Delhi
49	GMT+05:45	Kathmandu
50	GMT+06:00	Almaty, Novosibirsk
51	GMT+06:00	Astana, Dhaka
52	GMT+06:00	Sri Jayawardenepura
53	GMT+06:30	Rangoon
54	GMT+07:00	Bangkok, Hanoi, Jakarta
55	GMT+07:00	Krasnoyarsk
56	GMT+08:00	Beijing, Chongqing, Hong Kong, Urumqi
57	GMT+08:00	Irkutsk, Ulaan Bataar
58	GMT+08:00	Kuala Lumpur, Singapore
59	GMT+08:00	Perth
60	GMT+08:00	Taipei
61	GMT+09:00	Osaka, Sapporo, Tokyo
62	GMT+09:00	Seoul
63	GMT+09:00	Yakutsk
64	GMT+09:30	Adelaide
65	GMT+09:30	Darwin
66	GMT+10:00	Brisbane
67	GMT+10:00	Canberra, Melbourne, Sydney
68	GMT+10:00	Guam, Port Moresby
69	GMT+10:00	Hobart
70	GMT+10:00	Vladivostok
71	GMT+11:00	Magadan, Solomon Is., New Caledonia
72	GMT+12:00	Auckland, Wellington
73	GMT+12:00	Fiji, Kamchatka, Marshall Is.
74	GMT+13:00	Nuku'alofa

4.6.8. Network

- The **tcipip.php** CGI request is to get and set the TCP/IP parameters and values.

Syntax:

```
http://<server_address>/setup/system/network/tcipip.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request for getting the TCP/IP parameters and values

```
http://192.168.0.10/setup/system/network/tcipip.php?app=get
```

[Table 3- 69] Parameters of TCP/IP

Argument	Type	Mode	Description
net_dhcp	boolean	RW	Enable/Disable DHCP [0] : Disable [1] : Enable
net_ip	string	RW	IPv4 Address
net_mask	string	RW	Network Mask Address
net_gateway	string	RW	Gateway Address
net_ipv6	boolean	RW	Enable/Disable IPv6 Address [0] : Disable [1] : Enable
net_ipv6addr	string	RO	IPv6 Address
eth_link_mode	integer	RW	Determines the ethernet transfer rate and duplex mode of the camera. [0 = Auto 1 = 10Mb Half Duplex 2 = 10Mb Full Duplex 3 = 100Mb Half Duplex 4 = 100Mb Full Duplex 5 = 1.0Gb Half Duplex 6 = 100Mb Full Duplex Auto

			Negotiating 7 = 1.0Gb Full Duplex Auto Negotiating]
dns_dhcp	boolean	RW	Obtain DNS server via DHCP or not [0] : Disable [1] : Enable
dns_domain	string	RW	Domain Name Max name length is 63
net_dns	string	RW	Primary DNS Address
net_dns2	string	RW	Secondary DNS Address
http_port	integer	RW	HTTP Port Number [1 ~ 65535]
https_port	integer	RW	HTTPS Port Number [1 ~ 65535]
rtsp_port	integer	RW	RTSP Port Number [1 ~ 65535]
net_arp	boolean	RW	Enable/Disable ARP/Ping Setting [0] : Disable [1] : Enable
net_icmp	boolean	RW	Enable/Disable ICMP/Ping Setting [0] : Disable [1] : Enable
net_hostname	string	RW	Host name Max name length is 127

[Note]

1. Default HTTP port is 80
2. Default HTTPS port is 443
3. Default RTSP port is 554

- The **ddns.php** CGI request is to get and set the DDNS server configure parameters and values

Syntax:

```
http://<server_address>/setup/system/network/ddns.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request for getting the DDNS server configuration parameters and values

```
http://192.168.0.10/setup/system/network/ddns.php?app=get
```

[Table 3- 70] Parameters of DDNS server

Argument	Type	Mode	Description
net_ddns	boolean	RW	Enable/Disable DDNS [0] : Disable [1] : Enable
ddns_server	string	RW	DDNS server address Max length is 63
ddns_host	string	RW	Registered host name Max length is 31
ddns_user	string	RW	Registered user name Max length is 31
ddns_pwd	string	RW	Registered user password

			Max length is 31
ddns_interval	integer	RW	Time Interval to Re-Register IP address for Host Name (second) [600] : 10 minute [1800] : 30 minute [3600] : 1 hour [21600] : 6 hour [86400] : 24 hour

- The **rtp.php** CGI request is to get and set the RTP protocol parameters and values

Syntax:

```
http://<server_address>/setup/system/network/rtp.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request of getting the RTP protocol parameters and values

```
http://192.168.0.10/setup/system/network/rtp.php?app=get
```

The devices transport video and audio stream by RTP (Real-Time Protocol). this group is configuration for RTP connection.

[Table 3- 71] Parameters of RTP

Argument	Type	Mode	Description
rtp_min_port	integer	RO	Minimum RTP port [30000]
rtp_max_port	integer	RO	Maximum RTP port [39800]
rtp_start_port	integer	RW	Start port number of RTP port range

rtp_end_port	integer	RW	End port number of RTP port range
rtp_mcast#_ip	string	RW	Multicasting IP Address of the specified channel [224.0.0.0... 239.255.255.255]
rtp_mcast#_port	integer	RW	Multicasting Port Number of the specified channel
rtp_mcast#_ttl	integer	RW	TTL of Multicasting of the specified channel
rtp_mcast#_always_enable	boolean	RW	Enable/Disable RTP Always Multicast of the specified [0] : Disable [1] : Enable

[Note]

1. # means video encoder number.

2. Both rtp_start_port and rtp_end_port must be less than rtp_max_port and larger than rtp_min_port.

- The **upnp.php** CGI request is to get and set the UPnP parameters and values

Syntax:

```
http://<server_address>/setup/system/network/upnp.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request for getting the UPnP parameters and values

```
http://192.168.0.10/setup/system/network/upnp.php?app=get
```

[Table 3- 72] Parameters of UPnP

Argument	Type	Mode	Description
net_upnp	boolean	RW	Enable/Disable UPnP [0] : Disable [1] : Enable
friendly_name	string	RW	Friendly name. Max31 characters

[Note]

1. Default UPnP friendly name format is <MODEL_NAME>-<MAC_ADDRESS>.

- The **zeroconf.php** CGI request is to get and set the zeroconf parameters and values

Syntax:

```
http://<server_address>/setup/system/network/zeroconf.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request for getting the zeroconf parameters and values

```
http://192.168.0.10/setup/system/network/zeroconf.php?app=get
```

Zero-configuration networking (zeroconf) is a set of technologies that automatically creates a usable computer network based on the Internet Protocol Suite (TCP/IP) when computers or network peripherals are interconnected. It does not require manual operator intervention or special configuration servers.

[Table 3- 73] Parameters of zeroconf

Argument	Type	Mode	Description
zeroconf_enable	boolean	RW	Enable/Disable zeroconf

			[0] : Disable [1] : Enable
zeroconf_ip	string	RO	Zeroconf IP address

- The **bonjour.php** CGI request is to get and set the bonjour protocol parameters and values

Syntax:

```
http://<server_address>/setup/system/network/bonjour.php?<app>=(get|set)
[&<parameter>=<value>]...
```

Example: Request of getting the bonjour protocol parameters and values

```
http://192.168.0.10/setup/system/network/bonjour.php?app=get
```

[Table 3- 74] Parameters of bonjour group

Argument	Type	Mode	Description
bonjour_enable	boolean	RW	Enable/Disable bonjour function [0] : Disable [1] : Enable
bonjour_friendly_name	string	RW	Friendly name. Max31 characters

4.6.9. Maintenance

The device supports maintenance tools that restart, reset, default, backup and restores the configuration and upgrades the firmware.

(1) Restart

This CGI request is to reboot the device. If the device returns the result code 200 after this request, the device would be restarted and disconnected

Syntax:

```
http://<server_address>/setup/system/restart.php?app=set
```

(2) Reset

If the device returns the result code 200 after this request, all parameters of the device except network values would be changed to the factory default values.

Syntax:

```
http://<server_address>/setup/system/reset.php?app=set
```

(3) Default

If the device returns the result code 200 after this request, all parameters of the device including the network values would be changed to the factory default values. So, the device may NOT be connected with the previous network address. Thus, the default network IP address MUST be used to connect the device.

[Table 3- 75] Default network parameters

IP Address	192.168.0.10
Subnet Mask	255.255.255.0
Gateway Address	192.168.0.1

(4) Backup

Syntax:

```
http://<server_address>/setup/system/backup.cgi
```

(5) Restore

Syntax:

```
http://<server_address>/setup/system/restore.cgi?(get|set)[[&<parameter>=<value>]...]
```

(6) Upgrade

The update.php is used to upgrade the firmware. After the device has been upgraded with a new firmware it is restarted as part of this function.

The file content is provided in the HTTP body according to the format given in RFC 1867. The body is created automatically by the browser when using the HTML form with input type "file".

Syntax:

```
http://<server_address>/setup/system/update.php?app=set
```

Body:

```
POST /setup/system/update.php HTTP/1.1
Accept: text/html, application/xhtml+xml, */*
Referer: http://192.168.0.10/system/maintenance.php
Accept-Language: ko-KR
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Content-Type: multipart/form-data; boundary=<boundary>
Accept-Encoding: gzip, deflate
Host: 192.168.0.10
Content-Length: 17575583
DNT: 1
Connection: Keep-Alive
Cache-Control: no-cache
Cookie: PHPSESSID=6egs5757ih3r1ltoq338m0b2f6
--<boundary>
```

Content-Disposition: form-data; name="fimage"; filename="FTN_v1.4.9.img"

Content-Type: application/octet-stream

< firmware file content >

--<boundary>

4.6.10. Log Server

The device supports sending log message to external syslog server.

- The **support.php** CGI request is to get and set the log server parameters and values.

Syntax:

```
http://<server_address>/setup/system/support.php?<group>=group_name&
    <app>=(get|set)[&[<parameter>=value]]
```

Example: Request for getting the log server parameters and values

```
http://192.168.0.10/setup/system/support.php?group=log_server&app=get
```

Example: Response for getting log server parameters and values

```
res=200&logserver_enable=0&logserver_ip=127.0.0.1&logserver_port=514&logserver_tcp_
mode=0&logserver_tls_enable=1&logserver_log_format=0&
```

[Table 3- 76] Group of support.php

Group Name	Description
log_server	Log Server

[Table 3- 77] Parameters for log server group

Argument	Type	Mode	Description [Value]
logserver_enable	boolean	RW	Enable/Disable log server function [0] : Disable [1] : Enable
logserver_ip	string	RW	IPv4 Address of log server

logserver_port	integer	RW	Port Number of Log Server [1 ~ 65535]
logserver_tcp_mode	integer	RW	Type of log server [0] : UDP server type [1] : TCP server type
logserver_tls_enable	boolean	RW	Enable/Disable Encryption log date [0] : Plain text [1] : Encryption
logserver_log_format	integer	RW	Type of log format [0] : RFC 3164 [1] : RFC 5424

4.7. PTZ

4.7.1. Control

Some models support PTZ control function via HTTP connection. The URL starts '/cgi-bin/ptz/control.php' for general PTZ control.

This CGI request is to control pan/tilt/zoom movement

Syntax:

```
http://<server_address>/cgi-bin/ptz/control.php?[[&
<parameter>=<value>]...]
```

Example: Request for getting the saved presets and options of preset.

```
http://192.168.0.10/cgi-bin/ptz/control.php?zoom=stop
```

[Table 3- 78] Parameters of PTZ control

Argument	Type	Mode	Description
ch	integer	WO	Channel number [1] ~
pspd	integer	WO	Pan speed [1 ~ 8]
tspd	integer	WO	Tilt speed [1 ~ 8]
zoom	string	WO	Zoom control [tele] [wide] [tele_step] [wide_step] [stop]
focus	string	WO	Focus control [far]

			[near] [far_step] [near_step] [stop]
move	string	WO	Pan/Tilt movement [left] [right] [up] [down] [upleft] [upright] [downleft] [downright] [stop]
preset	integer	WO	Move preset position [home preset, 1 ~ max preset number]
tour	integer	WO	Run tour [1 ~ max tour number]

4.7.2. Preset list and options

This CGI request is to get the saved presets and options of preset.

Syntax:

```
http://<server_address>/setup/ptz/preset.php?<app>=<get>
```

Example: Request for getting the saved presets and options of preset.

```
http://192.168.0.10/setup/ptz/preset.php?app=get
```

[Table 3- 79] Parameters for presets and options

Argument	Type	Mode	Description
preset_max	integer	RO	Maximum number of presets that can be stored.
exposure_mode_list	string	RO	Supported exposure mode list
exposure_shutter_list	string	RO	Supported exposure shutter list
exposure_gain_list	string	RO	Supported exposure gain list
exposure_iris_list	integer	RO	Supported exposure iris list
dnn_mode_list	string	RO	Supported day and night mode list
wdr_mode_list	string	RO	Supported WDR mode list
exposure_dss_list	string	RO	Supported DSS mode list
exposure_def_shutter	integer	RO	Default shutter
exposure_def_gain	float	RO	Default gain
exposure_def_iris	integer	RO	Default iris
exposure_def_dss	integer	RO	Default DSS
home_id	integer	RO	

			Preset ID of the home position
home_name	string	RO	Preset Name of the home position
preset_list	string	RO	List of preset

[Note]

1. The Home position cannot be deleted but can be modified.

Each item of Preset list is delimited by '|' and ','.

[Table 3- 80] List of Preset

Syntax	<pre> <preset_id> <preset_enable> <preset_name> <preset_af_mode> <preset_ae_mode> <preset_ae_shutter> <preset_ae_gain> <preset_iris> <preset_dnn_mode> <preset_wdr_mode>, ... <preset_id> <preset_enable> <preset_name> <preset_af_mode> <preset_ae_mode> <preset_ae_shutter> <preset_ae_gain> <preset_iris> <preset_dnn_mode> <preset_wdr_mode> </pre>
Example	<pre> 0 1 HOME 0 auto 30 62.0 0 auto off, 1 1 Preset1 1 auto 30 42.0 8 day off </pre>

4.7.3. Preset

This GCI request is to set the preset parameters and values.

Syntax:

```

http://<server_address>/setup/ptz/preset.php?<app>=<set>&<method>=<
add|edit|delete|run>[[&<parameter>=<value>]...]

```

Example: Request for adding the preset and option

```
http://192.168.0.10/setup/ptz/preset.php?app=set&method=add&preset_id=3&preset_name=Preset3&preset_af_mode=0&preset_ae_mode=auto&preset_shutter=30&preset_gain=42.0&preset_iris=8&preset_dnn_mode=auto&preset_wdr_mode=off
```

Example: Request for modifying preset and option

```
http://192.168.0.10/setup/ptz/preset.php?app=set&method=edit&preset_id=3&preset_name=ModifiedPreset3&preset_af_mode=2&preset_position=1&preset_ae_mode=auto&preset_shutter=30&preset_gain=42.0&preset_iris=8&preset_dnn_mode=night&preset_wdr_mode=off
```

Example: Request for removing preset and option

```
http://192.168.0.10/setup/ptz/preset.php?app=set&method=delete&preset\_id=3
```

Example: Request for running preset

```
http://192.168.0.10/setup/ptz/preset.php?app=set&method=run&preset_id=3
```

[Table 3- 81] Parameters of preset

Argument	Type	Mode	Description
method	string	WO	Operation to configure preset [add] : add new preset [edit] : Modify saved preset [delete] : Delete saved preset [run] : run saved preset
preset_id	integer	WO	

			Preset id to add, edit, modify or run
preset_name	string	WO	Preset name to add or modify
preset_af_mode	integer	WO	Auto focus mode of preset to add or modify
preset_position	boolean	WO	PTZ position to modify preset [0] : Stored position [1] : Current position
preset_ae_mode	string	WO	Auto exposure mode of preset to add or modify
preset_shutter	integer	WO	Shutter speed of preset to add or modify
preset_gain	float	WO	gain value of preset to add or modify
preset_iris	integer	WO	iris value of preset to add or modify
preset_dnn_mode	string	WO	Day and night mode of preset to add or modify
preset_wdr_mode	string	WO	WDR mode of preset to add or modify

4.7.4. Tour list and options

This CGI request is to get the saved tours and options of tour.

Syntax:

```
http://<server_address>/setup/ptz/tour.php?<app>=<get>&<method>=
<get_tour_unit>&<tour_id>=
```

Example: Request for getting the saved tours and options of tour.

```
http://192.168.0.10/setup/ptz/tour.php?app=get
```

[Table 3- 82] Parameters of tours and options

Argument	Type	Mode	Description
tour_max	integer	RO	Maximum number of tours that can be stored.
tour_item_max	integer	RO	Maximum number of tour item that can be stored.
tour_speed_max	integer	RO	Maximum speed of tour item
tour_dwell_time_max	integer	RO	Maximum dwell time of tour item
default_tour_speed	integer	RO	Default speed of tour item
default_tour_dwell_time	integer	RO	Default dwell time of tour item
tour_list	string	RO	List of tour

Each item of Tour list is delimited by '|' and ','.

[Table 3- 83] List of Preset

Syntax	<code><tour_id> <tour_enable> <tour_name> ,</code> <code><tour_id> <tour_enable> <tour_name> ,</code> <code><tour_id> <tour_enable> <tour_name> ,</code> ... <code><tour_id> <tour_enable> <tour_name></code>
Example	1 0 TOUR 1, 2 0 TOUR 2, ... 8 0 TOUR 8

4.7.5. Tour

This GCI request is to set the tour parameters and values.

Syntax:

```
http://<server_address>/setup/ptz/tour.php?<app>=<get|set>&<method>=<
edit|run>[[&<parameter>=<value>]...]
```

Example: Request for tour item

```
http://192.168.0.10/setup/ptz/tour.php?app=get&method=get_tour_unit&tour_id=1
```

Example: Request for modifying tour

```
http://192.168.0.10/setup/ptz/tour.php?app=set&method=edit&tour_id=1&tour_name=TO
UR1&tour_enable=1&tour_item_list=1|1|0|50|5|0,2|1|1|50|3|0
```

Example: Request for running tour

```
http://192.168.0.10/setup/ptz/tour.php?app=set&method=run&tour_id=1
```

[Table 3- 84] Parameters of tour

Argument	Type	Mode	Description
method	string	WO	Operation to configure tour [get_tour_unit] : search tour unit [edit] : Modify saved tour [run] : run saved tour
tour_id	integer	RW	Tour id to modify or run
tour_name	string	RW	Tour name to modify of searched
tour_enable	boolean	WO	Enable/Disable tour [0] : Disable [1] : Enable
tour_item_list	string	WO	List of tour item to modify

Each item of Tour list is delimited by '|' and ','.

[Table 3- 85] List of Tour item list

Syntax	<pre> <tour_item_id> <tour_enable> <tour_preset_id> <tour_item_spd> <tour_item_dwell_tme> <tour_item_dir>, ... <tour_item_id> <tour_enable> <tour_preset_id> <tour_item_spd> <tour_item_dwell_tme> <tour_item_dir> </pre>
Example	<pre> 1 1 0 50 5 0, 2 1 1 50 3 0, ... 128 1 0 50 5 0 </pre>

[Table 3- 86] Parameters for tour item list

Argument	Type	Mode	Description
tour_item_id	integer	RW	number of tour item Range : 1 ~ tour_item_max
tour_enable	boolean	RW	Enable/Disable tour item [0] : Disable [1] : Enable
tour_preset_id	integer	RW	preset id of tour item [-1] : Not defined
tour_item_spd	integer	RW	tour item speed Range : 1 ~ tour_speed_max
tour_item_dwell_tme	integer	RW	tour item dwell time

			Range: 0 ~ tour_dwell_time_max
tour_item_dir	integer	RW	Moving direction to tour item [0] : Shortest distance [1] : Clockwise [2] : Counterclockwise

4.8. Playback

The device supports the function to search the recorded data information.

4.8.1. Latest Recorded Data list by event-based

This CGI request is to get the latest list of recorded data information by event-based.

Syntax:

```
http://<server_address>/playback/playback.php?<app>=<get>&<method>=<get_last_event>[[&<parameter>=<value>]...]
```

Example: Request for getting the list of recorded data information and values

```
http://192.168.0.10/playback/playback.php?app=get&method=get_last_event  
&count=30
```

[Table 3- 87] Parameters of event-based latest information of recorded data

Argument	Type	Mode	Description
method	string	WO	Command of Searching option [get_last_event] : reverse ordering by event time
record_type	string	WO	[event] : recorded data by event [continuous] : recorded data by continuous option [all] : all of recorded data
count	integer	WO	Count of events for searching [1 ~ 255]
event_list_count	integer	RO	Total count of searched event data
event_list	string	RO	List of searched data Refer to [Table 3-57]

[Table 3- 88] Format for search event data list

Syntax	<code><event_type_1> <date_1> <time_1>,</code> <code><event_type_2> <date_2> <time_2>,</code> ... <code><event_type_n> <date_n> <time_n></code>
Example	2 2018-03-23 08:57:19,2 2018-03-23 09:08:23

[Note]

1. date format: yyyy-mm-dd

2. time format: hh:mm:ss

[Table 3- 89] List of event type masking

Value	Event Type
0x00000000	Continuous
0x00000001	On Boot
0x00000002	Motion Detection
0x00000004	Manual Trigger
0x00000008	Alarm In
0x00000010	Network Loss
0x00000020	Tampering
0x00000040	VCA
0x00000080	Timer
0x00000100	Day and Night Switch
0x00000200	Temperature
0xFFFFFFFF	All event

4.8.2. Recorded Event-Based Data list for specified date

This CGI request gets an event-based list of recorded data information for the specified date.

Syntax:

```
http://<server_address>/playback/playback.php?<app>=<get>&<method>=<get_event>[[&<parameter>=<value>]...]
```

Example: Request for getting the list of recorded data information and values

```
http://192.168.0.10/playback/playback.php?app=get&method=get_event&record_type=event&event_type=255&start_date=2018-03-30&start_time=00:00:00&end_date=2018-03-30&end_time=23:59:59
```

[Table 3- 90] Parameters of event-based information of data for specified date

Argument	Type	Mode	Description
method	string	WO	Command of Searching option [get_event]
record_type	string	WO	[event] : recorded data by Event
event_type	integer	WO	Type of event Refer to [Table 3-58]
start_date	string	WO	Start date for searching [yyyy-mm-dd]
start_time	string	WO	Start time for searching [hh:mm:ss]
end_date	string	WO	End date for searching [yyyy-mm-dd]
end_time	string	WO	End time for searching

			[hh:mm:ss]
event_list_count	integer	RO	Total count of searched event data
event_list	string	RO	List of searched data Refer to [Table 3-57]

4.8.3. Latest Recorded Data Information

This CGI request is to get the information of the latest recorded data.

Syntax:

```
http://<server_address>/playback/playback.php?<app>=<get>&<method>=<get_calendar>[[&<parameter>=<value>]...]
```

Example: Request for getting the latest recorded data information

```
http://192.168.0.10/playback/playback.php?app=get&method=get_calendar
```

[Table 3- 91] Parameters of time-based information for recorded data

Argument	Type	Mode	Description
method	string	WO	Command of Searching option [get_calendar]: search recorded information of latest recorded data
year	integer	RO	Year of latest recorded data
month	integer	RO	Month of latest recorded data [1 ~ 12]
day	integer	RO	Day of latest recorded data [1 ~ 31]
hour	integer	RO	Hour of latest recorded data [0 ~ 23]
minute	integer	RO	Minute of latest recorded data [0 ~ 59]
second	integer	RO	Second of latest recorded data

			[0 ~ 59]
day_list	string	RO	Exist check of recording data separated by [,] with each day [0] : No recorded data [1] : recorded data
hour_list	string	RO	Exist check of recording data separated by [,] with each hour [0] : No recorded data [1] : recorded data
minute_list	string	RO	Exist check of recording data separated by [,] with each minute [0] : No recorded data [1] : recorded data
event_minute_list	string	RO	Event type masking of recording data separated by [,] with each minute Refer to [Table 3-58]
file	string	RO	URL address for downloading recorded video
offset	integer	RO	Starting minutes of recorded video in file
Record_type	string	RO	Cause of recording [continuous] : continuous recording [event] : recording by event

[Note]

1. date format: yyyy-mm-dd

2. time format: hh:mm:ss

4.8.4. Recorded Data Information by specified data or time

This CGI request is to get the information of recorded data with specified month, date, hour or minute.

Syntax:

```
http://<server_address>/playback/playback.php?<app>=<get>&<method>=(get_month|get_day|get_hour|get_minute)[&<parameter>=<value>]...
```

Example: Request for getting the recorded data information with specified month

```
http://192.168.0.10/playback/playback.php?app=get&method=get_month&year=2018&month=3
```

Example: Request for getting the recorded data information with specified date

```
http://192.168.0.10/playback/playback.php?app=get&method=get_day&year=2018&month=3&day=28
```

Example: Request for getting the recorded data information with specified hour

```
http://192.168.0.10/playback/playback.php?app=get&method=get_hour&year=2018&month=3&day=28&hour=13
```

Example: Request for getting the recorded data information with specified minute

```
http://192.168.0.10/playback/playback.php?app=get&method=get_minute&year=2018&month=3&day=28&hour=13&minute=30
```

[Table 3- 92] Parameters of information for specified recorded data

Argument	Type	Mode	Description
method	string	WO	

			Command of Searching option [get_month] [get_hour] [get_minute]
--	--	--	--

[Note]

Refer to [Table 3-63] for additional parameter and values

4.8.5. Recorded Data Information with specified index

This CGI request is to get the information of oldest or latest recorded data.

Syntax:

```
http://<server_address>/playback/playback.php?<app>=<get>&<method>=(get_first|get_last)
```

Example: Request for getting the oldest recorded data information

```
http://192.168.0.10/playback/playback.php?app=get&method=get_first
```

Example: Request for getting the latest recorded data information

```
http://192.168.0.10/playback/playback.php?app=get&method=get_last
```

[Table 3- 93] Parameters of information for specified index

Argument	Type	Mode	Description
method	string	WO	Command of Searching option [get_first] [get_last]

[Note]

Refer to [Table 3-64] for additional parameter and values

4.8.6. Recorded Data Volume on Storage

This CGI request is to get the recorded data volume on storage.

Syntax:

```
http://<server_address>/playback/playback.php?<app>=<get>&<method>=<get_info>[[
&<parameter>=<value>]...]
```

Example: Request for getting recorded data volume on storage.

```
http://192.168.0.10/playback/playback.php?app=get&method=get_info&record_type=all&
event_type=all&start_date=2018-03-01&start_time=00:00:00&end_date=2018-03-
28&end_time=16:00:00
```

[Table 3- 94] Parameter for recorded information on storage

Argument	Type	Mode	Description
method	string	WO	Command of Searching option [get_info]
record_type	string	WO	[event] : recorded data by event [continuous] : recorded data by continuous option [all] : all of recorded data
event_type	integer	WO	Ref [Table 3-58]
start_date	string	WO	Start date for searching [yyyy-mm-dd]
start_time	string	WO	Start time for searching [hh:mm:ss]
end_date	string	WO	End date for searching [yyyy-mm-dd]

end_time	string	WO	End time for searching [hh:mm:ss]
count	integer	RO	Count of recorded data
size	string	RO	Volume size

4.8.7. Remove recorded data on Storage

This CGI request is to delete the recorded data on storage.

Syntax:

```
http://<server_address>/playback/playback.php?<app>=<get>&<method>=<get_info>[[
&<parameter>=<value>]...]
```

Example: Request for removing recorded data on storage.

```
http://192.168.0.10/playback/playback.php?app=get&method=remove&record_type=all&event_type=all&start_date=2018-03-01&start_time=00:00:00&end_date=2018-03-28&end_time=16:00:00
```

[Table 3- 95] Parameters for removing data on storage

Argument	Type	Mode	Description
method	string	WO	Command of removing option [remove]
record_type	string	WO	[event] : recorded data by event [continuous] : recorded data by continuous option [all] : all of recorded data
event_type	integer	WO	Ref [Table 3-58]
start_date	string	WO	Start date for removing [yyyy-mm-dd]
start_time	string	WO	Start time for removing [hh:mm:ss]
end_date	string	WO	End date for removing [yyyy-mm-dd]

end_time	string	WO	End time for removing [hh:mm:ss]
count	integer	RO	Count of removed data
size	string	RO	Removed volume size

4.9. Four Eyes Principle

The device supports the 4 eyes principle for protect recorded data.

4.9.1. Four Eyes Principle

This CGI request is to control 4 eyes principle.

Syntax:

```
http://<server_address>/foureyes/foureyes.php?<app>=<get>

[ [&<parameter>=<value>]...]
```

Example: Request for getting the list of recorded data information and values

```
http://192.168.0.10/foureyes/foureyes.php?<app>=<get>
```

[Table 3- 96] Parameters of 4 eyes principle

Argument	Type	Mode	Description
four_eyes_set1	boolean	RW	Approve four eyes principle #1 [0] : clear [1] : approve
four_eyes_set2	boolean	RW	Approve four eyes principle #2 [0] : clear [1] : approve

5. Configuration

The device has a text file for configuration. The configuration shows important system information such as model, version of the device, hardware options.

Syntax:

```
http://<server_address>/config.txt
```

Example: Request for getting the configurations

```
http://192.168.0.10/config.txt
```

Example: Response for getting the configurations

```
ver=2.0
platform=CXD4145
name=HCAM64FB81D00469
ipv4=192.168.0.10
ipv6=fe80::66fb:81ff:fed0:469/64
dhcp=on
device_name=Network Video Transmitter
input=1920x1080
firmware=3.2.7.47-RC8
model=IMS-321
customer=HONEYWELL
model_customer=HCAM
mac=64FB81D00469
rtsp_port=554
http_port=80
https_port=443
https_mode=2
onvif_service_uri=http://192.168.0.10/onvif/device_service
options=ALARM_IN ALARM_OUT AEAWB DAY_NIGHT AUDIO AUDIO_OUT RECORD
CALIB_WP IR CORRIDOR CAPTURE_CTRL TAMPERING PRIVACY_MASK
video_enc_count=3
video_enc1_uri=rtsp://192.168.0.10/media/1/1
video_enc1_codec=H264HP
video_enc1_res=1920x1080
video_enc1_fps=25
video_enc1_bitrate=4000
video_enc1_ratecontrol=cbr
video_enc1_gop=25
```

```

video_enc2_uri=rtsp://192.168.0.10/media/1/2
video_enc2_codec=H264HP
video_enc2_res=640x360
video_enc2_fps=25
video_enc2_bitrate=2000
video_enc2_ratecontrol=cbr
video_enc2_gop=25
video_enc3_uri=rtsp://192.168.0.10/media/1/3
video_enc3_codec=MJPEG
video_enc3_res=640x360
video_enc3_fps=25
video_enc3_quality=60
audio_enc_codec=G711U
audio_enc_bitrate=64000
audio_enc_samplerate=8000
audio_2way_use=0

```

[Table 4- 1] Parameters of config.txt

Argument	Type	Mode	Description
ver	integer	RO	Configuration File Version
platform	string	RO	Device platform type (SOC type)
name	string	RO	Host Name of the device Default: <MODEL_NAME> <MAC>
ipv4	string	RO	IP Address (IPv4)
ipv6	string	RO	IP Address (IPv6)
device_name	string	RO	Device Name
input	string	RO	Input resolution
firmware	string	RO	Firmware version
model	string	RO	Model Name (Root model)
customer	string	RO	Specific Buyer Name
model_customer	string	RO	Specific model name for buyer
mac	string	RO	MAC Address
rtsp_port	integer	RO	RTSP Port

http_port	integer	RO	HTTP Port
https_port	integer	RO	HTTPS Port
https_mode	integer	RO	HTTP(S) mode [0] : HTTP only mode [1] : HTTPS only mode [2] : HTTP&HTTPS mode
tv_mode	string	RO	TV out mode [ntsc] [pal]
video_enc#_uri	string	RO	RTSP Stream URI
video_enc#_codec	string	RO	Video codec name
video_enc#_res	string	RO	Video resolution (WIDTHxHEIGHT)
video_enc#_fps	integer	RO	Video framerate
video_enc#_bitrate	integer	RO	Video bitrate
video_enc#_ratecontrol	string	RO	Video rate control [vbr] [cbr]
video_enc#_gop	integer	RO	Video gop size
audio_enc_codec	string	RO	Audio codec name
audio_enc_bitrate	integer	RO	Audio bitrate (Kbps)
audio_enc_samplerate	integer	RO	Audio sampling rate
audio_enc_2way_use	integer	RO	State of usage bi-directional audio [0] : not using [1] : using
alarm_in	integer	RO	Number of Alarm In
alarm_out	integer	RO	Number of Alarm Out
onvif_service_uri	string	RO	ONVIF service uri
options	string	RO	

			String arrays to describe Options
--	--	--	-----------------------------------

[Table 4- 2] Option parameters

Argument	Description
ALARM_IN	Digital in for event monitoring
ALARM_OUT	Digital out for event notification
AEAWB	Support AE & AWB control
DAY_NIGHT	Support Day & Night control
PTZ	Support PTZ control
MOTORIZED	Support Motorized PTZ control
CALIB_AF	Support AF lens calibration
CALIB_WP	Support white pixel compensation
AUDIO	Support Audio
AUDIO_OUT	Support Audio out (Two way)
RECORD	Support record to device
CORRIDOR	Support image corridor function
CAPTURE_CTRL	Support video source mode change function
TAMPERING	Support video tampering function
PRIVACY_MASK	Support privacy mask function

Contact Information

For technical assistance with this product, please contact the supplier from whom the product was purchased.

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