



## FDT IP Camera CGI User Guide

V1.0.2

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History

| Ver   | Auth   | Edit Date | Remark                         |
|-------|--------|-----------|--------------------------------|
| 1.0.0 | Martin | 2016-4-29 | Baseline Version               |
| 1.0.1 | Hasan  | 2016-5-5  | Formatting edits               |
| 1.0.2 | Martin | 2017-4-7  | Add a snap url for web browser |

## Introduction

All CGI commands listed in this document are based on the HTTP protocol, which can be executed in a web browser or software client.

- Authentication

All cgi commands need authentication before they can be executed. There are 3 different authentications which can be configured in your IP camera: administrator/user/guest. There are 2 kinds of authentications mechanism. The first one is the Basic authentication mechanism declared by HTTP protocol. The second one is including the username/password in the paramaters of CGI command URL.

- We only support GET and POST method of HTTP CGI. The command **upgrade.cgi** and **restore.cgi** are used for the POST method, all others commands are GET methods.

Example for GET method:

```
<form name="form2" method="get" action="cgi-bin/hi3510/cleanlog.cgi">
  <input name="cururl" type="hidden" >
  <input name="name" type="hidden" value="access">
```

</form>

Example for POST method:

```
<form name="form5" method="post" target="retframe" enctype="multipart/form-data"
  action="cgi-bin/hi3510/upgrade.cgi" onSubmit="return upgrade()">
  <td colspan="3"><input type="file" name="setting_file" >
  <input type="submit" value=" submit" >
```

</form>

- CGI execute return information

- ✓ For the commands to get information from the IP camera, such as the running status or configurations.

If the command is executed successfully, there will return a text to show the information from the IP camera. Each status or parameter is defined as text variables; you can get its values from the return information after the CGI was executed. For example:

```
var bps_1="2048";
var fps_1="25";
var gop_1="50";
var brmode_1="1";
var imagegrade_1="1";
var width_1="704";
var height_1="576";
```

If the command is execution fails, it will return information with an error code. For example, "[Error]Get video attribution error! errcode is 0xa10e6008" .

- ✓ For the command to set configurations to the IP camera. If success, it will return the executing result information, such as "HTTP/1.0 200 OK". If fail, it will return

the error promoting, such as “[Error][Data-Length:91] unrecongized or incomplete command line.”

- ✓ CGI can be executed in the URL of web browser, which are as follows:

http://192.168.1.88/cgi-bin/hi3510/param.cgi?cmd=getvencattr&-chn=11

http://192.168.1.6/cgi-bin/hi3510/param.cgi?cmd=setvencattr&-chn=11&-fps=15

http://192.168.1.6/cgi-bin/hi3510/param.cgi?cmd=getwirelessattr

Or you can include the username/password of the IP camera directly:

http://192.168.1.88/cgi-bin/hi3510/param.cgi?cmd=getvencattr&-chn=11&-usr=admin  
&-pwd=admin

http://192.168.1.6/cgi-bin/hi3510/param.cgi?cmd=getwirelessattr&-usr=admin&-pwd=admin

## 1. Video & Audio

### getvideoattr

|           |   |   |
|-----------|---|---|
| Function  | Get the properties of camera video, such as resolution, format and H.264 profile. |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getvideoattr]                                      |   |
| Param.    | None  |   |
| Return    | videomode   | 31: 720P_Q720P_QQ720P<br>32: 720P_QQ720P_QQ720P<br>33: Q720P_Q720P_QQ720P<br>34: Q720P_QQ720P_QQ720P<br>41: 1080P_Q720P_QQ720P<br>42: 1080P_QQ720P_QQ720P<br>51: 960P_VGA_QVGA<br>52: 960P_QVGA_QVGA<br>53:VGA_VGA_QVGA<br>54: VGA_QVGA_QVGA<br>17: D1_CIF_CIF<br>20: CIF_CIF_CIF |
|           | vinorm  | P: 50Hz(PAL)<br>N: 60Hz(NTSC)   |
|           | profile   | 0: baseline<br>1: mainprofile   |
| Note      | Note:<br>The resolution of 720P is 1280x720                                       |   |

|         |  |
|---------|--|
|         | <p>The resolution of Q720P is 640x352</p> <p>The resolution of QQ720P is 320x176</p> <p>The resolution of 960P is 1280x960</p> <p>The resolution of VGA is 640x480</p> <p>The resolution of QVGA is 320x240</p> <p>The resolution of 1080P is 1920x1080</p> <p>Note:</p> <p>720P_Q720P_QQ720P: It is 720P for first stream, Q720P for second stream.</p> |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getvideoattr   |

## setvideoattr

|           |  |   |
|-----------|--|---|
| Function  | Set the properties of camera video.  |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setvideoattr&-vinorm=&-profile=&-videomode=]    |   |
| Param.    | vinorm   | P: 50Hz(PAL)<br>N: 60Hz(NTSC)   |
|           | profile  | 0: baseline<br>1: mainprofile   |
|           | videomode  | 31: 720P_Q720P_QQ720P<br>32: 720P_QQ720P_QQ720P<br>33: Q720P_Q720P_QQ720P<br>34: Q720P_QQ720P_QQ720P<br>41: 1080P_Q720P_QQ720P<br>42: 1080P_QQ720P_QQ720P<br>51: 960P_VGA_QVGA<br>52: 960P_QVGA_QVGA<br>53:VGA_VGA_QVGA<br>54: VGA_QVGA_QVGA<br>17: D1_CIF_CIF<br>20: CIF_CIF_CIF |
| Return    | Success: Success<br>Fail: Error<br>Note:<br>The resolution of 720P is 1280x720 |   |



|         |  |
|---------|--|
|         | <p>The resolution of Q720P is 640x352</p> <p>The resolution of QQ720P is 320x176</p> <p>The resolution of 960P is 1280x960</p> <p>The resolution of VGA is 640x480</p> <p>The resolution of QVGA is 320x240</p> <p>The resolution of 1080P is 1920x1080</p> <p>Note:</p> <p>720P_Q720P_QQ720P: It is 720P for first stream, Q720P for second stream.</p> <p>Note: This command will take some time for return value.</p> |
| Note    | None   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setvideoattr&-vinorm=N&-profile=1&-videomode=32  |

## getvencattr

|           |  |  |
|-----------|--|--|
| Function  | Get encoding information for camera video.                         |  |
| Privilege | admin, user, guest   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getvencattr &-chn=]                 |  |
| Param.    | chn  | Channel No.<br>11: The first stream.<br>12: The second stream. |
| Return    | bps_1, bps_2   | Bit rate.  |
|           | fps_1, fps_2   | Frame rate.  |
|           | gop_1, gop_2   | Key frame interval.  |
|           | brmode_1, brmode_2   | Encode mode:<br>0: CBR<br>1: VBR                               |
|           | imagegrade_1<br>imagegrade_2                                       | Image quality.   |
|           | width_1, width_2   | The width of the video.  |
|           | height_1, height_2   | The hight of the video.  |
| Note      | Note: “_1” is for the first stream, “_2” is for the second stream. |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getvencattr&-chn=11                  |  |

## setvencattr

|           |   |  |
|-----------|---|--|
| Function  | Set encoding information for camera video.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setvencattr&-chn=&-bps=&-fps=&-brmode=&-imagegrade=&-gop=]           |  |
| Param.    | chn   | Channel No.<br>11 is the first stream.<br>12 is the second stream.   |
|           | bps   | Bit rate<br>720P: The range is [32 ~ 6144 kbps]<br>1080P: The range is [32 ~ 8192 kbps]<br>D1: The range is [32 ~ 2048 kbps]<br>CIF: The range is [32 ~ 512 kbps]<br>QCIF: The range is [32 ~ 256 kbps]<br>VGA: The range is [32 ~ 2048 kbps]<br>QVGA: The range is [32 ~ 512 kbps]<br>QQVGA: The range is [32 ~ 256 kbps] |
|           | fps   | Frame rate<br>PAL: The range is [1 ~ 25]<br>NTSC: The range is [1 ~ 30]  |
|           | brmode  | Encode mode value:<br>0: CBR<br>1: VBR   |
|           | imagegrade  | Image quality value: The range is [1 ~ 6]<br>Note: The smaller the value, the better the image, and the greater to affect the video bit rate.  |
|           | gop   | Key frame interval value: The range is [2 ~ 150]   |
| Return    | Success: Success<br>Fail: Error   |  |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setvencattr&-chn=11&-bps=1536&-fps=25&-brmode=1&-imagegrade=1&-gop=50 |  |
|           | /cgi-bin/hi3510/param.cgi?cmd=setvencattr&-chn=12&-bps=1536&-fps=25&-brmode=1&-imagegrade=1&-gop=50 |  |
|           | /cgi-bin/hi3510/param.cgi?cmd=setvencattr&-chn=11&-bps=1536&-f                                      |  |

|  |       |
|--|-------|
|  | ps=25 |
|--|-------|

## getimageattr

|           |   |   |
|-----------|---|---|
| Function  | Get the attributes of the image.  |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getimageattr]  |   |
| Param.    | None.   |   |
| Return    | brightness  | The value for brightness.                                   |
|           | saturation  | The value for saturation.                                   |
|           | contrast  | The value for contrast.                                     |
|           | sharpness   | The value for sharpness.                                    |
|           | hue   | The value for hue.  |
|           | targety   | The value for target.                                       |
|           | flip  | The value for flip status:<br>on: enable.<br>off: disable   |
|           | mirror  | The status for mirror:<br>on: enable.<br>off: disable       |
|           | night   | The status for night vision:<br>on: enable.<br>off: disable |
|           | shutter   | The value for shutter.                                      |
|           | wdr   | The status for WDR:<br>on: enable.<br>off: disable          |
|           | noise   | The status for denoise:<br>on: enable.<br>off: disable      |
|           | gc  | The value for gain control, the range is [0-4294967295]     |
| imgmode   | The mode to improve the video:<br>0: Improve the video frame rate first.<br>1: Improve the image light first. |   |
| aemode    | The value for AE control mode:<br>0: Auto, 1: Indoor, 2: Outdoor.   |   |

|         |  |  |
|---------|--|--|
|         | display_mode   | The current video mode for camera:<br>0: Black/White, 1: Colorful. |
| Note    | Different devices will have different image parameters, please see Appendix I for reference. |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getimageattr   |  |

## setimageattr

|           |  |   |
|-----------|--|---|
| Function  | Set the attributes of the image.   |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setimageattr&-brightness=&-saturation=&-contrast=&-hue=&-targety=&-flip=&-mirror=&-noise=&-imgmode=&-aemode=&-display_mode=&] |   |
| Param.    | brightness   | The value for brightness.                                   |
|           | saturation   | The value for saturation.                                   |
|           | contrast   | The value for contrast.                                     |
|           | sharpness  | The value for sharpness.                                    |
|           | hue  | The value for hue.  |
|           | targety  | The value for target.                                       |
|           | flip   | The value for flip status:<br>on: enable.<br>off: disable   |
|           | mirror   | The status for mirror:<br>on: enable.<br>off: disable       |
|           | night  | The status for night vision:<br>on: enable.<br>off: disable |
|           | shutter  | The value for shutter.                                      |
|           | wdr  | The status for WDR:<br>on: enable.<br>off: disable          |
|           | noise  | The status for denoise:<br>on: enable.<br>off: disable      |
|           | gc   | The value for gain control, the range is [0-4294967295]     |

|         |  |   |
|---------|--|---|
|         | imgmode  | The mode to improve the video:<br>0: Improve the video frame rate first.<br>1: Improve the image light first. |
|         | aemode   | The value for AE control mode:<br>0: Auto, 1: Indoor, 2: Outdoor.   |
|         | display_mode   | The current video mode for camera:<br>0: Black/White, 1: Colorful.  |
| Return  | Success: Success.<br>Fail: Error.  |   |
| Note    | Different devices will have different image parameters, please see Appendix I for reference.   |   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setimageattr&-brightness=1&-saturation=1&-contrast=1&-hue=1&-flip=on&-mirror=on&-noise=on&-imgmode=0&-aemode=0&-display_mode=1 |   |

## getldcatr

|           |   |  |
|-----------|---|--|
| Function  | Get the distortion value of lens.         |  |
| Privilege | admin                                     |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getldcatr] |  |
| Param.    | None.                                     |  |
| Return    | ldc_ratio                                 | The value for distortion, from 0 to 511. |
| Note      | None                                      |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getldcatr   |  |

## setldcatr

|           |   |  |
|-----------|---|--|
| Function  | Set the distortion value of lens.                       |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setldcatr&- ldc_ratio =] |  |
| Param.    | ldc_ratio   | The value for distortion, from 0 to 511. |
| Return    | Success: Success.<br>Fail: Error.                       |  |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setldcatr&- ldc_ratio=1   |  |

## getircutattr

|           |   |  |
|-----------|---|--|
| Function  | Get the value for the automatic switch of the IR-CUT. |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getircutattr]          |  |
| Param.    | None  |  |
| Return    | saradc_switch_value                                   | The value for IR_Cut switch, from 1 to 1024. |
| Note      | None.   |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getircutattr            |  |

## setircutattr

|           |   |  |
|-----------|---|--|
| Function  | Set the value for the automatic switch of the IR-CUT.               |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setircutattr&-saradc_switch_value=]  |  |
| Param.    | saradc_switch_value   | The value for IR_Cut switch, from 1 to 1024. |
| Return    | Success: Success.<br>Fail: Error.                                   |  |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setircutattr&-saradc_switch_value=700 |  |

## getoverlayattr

|           |   |  |
|-----------|---|--|
| Function  | Get the information for OSD region.                     |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getoverlayattr&-region=] |  |
| Param.    | region  | Region<br>0: OSD camera time.<br>1: OSD camera name.         |
| Return    | x_[region]  | The x-coordinate for OSD region.                             |
|           | y_[region]  | The y-coordinate for OSD region.                             |
|           | w_[region]  | The width for OSD region.                                    |
|           | h_[region]  | The height for OSD region.                                   |
|           | show_[region]   | Whether to display the OSD region<br>0: Hidden<br>1: Diaplay |

|         |  |          |
|---------|--|----------|
|         | name_[region]  | OSD name |
| Note    | None   |          |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getoverlayattr&-region=0 |          |

## setoverlayattr

|           |  |  |
|-----------|--|--|
| Function  | Set the imformation for OSD region.  |  |
| Privilege | admin  |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setoverlayattr&-region=&show=&name=]        |  |
| Param.    | region   | Region<br>0: OSD camera time.<br>1: OSD camera name.         |
|           | show   | Whether to display the OSD region<br>0: Hidden<br>1: Diaplay |
|           | name   | OSD name, only support English, less then 16 characters.     |
| Return    | Success: Success.<br>Fail: Error.  |  |
| Note      | Note: region_0 time OSD region do support to set name.                     |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setoverlayattr&-region=0&-show=0             |  |
|           | /cgi-bin/hi3510/param.cgi?cmd=setoverlayattr&-region=1&-show=1&-name=IPCam |  |

## getmobilesnapattr

|           |   |  |
|-----------|---|--|
| Function  | Get image attributes for mobile phone.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getmobilesnapattr]   |  |
| Param.    | None  |  |
| Return    | msize   | 1: The max. resolution for the second stream.<br>2: The min. resolution for the second stream. |
| Note      | Some kinds of devices do not support to set this attributes, please see Appendix I for reference. |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getmobilesnapattr   |  |

## setmobilesnapattr

|           |   |  |
|-----------|---|--|
| Function  | Set image attributes for mobile phone.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setmobilesnapattr&-msize=]   |  |
| Param.    | msize   | 1: The max. resolution for the second stream.<br>2: The min. resolution for the second stream. |
| Return    | Success: Success.<br>Fail: Error.   |  |
| Note      | Some kinds of devices do not support to set this attributes, please see Appendix I for reference. |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setmobilesnapattr&-msize=1  |  |

## getaencattr

|           |   |   |
|-----------|---|---|
| Function  | Get the encode attributes of audio.   |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getaencattr&-chn=]   |   |
| Param.    | chn   | Channel No.:<br>11: The first stream.<br>12: The second stream.                                   |
| Return    | aeswitch_1, aeswitch_2  | Whether to enable the switch for audio encode:<br>0: Disable<br>1: Enable                         |
|           | aeformat_1, aeformat_2  | The format for audio encode:<br>g711a: G711A, bit rate is 64Kbps<br>g726: G726 bit rate is 16Kbps |
| Note      | 1. _1 represents the first stream, _2 represents the second stream.<br>2. The sampling rate for audio is 8K, single track, 16 bit wide. |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getaencattr&-chn=11   |   |

## setaencattr

|           |                                     |
|-----------|-------------------------------------|
| Function  | Set the encode attributes of audio. |
| Privilege | admin                               |



|         |  |   |
|---------|--|---|
| Usage   | /cgi-bin/hi3510/param.cgi[?cmd=setaencattr&-chn=]                            |   |
| Param.  | chn  | Channel No.:<br>11: The first stream.<br>12: The second stream.                                   |
|         | aeswitch   | Whether to enable the switch for audio encode:<br>0: Disable<br>1: Enable                         |
|         | aeformat   | The format for audio encode:<br>g711a: G711A, bit rate is 64Kbps<br>g726: G726 bit rate is 16Kbps |
| Return  | Success: Success.<br>Fail: Error.  |   |
| Note    | The sampling rate for audio is 8K, single track, 16 bit wide.                |   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setaencattr&-chn=11&-aeswitch=0                |   |
|         | /cgi-bin/hi3510/param.cgi?cmd=setaencattr&-chn=12&-aeswitch=1&-aeformat=g726 |   |

## getaudioinvolume

|           |  |   |
|-----------|--|---|
| Function  | Get the volume of the input audio.               |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getaudioinvolume] |   |
| Param.    | None   |   |
| Return    | volume   | The value of volumn, the range is [1-100] |
| Note      | None   |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getaudioinvolume   |   |

## setaudioinvolume

|           |   |   |
|-----------|---|---|
| Function  | Set the volume of the input audio.                        |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setaudioinvolume&-volume=] |   |
| Param.    | volume  | The value of volumn, the range is [1-100] |
| Return    | Success: Success.<br>Fail: Error.                         |   |
| Note      | None  |   |

|         |   |
|---------|---|
| Example | /cgi-bin/hi3510/param.cgi?cmd=setaudioinvolume&-volume=80 |
|---------|---|

## getaudiooutvolume

|           |   |   |
|-----------|---|---|
| Function  | Get the volume of the output audio.               |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getaudiooutvolume] |   |
| Param.    | None  |   |
| Return    | ao_volume   | The value of volumn, the range is [1-100] |
| Note      | None  |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getaudiooutvolume   |   |

## setaudiooutvolume

|           |  |   |
|-----------|--|---|
| Function  | Set the volume of the output audio.                        |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setaudiooutvolume&-volume=] |   |
| Param.    | volume   | The value of volumn, the range is [1-100] |
| Return    | Success: Success.<br>Fail: Error.                          |   |
| Note      | None   |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setaudiooutvolume&-volume=80 |   |

## getaudiooutvolume

|           |   |                         |
|-----------|---|-------------------------|
| Function  | Get the input type for audio.                     |                         |
| Privilege | admin   |                         |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getaudiooutvolume] |                         |
| Param.    | None  |                         |
| Return    | volin_type  | 0: Line in<br>1: Mac in |
| Note      | None  |                         |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getaudiooutvolume   |                         |

## setaudiooutvolume

|           |  |                         |
|-----------|--|-------------------------|
| Function  | Set the input type for audio.                                  |                         |
| Privilege | admin  |                         |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setaudiooutvolume&-volin_type=] |                         |
| Param.    | volin_type   | 0: Line in<br>1: Mac in |
| Return    | Success: Success.<br>Fail: Error.                              |                         |
| Note      | None   |                         |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setaudiooutvolume&-volin_type=0  |                         |

## requestifrm

|           |   |   |
|-----------|---|---|
| Function  | Request the key frame of next frame group.        |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=requestifrm&-chn=] |   |
| Param.    | chn   | Channel No.<br>11: The first stream. 12: The second stream. |
| Return    | Success: Success.<br>Fail: Error.                 |   |
| Note      | None.   |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=requestifrm&-chn=11 |   |

## 2. IR Led control

### getinfrared

|           |   |  |
|-----------|---|--|
| Function  | Get the status of IR LED switch.            |  |
| Privilege | admin                                       |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getinfrared] |  |
| Param.    | None  |  |
| Return    | infraredstat                                | IR Led status:<br>auto: Automatical switch as the changing of outside light.<br>open: Force to open permanently. |

|         |  |                                    |
|---------|--|------------------------------------|
|         |  | close: Force to close permanently. |
| Note    | Some kinds of devices do not support to set this attribute, please see Appendix I for reference. |                                    |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getinfrared  |                                    |

## setinfrared

|           |   |  |
|-----------|---|--|
| Function  | Set the status of IR LED switch.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setinfrared]   |  |
| Param.    | None  |  |
| Return    | infraredstat  | IR Led status:<br>auto: Automatical switch as the changing of outside light.<br>open: Force to open permanently.<br>close: Force to close permanently. |
| Note      | Some kinds of devices do not support to set this attributes, please see Appendix I for reference. |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setinfrared&-infraredstat=auto                                      |  |

## 3. Network

### getnetattr

|           |  |  |
|-----------|--|--|
| Function  | Get the attributes of camera network.      |  |
| Privilege | admin                                      |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getnetattr] |  |
| Param.    | None                                       |  |
| Return    | dhcpflag                                   | DHCP status:<br>On: Enable<br>Off: Disable |
|           | ip   | IP address                                 |
|           | netmask                                    | Subnet mask                                |
|           | gateway                                    | Gatway                                     |
|           | dnsstat                                    | DNS Status:<br>0: Set manually.            |

|         |  |   |
|---------|--|---|
|         |  | 1: Obtain automatically.                      |
|         | fdnsip                                   | First DNS                                     |
|         | sdnsip                                   | Reserve DNS                                   |
|         | macaddress                               | MAC address                                   |
|         | networktype                              | Network type:<br>LAN: Wired<br>WiFi: Wireless |
| Note    | None                                     |   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getnetattr |   |

## setnetattr

|           |   |   |
|-----------|---|---|
| Function  | Set the attributes of camera network.   |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setnetattr&-dhcp=&-ipaddr=&-netmask=&-gateway=&-dnsstat=&-fdnsip=&-sdnsip=]  |   |
| Param.    | dhcp  | DHCP status:<br>On: Enable<br>Off: Disable                  |
|           | ipaddr  | IP address  |
|           | netmask   | Subnet mask   |
|           | gateway   | Gateway   |
|           | dnsstat   | DNS Status:<br>0: Set manually.<br>1: Obtain automatically. |
|           | fdnsip  | First DNS   |
|           | sdnsip  | Reserve DNS   |
| Return    | Success: Success.<br>Fail: Error.   |   |
| Note      | None  |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setnetattr&-dhcp=off&-ipaddr=192.168.1.88&-netmask=255.255.255.0&-gateway=192.168.1.1&-dnsstat=0&-fdnsip=192.168.1.1&-sdnsip= |   |

## gethttpport

|          |                       |
|----------|-----------------------|
| Function | Get the port of HTTP. |
|----------|-----------------------|

|           |   |                   |
|-----------|---|-------------------|
| Privilege | admin                                       |                   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=gethttpport] |                   |
| Param.    | None  |                   |
| Return    | httpport                                    | HTTP port number. |
| Note      | None  |                   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=gethttpport   |                   |

## sethttpport

|           |  |   |
|-----------|--|---|
| Function  | Set the port of HTTP.  |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=sethttpport&-httpport=]           |   |
| Param.    | httpport   | HTTP port number, the range is [80~65535] |
| Return    | Success: Success.<br>Fail: Error.                                |   |
| Note      | The camera will reboot automatically after modify its HTTP port. |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=sethttpport&-httpport=80           |   |

## getrtspport

|           |   |           |
|-----------|---|-----------|
| Function  | Get the ports for RTSP and RTP.             |           |
| Privilege | admin                                       |           |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getrtspport] |           |
| Param.    | None  |           |
| Return    | rtspport                                    | RTSP port |
|           | rtpport                                     | RTP port  |
| Note      | None  |           |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getrtspport   |           |

## setrtspport

|           |  |   |
|-----------|--|---|
| Function  | Set the ports for RTSP and RTP.                                  |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setrtspport&-rtspport=&-rtpport=] |   |
| Param.    | rtspport   | RTSP port number, the range is [80~65535] |
|           | rtpport  | RTP port number, the range is [5000~8000] |

|         |   |
|---------|---|
| Return  | Success: Success.<br>Fail: Error.                                       |
| Note    | The camera will reboot automatically after modify its ports.            |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setrtsport&-rtsport=554&-rtpport=660<br>0 |

## getrtspauth

|           |   |                         |
|-----------|---|-------------------------|
| Function  | Get the status to verify authorization.     |                         |
| Privilege | admin                                       |                         |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getrtspauth] |                         |
| Param.    | None  |                         |
| Return    | rtsp_aenable                                | 0: Disable<br>1: Enable |
| Note      | None  |                         |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getrtspauth   |                         |

## setrtspauth

|           |  |                         |
|-----------|--|-------------------------|
| Function  | Set the status to verify authorization.                        |                         |
| Privilege | admin  |                         |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setrtspauth&-rtsp_aenable=]     |                         |
| Param.    | rtsp_aenable   | 0: Disable<br>1: Enable |
| Return    | Success: Success.<br>Fail: Error.                              |                         |
| Note      | The camera will reboot automatically after modify this status. |                         |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setrtspauth&-rtsp_aenable=1      |                         |

## getinterip

|           |  |   |
|-----------|--|---|
| Function  | Get the internet IP address of the camera network. |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/param.cgi?cmd=getinterip                  |   |
| Param.    | None   |   |
| Return    | interip  | Internet IP, such as interip = "220.112.14.173" |

|         |                                   |
|---------|-----------------------------------|
| Note    | None                              |
| Example | /cgi-bin/param.cgi?cmd=getinterip |

## getupnpatr

|           |  |                         |
|-----------|--|-------------------------|
| Function  | Get the status of UPNP enable.             |                         |
| Privilege | admin                                      |                         |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getupnpatr] |                         |
| Param.    | None                                       |                         |
| Return    | upm_enable                                 | 0: Disable<br>1: Enable |
| Note      | None                                       |                         |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getupnpatr   |                         |

## setupnpatr

|           |   |                         |
|-----------|---|-------------------------|
| Function  | Set the status of UPNP enable.                          |                         |
| Privilege | admin   |                         |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setupnpatr&-upm_enable=] |                         |
| Param.    | upm_enable  | 0: Disable<br>1: Enable |
| Return    | Success: Success.<br>Fail: Error.                       |                         |
| Note      | None  |                         |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setupnpatr&-upm_enable=1  |                         |

## getonvifattr

|           |  |   |
|-----------|--|---|
| Function  | Get the attributes of Onvif.                 |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getonvifattr] |   |
| Param.    | None   |   |
| Return    | ov_enable                                    | Onvif enable status:<br>1: Enable<br>0: Disable |
|           | ov_port                                      | Onvif port number.                              |



|         |  |   |
|---------|--|---|
|         | ov_authflag                                | Authorization check status:<br>1: Enable<br>0: Disable  |
|         | ov_forbitset                               | Enable status for onvif parameters:<br>0: Enable to set time zone, enable to set image parameters.<br>1: Disable to set time zone, enable to set image parameters.<br>2: Enable to set time zone, Disable to set image parameters.<br>3: Disable to set time zone, Disable to set image parameters. |
| Note    | None                                       |   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getonvifattr |   |

## setonvifattr

|           |  |   |
|-----------|--|---|
| Function  | Set the attributes of Onvif.   |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi?cmd=setonvifattr&-ov_enable=&-ov_port=&-ov_authflag=&-ov_forbitset=] |   |
| Param.    | ov_enable  | Onvif enable status:<br>1: Enable<br>0: Disable   |
|           | ov_port  | Onvif port number.  |
|           | ov_authflag  | Authorization check status:<br>1: Enable<br>0: Disable  |
|           | ov_forbitset   | Enable status for onvif parameters:<br>0: Enable to set time zone, enable to set image parameters.<br>1: Disable to set time zone, enable to set image parameters.<br>2: Enable to set time zone, Disable to set image parameters.<br>3: Disable to set time zone, Disable to set image parameters. |

|         |  |
|---------|--|
| Return  | Success: Success.<br>Fail: Error.  |
| Note    | The camera will reboot automatically after modify this onvif settings.                               |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setonvifattr&-ov_enable=1&-ov_port=8080&-ov_authflag=0&-ov_forbitset=0 |

## 4. Wireless

### getwirelessattr

|           |   |  |
|-----------|---|--|
| Function  | Get the attributes of wireless.                 |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getwirelessattr] |  |
| Param.    | None  |  |
| Return    | wf_enable                                       | Wireless status:<br>0: Disable<br>1: Enable                      |
|           | wf_ssid   | SSID, less then 32 characters.                                   |
|           | wf_auth   | Security Mode:<br>0: None<br>1: WEP<br>2: WPA-PSK<br>3: WPA2-PSK |
|           | wf_key  | Password   |
|           | wf_enc  | WPA Algorithm<br>0: TKIP<br>1: AES                               |
|           | wf_mode   | Connection mode:<br>0: Router mode<br>1: Point to Point mode     |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getwirelessattr   |  |

### setwirelessattr

|           |                                 |
|-----------|---------------------------------|
| Function  | Set the attributes of wireless. |
| Privilege | admin                           |

|         |  |  |
|---------|--|--|
| Usage   | /cgi-bin/hi3510/param.cgi[?cmd=setwirelessattr&-wf_enable=&-wf_ssid=&-wf_auth=&-wf_key=&-wf_enc=&-wf_mode=]                    |  |
| Param.  | wf_enable  | Wireless status:<br>0: Disable<br>1: Enable                      |
|         | wf_ssid  | SSID, less then 32 characters.                                   |
|         | wf_auth  | Security Mode:<br>0: None<br>1: WEP<br>2: WPA-PSK<br>3: WPA2-PSK |
|         | wf_key   | Password   |
|         | wf_enc   | WPA Algorithm<br>0: TKIP<br>1: AES                               |
|         | wf_mode  | Connection mode:<br>0: Router mode<br>1: Point to Point mode     |
|         | Return   | Success: Success.<br>Fail: Error.                                |
| Note    | None   |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setwirelessattr&-wf_ssid=linksys&-wf_enable=1&-wf_auth=2&-wf_key=1234567890&-wf_enc=0&-wf_mode=0 |  |

## searchwireless

|           |  |  |
|-----------|--|--|
| Function  | Search wireless AP.                            |  |
| Privilege | admin  |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=searchwireless] |  |
| Param.    | None   |  |
| Return    | waccess_points                                 | AP counts.                                 |
|           | wchannel                                       | Channel                                    |
|           | wrssi  | Signal strength                            |
|           | wssid  | SSID                                       |
|           | wenc   | Security mode                              |
|           | wauth  | WPA Algorithm                              |
|           | wnet   | Connection mode (Router or Point to Point) |

|         |  |
|---------|--|
|         | <p>Note: If the waccess_points &gt; 1, it means there are several AP, then it will return a value for each segments from wchannel to wnet of every AP.</p> <p>For example:</p> <pre> var waccess_points="2" ; var wchannel=new Array(); var wrssi=new Array(); var wssid=new Array(); var wenc=new Array(); var wauth=new Array(); var wnet=new Array(); wchannel[0]="6" ; wrssi[0]="-82" ; wssid[0]="Fumax wireless" ; wenc[0]="AES" ; wauth[0]="WPA(2)-PSK" ; wnet[0]="Infra" ; wchannel[1]="11" ; wrssi[1]="-62" ; wssid[1]="linksys" ; wenc[1]="TKIP" ; wauth[1]="WPA(2)-PSK" ; wnet[1]="Infra" ; </pre> |
| Note    | None   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=searchwireless   |

## chkwirelessattr

|           |   |  |
|-----------|---|--|
| Function  | Check wireless configuration is right or not.   |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=chkwirelessattr&-wf_ssid=&-wf_auth=&-wf_key=&-wf_enc=&-wf_mode=] |  |
| Param.    | wf_ssid   | SSID, less than 32 characters.                     |
|           | wf_auth   | Security mode :<br>0: None<br>1: WEP<br>2: WPA-PSK |

|         |   |  |
|---------|---|--|
|         |   | 3: WPA2-PSK  |
|         | wf_key  | Password   |
|         | wf_enc  | WPA Algorithm<br>0: TKIP<br>1: AES                           |
|         | wf_mode   | Connection mode:<br>0: Router mode<br>1: Point to Point mode |
| Return  | Success: Success.<br>Fail: Error.   |  |
| Note    | None  |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=chkwirelessattr&-wf_ssid=linksys&-wf_auth=3&-wf_key=1234567890&-wf_enc=0&-wf_mode=0 |  |

## getchkwireless

|           |   |  |
|-----------|---|--|
| Function  | Get the check result for wifi configurations.                 |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getchkwireless]                |  |
| Param.    | None  |  |
| Return    | chkres  | The status for wifi connection:<br>0: Fail<br>1: Success |
| Note      | Please run chkwirelessattr command first before use this cgi. |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getchkwireless                  |  |

## 5. DDNS

### get3thddnsattr

|           |  |  |
|-----------|--|--|
| Function  | Get the DDNS attributes of third party.        |  |
| Privilege | admin  |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=get3thddnsattr] |  |
| Param.    | None   |  |
| Return    | d3th_enable                                    | The status for third-party DDNS:<br>0: Disable |

|         |  |  |
|---------|--|--|
|         |  | 1: Enable  |
|         | d3th_service                                 | The type of third-party DDNS provider:<br>0: dyndns.org<br>1: 322.org<br>2: dynddns.us<br>3: No-ip.com |
|         | d3th_uname                                   | Username   |
|         | d3th_passwd                                  | Password   |
|         | d3th_domain                                  | Domain   |
| Note    | None   |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=get3thddnsattr |  |

## set3thddnsattr

|           |   |  |
|-----------|---|--|
| Function  | Set the DDNS attributes of third partyt.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=set3thddnsattr.&-d3th_enable=&-d3th_service=&-d3th_uname=&-d3th_passwd=&-d3th_domain=]                           |  |
| Param.    | d3th_enable   | The status for third-party DDNS:<br>0: Disable<br>1: Enable  |
|           | d3th_service  | The type of third-party DDNS provider:<br>0: dyndns.org<br>1: 322.org<br>2: dynddns.us<br>3: No-ip.com |
|           | d3th_uname  | Username   |
|           | d3th_passwd   | Password   |
|           | d3th_domain   | Domain   |
| Return    | Success: Success.<br>Fail: Error.   |  |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=set3thddnsattr&-d3th_enable=1&-d3th_service=1&-d3th_uname=sample&-d3th_passwd=1234&-d3th_domain=sample.dyndns.org |  |

## 6. PTZ control

### ptzctrl

|           |  |  |
|-----------|--|--|
| Function  | The control for PTZ motion.  |  |
| Privilege | admin, user  |  |
| Usage     | /cgi-bin/hi3510/param.cgi?cmd=ptzctrl.cgi[&-step=&-act=&-speed=]                                   |  |
| Param.    | step   | Stepping mode:<br>0: Single step and stop until stop command.<br>1: Single step and stop automatically.  |
|           | act  | Command strings for motion control:<br>left: Go to left.<br>right: Go to right.<br>up: Go to up.<br>Down: Go to down<br>upleft, upright, downleft, downright: Go to upleft, upright, downleft, downright<br>home: Back to center point.<br>zoomin: Zoom in.<br>zoomout: Zoom out.<br>hscan: The curise of horizontal.<br>vscan: The curise of vertical.<br>stop: Stop. |
|           | speed  | Speed for motion, the value is [1~63].   |
| Return    | Success: Success.<br>Fail: Error.  |  |
| Note      | Different device types may have different parameters for PTZ, please see Appendix I for reference. |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=0&-act=left&-speed=45                                  |  |

### preset

|           |  |  |
|-----------|--|--|
| Function  | Set the attributes for preset.                                 |  |
| Privilege | admin, user  |  |
| Usage     | /cgi-bin/hi3510/param.cgi?cmd=preset[&-act=&-status=&-number=] |  |
| Param.    | act  | Command strings:<br>goto: Call and go to the preset point. |

|         |   |   |
|---------|---|---|
|         |   | set: Set the preset point.  |
|         | status  | Set the status for preset point:<br>0: Clear the preset point.<br>1: Save the preset point. |
|         | number  | The No for the preset.  |
| Return  | Success: Success.<br>Fail: Error.   |   |
| Note    | Different device type may have different count of preset.   |   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=preset&-act=goto&-number=1<br>/cgi-bin/hi3510/param.cgi?cmd=preset&-act=set&-status=1&-number=1 |   |

## getmotorattr

|           |  |   |
|-----------|--|---|
| Function  | Get the attributes for PTZ.                  |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getmotorattr] |   |
| Param.    | None   |   |
| Return    | panspeed                                     | Speed of Pan:<br>0: Fast<br>1: Medium<br>2: Slow                          |
|           | tiltspeed                                    | Speed of Tilt<br>0: Fast<br>1: Medium<br>2: Slow                          |
|           | panscan                                      | The number for horizontal cruise.   |
|           | tiltscan                                     | The number for vertical cruise.   |
|           | movehome                                     | Back to center after self-check:<br>on: Enable<br>off: Disable            |
|           | ptzalarmmask                                 | Close the motion alarm while PTZ is moving.<br>on: Enable<br>off: Disable |
|           | alarmpresetindex                             | Alarm link action for going to preset, the preset number is [1-8].        |
| Note      | None   |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getmotorattr   |   |



## setmotorattr

|           |  |   |
|-----------|--|---|
| Function  | Set the attributes for PTZ.  |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setmotorattr&-panspeed=&-tiltspeed=&-panscan=&-tiltscan=&-movehome=&-ptzalarmmask=&-alarmpresetindex=]        |   |
| Param.    | panspeed   | Speed of Pan:<br>0: Fast<br>1: Medium<br>2: Slow                          |
|           | tiltspeed  | Speed of Tilt<br>0: Fast<br>1: Medium<br>2: Slow                          |
|           | panscan  | The number for horizontal cruise.   |
|           | tiltscan   | The number for vertical cruise.   |
|           | movehome   | Back to center after self-check:<br>on: Enable<br>off: Disable            |
|           | ptzalarmmask   | Close the motion alarm while PTZ is moving.<br>on: Enable<br>off: Disable |
|           | alarmpresetindex   | Alarm link action for going to preset, the preset number is [1-8].        |
| Return    | Success: Success.<br>Fail: Error.  |   |
| Note      | They must be the same for the speed of Pan and Tilt. And they must be the same for the number of horizontal and vertical cruise.             |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setmotorattr&-panspeed=1&-tiltspeed=1&-panscan=1&-tiltscan=1&-movehome=on&-ptzalarmmask=on&-alarmpresetindex=1 |   |

## getmotorrange

|          |                                       |
|----------|---------------------------------------|
| Function | Get the attributes of PTZ motor type. |
|----------|---------------------------------------|

|           |  |   |
|-----------|--|---|
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getmotorange] |   |
| Param.    | None   |   |
| Return    | motortype                                    | 0: Default, include a travel switch.<br>1: Do not have a travel switch. |
|           | panrange                                     | Step length for pan.  |
|           | tilrange                                     | Step length for Tilt.   |
| Note      | None   |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getmotorange   |   |

## setmotorange

|           |   |   |
|-----------|---|---|
| Function  | Set the attributes of PTZ motor type.   |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setmotorange&-motortype=&-panrange=&-tilrange=]      |   |
| Param.    | motortype   | 0: Default, include a travel switch.<br>1: Do not have a travel switch. |
|           | panrange  | Step length for pan.  |
|           | tilrange  | Step length for Tilt.   |
| Return    | Success: Success.<br>Fail: Error.   |   |
| Note      | None  |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setmotorange&-motortype=0&-panrange=580&-tilrange=150 |   |

## getptzcomattr

|           |   |  |
|-----------|---|--|
| Function  | Get the PTZ common attributes.                |  |
| Privilege | admin, user                                   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getptzcomattr] |  |
| Param.    | None  |  |
| Return    | protocal                                      | Protocol type:<br>0: PELCO-D<br>1: PELCO-P |
|           | address                                       | Address code, the range is [0~255].        |

|         |  |   |
|---------|--|---|
|         | baud   | Baud rate, 1200, 2400, 4800, 9600, 19200, 38400, 57600.   |
|         | databit  | Data bits, 7 or 8.  |
|         | stopbit  | Stop bits, 1 or 2.  |
|         | check  | The method to verify:<br>0: None<br>1: Odd parity check.<br>2: Even parity check.<br>3: Mark<br>4: Blank space. |
| Note    | Some kinds of device do not support this attribute, please see Appendix I for reference. |   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getptzcomattr  |   |

## setptzcomattr

|           |   |   |
|-----------|---|---|
| Function  | Set the PTZ common attributes.  |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setptzcomattr&-protocol=&-address=&-baud=&-databit=&-stopbit=&-check=] |   |
| Param.    | protocol  | Protocol type:<br>0: PELCO-D<br>1: PELCO-P  |
|           | address   | Address code, the range is [0~255].   |
|           | baud  | Baud rate, 1200, 2400, 4800, 9600, 19200, 38400, 57600.   |
|           | databit   | Data bits, 7 or 8.  |
|           | stopbit   | Stop bits, 1 or 2.  |
|           | check   | The method to verify:<br>0: None<br>1: Odd parity check.<br>2: Even parity check.<br>3: Mark<br>4: Blank space. |
| Return    | Success: Success.<br>Fail: Error.   |   |
| Note      | Some kinds of device do not support this attribute, please see Appendix                               |   |

|         |  |
|---------|--|
|         | I for reference.   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setptzcomattr&-protocal=0&-address=1<br>&-baud=9600&-databit=8&-stopbit=1&-check=0 |

## ptzup.cgi

|           |  |
|-----------|--|
| Function  | Let the PT go to up, used for the control on mobile phone. |
| Privilege | admin, user  |
| Usage     | /cgi-bin/hi3510/ptzup.cgi                                  |
| Param.    | None   |
| Return    | Success: Success.<br>Fail: Error.                          |
| Note      | None   |
| Example   | /cgi-bin/hi3510/ptzup.cgi                                  |

## ptzdown.cgi

|           |  |
|-----------|--|
| Function  | Let the PT go to down, used for the control on mobile phone. |
| Privilege | admin, user  |
| Usage     | /cgi-bin/hi3510/ptzdown.cgi                                  |
| Param.    | None   |
| Return    | Success: Success.<br>Fail: Error.                            |
| Note      | None   |
| Example   | /cgi-bin/hi3510/ptzdown.cgi                                  |

## ptzleft.cgi

|           |  |
|-----------|--|
| Function  | Let the PT go to left, used for the control on mobile phone. |
| Privilege | admin, user  |
| Usage     | /cgi-bin/hi3510/ptzleft.cgi                                  |
| Param.    | None   |
| Return    | Success: Success.<br>Fail: Error.                            |
| Note      | None   |
| Example   | /cgi-bin/hi3510/ptzleft.cgi                                  |

## ptzright.cgi

|           |   |
|-----------|---|
| Function  | Let the PT go to right, used for the control on mobile phone. |
| Privilege | admin, user   |
| Usage     | /cgi-bin/hi3510/ptzright.cgi                                  |
| Param.    | None  |
| Return    | Success: Success.<br>Fail: Error.                             |
| Note      | None  |
| Example   | /cgi-bin/hi3510/ptzright.cgi                                  |

## ptzzoomin.cgi

|           |   |
|-----------|---|
| Function  | Let the PTZ to zoom in, used for the control on mobile phone. |
| Privilege | admin, user   |
| Usage     | /cgi-bin/hi3510/ptzzoomin.cgi                                 |
| Param.    | None  |
| Return    | Success: Success.<br>Fail: Error.                             |
| Note      | None  |
| Example   | /cgi-bin/hi3510/ptzzoomin.cgi                                 |

## ptzzoomout.cgi

|           |  |
|-----------|--|
| Function  | Let the PTZ to zoom out, used for the control on mobile phone. |
| Privilege | admin, user  |
| Usage     | /cgi-bin/hi3510/ptzzoomout.cgi                                 |
| Param.    | None   |
| Return    | Success: Success.<br>Fail: Error.                              |
| Note      | None   |
| Example   | /cgi-bin/hi3510/ptzzoomout.cgi                                 |

## getlightattr

|          |   |
|----------|---|
| Function | Get the status for indicator light LED. |
|----------|---|

|           |  |   |
|-----------|--|---|
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getlightattr] |   |
| Param.    | None   |   |
| Return    | light_enable                                 | The status for indocator light:<br>on: The LED always light.<br>off: The LED always go out. |
| Note      | None   |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getlightattr   |   |

## setlightattr

|           |   |   |
|-----------|---|---|
| Function  | Set the status for indicator light LED.                     |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setlightattr]                |   |
| Param.    | None  |   |
| Return    | light_enable  | The status for indocator light:<br>on: The LED always light.<br>off: The LED always go out. |
| Note      | None  |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setlightattr&-light_enable=on |   |

## 7. Motion detection and I/O alram

### getmdattr

|           |  |  |
|-----------|--|--|
| Function  | Get the attributes for motion detection. |  |
| Privilege | admin                                    |  |
| Usage     | cgi-bin/hi3510/param.cgi[?cmd=getmdattr] |  |
| Param.    | None                                     |  |
| Return    | m1_enable                                | The status of motion detection of area 1:<br>0: Disable<br>1: Enable |
|           | m1_x                                     | X-coordinate for area 1.   |
|           | m1_y                                     | Y-coordinate for area 1.   |
|           | m1_w                                     | The width for area 1.  |
|           | m1_h                                     | The height for area 1.   |

|         |  |  |
|---------|--|--|
|         | m1_sensitivity   | The sensitivity for area 1.  |
|         | m1_threshold   | Reserved   |
|         | m2_enable  | The status of motion detection of area 2:<br>0: Disable<br>1: Enable |
|         | m2_x   | X-coordinate for area 2.   |
|         | m2_y   | Y-coordinate for area 2.   |
|         | m2_w   | The width for area 2.  |
|         | m2_h   | The height for area 2.   |
|         | m2_sensitivity   | The sensitivity for area 2.  |
|         | m2_threshold   | Reserved   |
|         | m3_enable  | The status of motion detection of area 3:<br>0: Disable<br>1: Enable |
|         | m3_x   | X-coordinate for area 3.   |
|         | m3_y   | Y-coordinate for area 3.   |
|         | m3_w   | The width for area 3.  |
|         | m3_h   | The height for area 3.   |
|         | m3_sensitivity   | The sensitivity for area 3.  |
|         | m3_threshold   | Reserved   |
|         | m4_enable  | The status of motion detection of area 4:<br>0: Disable<br>1: Enable |
|         | m4_x   | X-coordinate for area 4.   |
|         | m4_y   | Y-coordinate for area 4.   |
|         | m4_w   | The width for area 4.  |
|         | m4_h   | The height for area 4.   |
|         | m4_sensitivity   | The sensitivity for area 4.  |
|         | m4_threshold   | Reserved   |
| Note    | The width and height for the area is based on the max. resolution of camera. |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getmdattr                                      |  |

## setmdattr

|           |  |
|-----------|--|
| Function  | Set the attributes for motion detection. |
| Privilege | admin                                    |

|         |   |  |
|---------|---|--|
| Usage   | /cgi-bin/hi3510/param.cgi[?cmd=setmdattr&-enable=&-s=&-name=&-x=&-y=&-w=&-h=]         |  |
| Param.  | enable  | The status of motion detection:<br>0: Disable<br>1: Enable |
|         | s   | Sensitivity, the range is [1 ~ 100].                       |
|         | name  | Area number, the rang is [1 ~ 4]                           |
|         | x   | X-coordinate for detection area.                           |
|         | y   | Y-coordinate for detection area.                           |
|         | w   | The width for detection area.                              |
|         | h   | The height for detection area.                             |
| Return  | Success: Success.<br>Fail: Error.   |  |
| Note    | The width and height for the area is based on the max. resolution of camera.          |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setmdattr&-enable=1&-s=50&-name=1&-x=0&-y=0&-w=60&-h=60 |  |

## getioattr

|           |   |  |
|-----------|---|--|
| Function  | Get the attributes for I/O alarm.         |  |
| Privilege | admin                                     |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getioattr] |  |
| Param.    | None                                      |  |
| Return    | io_enable                                 | Whether to allow the I/O alarm or not:<br>0: Disable, do not allow.<br>1: Enable, allow. |
|           | io_flag                                   | The trigger mode for I/O alarm:<br>0: Always close.<br>1: Always open.                   |
| Note      | None                                      |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getioattr   |  |

## setioattr

|           |                                   |
|-----------|-----------------------------------|
| Function  | Set the attributes for I/O alarm. |
| Privilege | admin                             |



|         |  |  |
|---------|--|--|
| Usage   | /cgi-bin/hi3510/param.cgi[?cmd=setioattr &-io_enable=&-io_flag=] |  |
| Param.  | io_enable  | Whether to allow the I/O alarm or not:<br>0: Disable, do not allow.<br>1: Enable, allow. |
|         | io_flag  | The trigger mode for I/O alarm:<br>0: Always close.<br>1: Always open.                   |
| Return  | Success: Success.<br>Fail: Error.                                |  |
| Note    | None   |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setioattr&-io_enable=0&-io_flag=1  |  |

## getaudioalarmattr

|           |   |  |
|-----------|---|--|
| Function  | Get the attributes for audio alarm.               |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getaudioalarmattr] |  |
| Param.    | None  |  |
| Return    | aa_enable   | Whether to allow the audio alarm or not:<br>0: Disable, do not allow.<br>1: Enable, allow. |
|           | aa_value  | Sensitivity value, the range is [1-100]. Much bigger will be much more sensitivity.        |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getaudioalarmattr   |  |

## setaudioalarmattr

|           |  |  |
|-----------|--|--|
| Function  | Set the attributes for audio alarm.                                      |  |
| Privilege | admin  |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setaudioalarmattr&-aa_enable=&-aa_value=] |  |
| Param.    | aa_enable  | Whether to allow the audio alarm or not:<br>0: Disable, do not allow.<br>1: Enable, allow. |
|           | aa_value   | Sensitivity value, the range is [1-100]. Much bigger will be much more sensitivity.        |

|         |   |
|---------|---|
| Return  | Success: Success.<br>Fail: Error.   |
| Note    | None  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setaudioalarmattr&-aa_enable=0&-aa_value=50 |

## getmdalarm

|           |  |   |
|-----------|--|---|
| Function  | Get the attributes for alarm link actions.         |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getmdalarm&-aname=] |   |
| Param.    | aname  | <p>Link action name:</p> <p>Email: E-mail alarm</p> <p>Emailsnap: E-mail alarm with snapshots.</p> <p>Snap: Save snapshots to SD card.</p> <p>Ftpsnap: Save snapshots to FTP server.</p> <p>record: Save video to SD card.</p> <p>ftprec: Save video to FTP server.</p> <p>relay: Relay output.</p> <p>server: Alarm server.</p> <p>preset: Actions for preset of PT.</p> |
| Return    | md_email_switch                                    | <p>Whether to allow the email alarm:</p> <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p>   |
|           | md_emailsnap_switch                                | <p>Whether to allow the email alarm with snapshots:</p> <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p>  |
|           | md_snap_switch                                     | <p>Whether to allow to save snapshots to SD card:</p> <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p>  |
|           | md_ftpsnap_switch                                  | <p>Whether to allow to save snapshots to FTP server:</p> <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p>   |
|           | md_record_switch                                   | <p>Whether to allow to save video to SD card:</p>   |

|         |  |   |
|---------|--|---|
|         |  | <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p>  |
|         | md_ftprec_switch   | <p>Whether to allow to save video to FTP server:</p> <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p> |
|         | md_relay_switch  | <p>Whether to allow the relay output:</p> <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p>            |
|         | md_server_switch   | <p>Whether to allow to enable the alarm server:</p> <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p>  |
|         | md_preset_switch   | <p>Whether to allow the preset action for alarm:</p> <p>on: Enable, allow.</p> <p>off: Disable, do not allow.</p> |
| Note    | None   |   |
| Example | <pre>/cgi-bin/hi3510/param.cgi?cmd=getmdalarm&amp;-aname=email&amp;cmd=getmdalarm&amp;-aname=emailsnap&amp;cmd=getmdalarm&amp;-aname=ftpsnap&amp;cmd=getmdalarm&amp;-aname=snap&amp;cmd=getmdalarm&amp;-aname=emailrec&amp;cmd=getmdalarm&amp;-aname=record&amp;cmd=getmdalarm&amp;-aname=ftprec&amp;cmd=getmdalarm&amp;-aname=relay&amp;cmd=getmdalarm&amp;-aname=server&amp;cmd=getmdalarm&amp;-aname=preset</pre> |   |

## setmdalarm

|           |  |   |
|-----------|--|---|
| Function  | Set the attributes for alarm link actions.                   |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setmdalarm &-aname=&-switch=] |   |
| Param.    | aname  | <p>Link action name:</p> <p>Email: E-mail alarm</p> <p>Emailsnap: E-mail alarm with snapshots.</p> <p>Snap: Save snapshots to SD card.</p> <p>Ftpsnap: Save snapshots to FTP server.</p> <p>record: Save video to SD card.</p> <p>ftprec: Save video to FTP server.</p> <p>relay: Relay output.</p> <p>server: Alarm server.</p> <p>preset: Actions for preset of PT.</p> |

|         |  |  |
|---------|--|--|
|         | switch   | Action status:<br>on: Enable<br>off: Disable |
| Return  | Success: Success.<br>Fail: Error.  |  |
| Note    | None   |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setmdalarm&-aname=email&-switch=off&cmd=setmdalarm&-aname=emailsnap&-switch=off&cmd=setmdalarm&-aname=ftprec&-switch=off&cmd=setmdalarm&-aname=snap&-switch=off&cmd=setmdalarm&-aname=ftpsnap&-switch=off&cmd=setmdalarm&-aname=record&-switch=off&cmd=setmdalarm&-aname=relay&-switch=off&cmd=setmdalarm&-aname=server&-switch=off&cmd=setmdalarm&-aname=preset&-switch=off |  |

## getrelayattr

|           |  |   |
|-----------|--|---|
| Function  | Get the relay output time for alarm link action. |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getrelayattr]     |   |
| Param.    | None   |   |
| Return    | time   | Output time, the unit is second, var time="10"; |
| Note      | None   |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getrelayattr       |   |

## setrelayattr

|           |   |   |
|-----------|---|---|
| Function  | Set the relay output time for alarm link action.    |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setrelayattr&-time=] |   |
| Param.    | time  | Output time, the unit is second , include [5, 10, 20, 30] |
| Return    | Success: Success.<br>Fail: Error.                   |   |
| Note      | None  |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setrelayattr&-time=10 |   |

## getmotorattr

|           |  |  |
|-----------|--|--|
| Function  | Get the preset number for alarm action.      |  |
| Privilege | admin  |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getmotorattr] |  |
| Param.    | None   |  |
| Return    | alarmpresetindex                             | Preset name or number, the range is [1-8]. |
| Note      | None   |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getmotorattr   |  |

## setmotorattr

|           |   |  |
|-----------|---|--|
| Function  | Set the preset number for alarm action.                         |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setmotorattr&-alarmpresetindex=] |  |
| Param.    | alarmpresetindex  | Preset name or number, the range is [1-8]. |
| Return    | Success: Success.<br>Fail: Error.                               |  |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setmotorattr&-alarmpresetindex=2  |  |

## getalarmsnapattr

|           |  |                                   |
|-----------|--|-----------------------------------|
| Function  | Get the count for alarm snapshots.               |                                   |
| Privilege | admin  |                                   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getalarmsnapattr] |                                   |
| Param.    | None   |                                   |
| Return    | snap_count                                       | The count for snapshots of alarm. |
| Note      | None   |                                   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getalarmsnapattr   |                                   |

## setalarmsnapattr

|           |   |  |
|-----------|---|--|
| Function  | Set the count for alarm snapshots.                            |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setalarmsnapattr&-snap_count=] |  |

|         |  |   |
|---------|--|---|
| Param.  | snap_count   | Count for snapshots, the range is [1、 2、 3] |
| Return  | Success: Success.<br>Fail: Error.                            |   |
| Note    | None   |   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setalarmsnapattr&-snap_count=2 |   |

## getscheduleex

|           |   |   |
|-----------|---|---|
| Function  | Get the time schedule for motion alarm and scheduled snap.  |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getscheduleex&-ename=]   |   |
| Param.    | ename   | Schedule name:<br>md : Schedule for motion detection.<br>Snap: Schedule for planed snap.  |
| Return    | <pre> week0=PPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP P week1=PPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP P week3=PPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP P week4=PPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP P week5=PPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP </pre> | <pre> week0: Sunday week1: Monday week2: Tuesday week3: Wednesday week4: Thursday week5: Friday week6: Saturday P : Represents enable N : Represents disable </pre> |

|         |  |
|---------|--|
|         | <pre> PPPPPPPPPPPPPP P week6=PPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP P </pre>  |
| Note    | 48 characters in –week0~-week6 represent 24 hours for one day from 0:00-23:30, each character represents a half hour. Character P means enable alarm in this half a hour, N means disable alarm in this half a hour. |
| Example | <pre> /cgi-bin/hi3510/param.cgi?cmd=getscheduleex&amp;-ename=md /cgi-bin/hi3510/param.cgi?cmd=getscheduleex&amp;-ename=snap </pre>   |

## setscheduleex

|           |   |  |
|-----------|---|--|
| Function  | Set the time schedule for motion alarm and scheduled snap.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setscheduleex&-ename=&-week0=&-week1=&-week2=&-week3=&-week4=&-week5=&-week6=] |  |
| Param.    | ename   | Schedule name:<br>md : Schedule for motion detection.<br>Snap: Schedule for planed snap.   |
|           | <pre> week0=PPPPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP PPPPPPPPPPPPPP </pre>                                    | 48 characters in –week0~-week6 represent 24 hours for one day from 0:00-23:30, each character represents a half hour. Character P means enable alarm in this half a hour, N means disable alarm in this half a hour. |
|           | <pre> week0 week1 week2 week3 week4 week5 week6 </pre>  | <pre> week0: Sunday week1: Monday week2: Tuesday week3: Wednesday week4: Thursday week5: Friday week6: Saturday P : Represents enable N : Represents disable </pre>  |
| Return    | Success: Success.   |  |





|         |   |  |
|---------|---|--|
|         | snap_timer_name   | File name for snapshot of planning snap. |
| Return  | Success: Success.<br>Fail: Error.   |  |
| Note    | None  |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setalarmsnapattr&-snap_name_mode=1&-snap_alarm_name=snapalarm&-snap_timer_name=snaptime |  |

## getplanrecattr

|           |   |   |
|-----------|---|---|
| Function  | Get the attributes for scheduled recording.     |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd= getplanrecattr] |   |
| Param.    | None  |   |
| Return    | planrec_enable                                  | Whether to enable the recording:<br>0: Disable<br>1: Enable |
|           | planrec_time                                    | Time length for recoding, the range is [15-900] seconds.    |
|           | planrec_chn                                     | The stream channel for recording, 11, 12, 13                |
| Note      | None  |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getplanrecattr    |   |

## setplanrecattr

|           |  |   |
|-----------|--|---|
| Function  | Set the attributes for scheduled recording.  |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setplanrecattr&-planrec_enable=&-planrec_time&-planrec_chn] |   |
| Param.    | planrec_enable   | Whether to enable the recording:<br>0: Disable<br>1: Enable |
|           | planrec_time   | Time length for recoding, the range is [15-900] seconds.    |
|           | planrec_chn  | The stream channel for recording, 11, 12, 13                |
| Return    | Success: Success.<br>Fail: Error.  |   |

|         |   |
|---------|---|
| Note    | The camera will reboot automatically after modify the recording channel.                        |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setplanrecattr&-planrec_enable=1&-planrec_time=30&-planrec_chn=12 |

## getalarmserverattr

|           |  |                                     |
|-----------|--|-------------------------------------|
| Function  | Get the attributes for alarm server.               |                                     |
| Privilege | admin  |                                     |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getalarmserverattr] |                                     |
| Param.    | None   |                                     |
| Return    | as_server  | Server address.                     |
|           | as_port  | Server port, the range is [1-65535] |
|           | as_username  | Username                            |
|           | as_password  | Password                            |
| Note      | None   |                                     |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getalarmserverattr   |                                     |

## setalarmserverattr

|           |   |                                     |
|-----------|---|-------------------------------------|
| Function  | Set the attributes for alarm server.  |                                     |
| Privilege | admin   |                                     |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setalarmserverattr&-as_server=&-as_port=&-as_username=&-as_password=]                    |                                     |
| Param.    | as_server   | Server address.                     |
|           | as_port   | Server port, the range is [1-65535] |
|           | as_username   | Username                            |
|           | as_password   | Password                            |
| Return    | Success: Success.<br>Fail: Error.   |                                     |
| Note      | None  |                                     |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setalarmserverattr&-as_server=alarm.net&-as_port=8990&-as_username=asdf&-as_password=1234 |                                     |

## relayctrl

|           |   |                            |
|-----------|---|----------------------------|
| Function  | Enable or disable the relay manually.           |                            |
| Privilege | admin   |                            |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=relayctrl&-act=] |                            |
| Param.    | act   | on: Enable<br>off: Disable |
| Return    | Success: Success.<br>Fail: Error.               |                            |
| Note      | None  |                            |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=relayctrl&-act=on |                            |

## 8. Privacy masking

### getcover

|           |   |  |
|-----------|---|--|
| Function  | Get the attributes for masking.         |  |
| Privilege | admin                                   |  |
| Usage     | cgi-bin/hi3510/param.cgi[?cmd=getcover] |  |
| Param.    | None                                    |  |
| Return    | show_1                                  | Whether to enable privacy masking for area 1:<br>0: Disable<br>1: Enable |
|           | color_1                                 | The masking color for area 1.  |
|           | x_1                                     | X-coordinate for area 1.   |
|           | y_1                                     | Y-coordinate for area 1.   |
|           | w_1                                     | The width for area 1.  |
|           | h_1                                     | The height for area 1.   |
|           | show_2                                  | Whether to enable privacy masking for area 2:<br>0: Disable<br>1: Enable |
|           | color_2                                 | The masking color for area 2.  |
|           | x_2                                     | X-coordinate for area 2.   |
|           | y_2                                     | Y-coordinate for area 2.   |
|           | w_2                                     | The width for area 2.  |
|           | h_2                                     | The height for area 2.   |

|         |   |  |
|---------|---|--|
|         | show_3  | Whether to enable privacy masking for area 3:<br>0: Disable<br>1: Enable |
|         | color_3   | The masking color for area 3.  |
|         | x_3   | X-coordinate for area 3.   |
|         | y_3   | Y-coordinate for area 3.   |
|         | w_3   | The width for area 3.  |
|         | h_3   | The height for area 3.   |
|         | show_4  | Whether to enable privacy masking for area 4:<br>0: Disable<br>1: Enable |
|         | color_4   | The masking color for area 4.  |
|         | x_4   | X-coordinate for area 4.   |
|         | y_4   | Y-coordinate for area 4.   |
|         | w_4   | The width for area 4.  |
|         | h_4   | The height for area 4.   |
| Note    | The coordinate/width/height are based on the max. resolution of the camera. |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getcover                                      |  |

## setcover

|           |  |   |
|-----------|--|---|
| Function  | Set the attributes for masking.  |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setcover&-show=&-region=&-color=&-x=&-y=&-w=&-h=] |   |
| Param.    | show   | Whether to enable privacy masking:<br>0: Disable<br>1: Enable |
|           | region   | Area number for masking, [1 ~ 4]                              |
|           | color  | Masking color.  |
|           | x  | X-coordinate for masking.                                     |
|           | y  | Y-coordinate for masking.                                     |
|           | w  | The width for masking.  |
|           | h  | The height for masking.                                       |
| Return    | Success: Success.<br>Fail: Error.  |   |

|         |  |
|---------|--|
| Note    | The coordinate/width/height are based on the max. resolution of the camera.                  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setcover&-show=1&-region=1&-color=000000&-x=0&-y=0&-w=50&-h=50 |

## 9. Multi-screens

### getdevices

|           |  |  |
|-----------|--|--|
| Function  | Get the attributes for multi-screen.   |  |
| Privilege | admin, user, guest   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getdevices]   |  |
| Param.    | None   |  |
| Return    | d_host[0]=""<br>d_alias[0]=""<br>d_port[0]="80"<br>d_username[0]=""<br>d_password[0]=""<br><br>d_host[1]=""<br>d_alias[1]=""<br>d_port[1]="80"<br>d_username[1]=""<br>d_password[1]=""<br><br>d_host[2]=""<br>d_alias[2]=""<br>d_port[2]="80"<br>d_username[2]=""<br>d_password[2]=""<br><br>d_host[3]=""<br>d_alias[3]=""<br>d_port[3]="80"<br>d_username[3]=""<br>d_password[3]=""<br> | Camera IP address for screen-x.<br>Camera name for screen-x.<br>Camera HTTP port for screen-x.<br>Camera username for screen-x.<br>Camera password for screen-x.<br>X should be 1-9 which represents the screen from channel 1 to channel 9. |

|         |   |  |
|---------|---|--|
|         | <pre>d_host[4]=""<br/>d_alias[4]=""<br/>d_port[4]="80"<br/>d_username[4]=""<br/>d_password[4]=""<br/><br/>d_host[5]=""<br/>d_alias[5]=""<br/>d_port[5]="80"<br/>d_username[5]=""<br/>d_password[5]=""<br/><br/>d_host[6]=""<br/>d_alias[6]=""<br/>d_port[6]="80"<br/>d_username[6]=""<br/>d_password[6]=""<br/><br/>d_host[7]=""<br/>d_alias[7]=""<br/>d_port[7]="80"<br/>d_username[7]=""<br/>d_password[7]=""</pre> |  |
| Note    | None  |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getdevices  |  |

## setdevices

|           |   |                                  |
|-----------|---|----------------------------------|
| Function  | Set the attributes for multi-screen.  |                                  |
| Privilege | admin   |                                  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setdevices&-d_number=&-d_alias=&-d_host=&-d_port=&-d_username=&-d_password=] |                                  |
| Param.    | d_number  | Screen number, the range is 0-8. |
|           | d_host  | The IP address of camera.        |
|           | d_alias   | Camera name.                     |
|           | d_port  | The HTTP port for camera.        |
|           | d_username  | The username of camera.          |

|         |   |                         |
|---------|---|-------------------------|
|         | d_password  | The password of camera. |
| Return  | Success: Success.<br>Fail: Error.   |                         |
| Note    | None  |                         |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setdevices&-d_number=0&-d_alias=IPCamer&-d_host=192.168.1.88&-d_port=80&-d_username=admin&-d_password=admin |                         |

## 10. User management.

### getuserattr

|           |   |                         |
|-----------|---|-------------------------|
| Function  | Get the attributes of users.  |                         |
| Privilege | admin   |                         |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getuserattr]   |                         |
| Param.    | None  |                         |
| Return    | at_name   | The username of camera. |
|           | at_password   | The password of camera. |
| Note      | <p>This command will return all user information, such as username and password:</p> <pre>var at_name0="admin"; var at_password0="admin"; var at_name1="user"; var at_password1="user"; var at_name2="guest"; var at_password2="guest";</pre> |                         |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getuserattr   |                         |

### setuserattr

|           |  |  |
|-----------|--|--|
| Function  | Set the attributes of users.   |  |
| Privilege | admin  |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setuserattr&-at_username=&-at_newname= &-at_password =] |  |
| Param.    | at_username  | The current username, less then 16 characters. |
|           | at_newname   | The new username, less then 16 characters.     |
|           | at_password  | The password, less then 16 characters.         |

|         |   |
|---------|---|
| Return  | Success: Success.<br>Fail: Error.   |
| Note    | None  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=setuserattr&-at_username=admin&-at_newname=newname&-at_password=admin |

## getsetupflag

|           |  |          |
|-----------|--|----------|
| Function  | Get the attributes of admin user.          |          |
| Privilege | admin                                      |          |
| Usage     | /cgi-bin/hi3510/param.cgi?cmd=getsetupflag |          |
| Param.    | None                                       |          |
| Return    | name0                                      | Username |
|           | password0                                  | Password |
|           | authLevel0                                 | Reserved |
| Note      | None                                       |          |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getsetupflag |          |

## getstreamflag

|           |  |          |
|-----------|--|----------|
| Function  | Get the attributes of guest user.            |          |
| Privilege | guest  |          |
| Usage     | /cgi-bin/hi3510/ param.cgi?cmd=getstreamflag |          |
| Param.    | None   |          |
| Return    | name2  | Username |
|           | password2                                    | Password |
|           | authLevel2                                   | Reserved |
| Note      | None   |          |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getstreamflag  |          |

## getptzflag

|           |  |  |
|-----------|--|--|
| Function  | Get the attributes of user account.      |  |
| Privilege | user                                     |  |
| Usage     | /cgi-bin/hi3510/param.cgi?cmd=getptzflag |  |
| Param.    | None                                     |  |



|         |  |          |
|---------|--|----------|
| Return  | name1                                    | Username |
|         | password1                                | Password |
|         | authLevel1                               | Reserved |
| Note    | None                                     |          |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getptzflag |          |

## getuserinfo

|           |   |  |
|-----------|---|--|
| Function  | Get the online user information.          |  |
| Privilege | admin, user, guest                        |  |
| Usage     | /cgi-bin/hi3510/param.cgi?cmd=getuserinfo |  |
| Param.    | None                                      |  |
| Return    | name                                      | Username   |
|           | password                                  | Password   |
|           | authLevel                                 | The authorization level:<br>15: admin<br>3: user<br>1: guest |
| Note      | None                                      |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getuserinfo |  |

## 11. Scheduled snapshot

### getsnaptimerattrex

|           |  |  |
|-----------|--|--|
| Function  | Get the attributes for scheduled snapshot.         |  |
| Privilege | admin  |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getsnaptimerattrex] |  |
| Param.    | None   |  |
| Return    | as_snap_enable                                     | Whether to save snapshots to SD card:<br>0: Disable<br>1: Enable |
|           | as_snap_interval                                   | Time interval, the unit is second, the range is [5~86400].       |

|         |  |   |
|---------|--|---|
|         | as_email_enable                                  | Whether to send snapshots to E-mail:<br>0: Disable<br>1: Enable       |
|         | as_email_interval                                | Time interval, the unit is second, the range is [5~86400].            |
|         | as_ftp_enable                                    | Whether to upload snapshots to FTP server:<br>0: Disable<br>1: Enable |
|         | as_ftp_interval                                  | Time interval, the unit is second, the range is [5~86400].            |
| Note    | None   |   |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getsnaptimerattrex |   |

## setsnaptimerattrex

|           |   |   |
|-----------|---|---|
| Function  | Set the attributes for scheduled snapshot.  |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setsnaptimerattrex&-as_enable=&-as_interval=&-as_type=]      |   |
| Param.    | as_enable   | Whether to enable the scheduled snapshot?<br>0: Disable<br>1: Enable  |
|           | as_interval   | Time interval for snap, the range is [5~86400] seconds.   |
|           | as_type   | Link actions:<br>snap: Save snapshots to SD card.<br>email: Send snapshots to E-mail.<br>ftp: Upload snapshots to FTP server. |
| Return    | Success: Success.<br>Fail: Error.   |   |
| Note      | None  |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setsnaptimerattrex&-as_enable=1&-as_interval=60&-as_type=snap |   |

## 12. FTP

### getftpattr

|           |  |  |
|-----------|--|--|
| Function  | Get the attributes of FTP setting.         |  |
| Privilege | admin                                      |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getftpattr] |  |
| Param.    | None                                       |  |
| Return    | ft_server                                  | Server address.  |
|           | ft_port                                    | Server port.   |
|           | ft_username                                | Username.  |
|           | ft_password                                | Password.  |
|           | ft_dirname                                 | Storage path.  |
|           | ft_mode                                    | Whether to enable the passive mode?<br>0: Diasble<br>1: Enable |
| Note      | None                                       |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getftpattr   |  |

### setftpattr

|           |   |  |
|-----------|---|--|
| Function  | Set the attributes of FTP setting.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getftpattr&-ft_server=&-ft_port=&-ft_username=&-ft_password=&- ft_dirname =&-ft_mode=] |  |
| Param.    | ft_server   | Server address.  |
|           | ft_port   | Server port.   |
|           | ft_username   | Username.  |
|           | ft_password   | Password.  |
|           | ft_dirname  | Storage path.  |
|           | ft_mode   | Whether to enable the passive mode?<br>0: Diasble<br>1: Enable |
| Return    | Success: Success.<br>Fail: Error.   |  |
| Note      | None  |  |

|         |  |
|---------|--|
| Example | /cgi-bin/hi3510/param.cgi?cmd=setftpattr&-ft_server=220.112.14.173<br>&-ft_port=21&-ft_username=FTPUsername&-ft_password=FTPPasswo<br>rd&-ft_dirname =Program Files&-ft_mode=1 |
|---------|--|

## testftp

|           |   |   |
|-----------|---|---|
| Function  | Test the FTP setting.                   |   |
| Privilege | admin                                   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=testftp] |   |
| Param.    | None                                    |   |
| Return    | result                                  | Return value:<br>0: Success.<br>-1: Unknow error.<br>-2: Can not connect the FTP server.<br>-3: Username and password do not match.<br>-4: The storage path is error. |
| Note      | None                                    |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=testftp   |   |

## 13. SMTP

### getsmtpattr

|           |   |  |
|-----------|---|--|
| Function  | Get the SMTP setting.                       |  |
| Privilege | admin                                       |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getsmtpattr] |  |
| Param.    | None  |  |
| Return    | ma_server                                   | SMTP server address.   |
|           | ma_port                                     | Server port.   |
|           | ma_ssl                                      | Authentication link:<br>0: None.<br>1: SSL.<br>2: TLS.<br>3: STARTTLS. |
|           | ma_logintype                                | Whether to enable the check of authentication:<br>1: Enable            |

|         |  |                                |
|---------|--|--------------------------------|
|         |  | 3: Disable                     |
|         | ma_username                              | Username                       |
|         | ma_password                              | Password                       |
|         | ma_from                                  | The email address of sender.   |
|         | ma_to                                    | The email address of receiver. |
|         | ma_subject                               | The email subject.             |
|         | ma_text                                  | The email content.             |
| Note    | None                                     |                                |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getsmtpatr |                                |

## setsmtpatr

|           |   |   |
|-----------|---|---|
| Function  | Set the SMTP setting.   |   |
| Privilege | admin   |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setsmtpatr&-ma_server=&-ma_port=&-ma_ssl=&-ma_logintype=&-ma_username=&-ma_password=&-ma_from=&-ma_to=&-ma_subject=&-ma_text=] |   |
| Param.    | ma_server   | SMTP server address.  |
|           | ma_port   | Server port.  |
|           | ma_ssl  | Authentication link:<br>0: None.<br>1: SSL.<br>2: TLS.<br>3: STARTTLS.    |
|           | ma_logintype  | Whether to enable the check of authentication:<br>1: Enable<br>3: Disable |
|           | ma_username   | Username  |
|           | ma_password   | Password  |
|           | ma_from   | The email address of sender.  |
|           | ma_to   | The email address of receiver.  |
|           | ma_subject  | The email subject.  |
|           | ma_text   | The email content.  |
| Return    | Success: Success.<br>Fail: Error.   |   |
| Note      | None  |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setsmtpatr&-ma_server=stmp.sdf.co   |   |

|  |  |
|--|--|
|  | m&-ma_from=sd1@sdf.com&-ma_to=a1@sdf.com&-ma_subject=demosubject&-ma_text=demotext&-ma_logintype=1&-ma_username=demo&-ma_password=123456&-ma_port=25&-ma_ssl=0 |
|--|--|

## testsmtp

|           |  |  |
|-----------|--|--|
| Function  | Test the SMTP setting.                 |  |
| Privilege | admin                                  |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=smtp]   |  |
| Param.    | None                                   |  |
| Return    | result                                 | Return value:<br>0: Success.<br>-1: Unknow error.<br>-2: SSL error.<br>-3: None, can not to connect the server.<br>-4: The username and password do not match. |
| Note      | None                                   |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=testsmtp |  |

## 14. System setting

### getserverinfo

|           |   |                                   |
|-----------|---|-----------------------------------|
| Function  | Get the attributes of camera.                 |                                   |
| Privilege | admin   |                                   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getserverinfo] |                                   |
| Param.    | None  |                                   |
| Return    | model   | Model SN number of camera.        |
|           | hardVersion                                   | Hardware version.                 |
|           | softVersion                                   | Software version.                 |
|           | webVersion                                    | Web version.                      |
|           | name  | Camera name.                      |
|           | startdate                                     | The start date of system running. |
|           | upnpstatus                                    | Ok: Success<br>off: Disable       |

|         |   |  |
|---------|---|--|
|         |   | failed: Fail   |
|         | facddnsstatus                               | The status of the DDNS from camera factory.<br>Ok: Success<br>off: Disable<br>failed: Fail |
|         | th3ddnsstatus                               | The status of the DDNS from third-party.<br>Ok: Success<br>off: Disable<br>failed: Fail    |
|         | runtimes                                    | Reserved   |
| Note    | None  |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getserverinfo |  |

## getdevtype

|           |  |              |
|-----------|--|--------------|
| Function  | Get the device type of camera.             |              |
| Privilege | admin                                      |              |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getdevtype] |              |
| Param.    | None                                       |              |
| Return    | devtype                                    | Device type. |
| Note      | See appendix I for reference.              |              |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getdevtype   |              |

## getstreamnum

|           |  |   |
|-----------|--|---|
| Function  | Get the count of users online.               |   |
| Privilege | admin  |   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getstreamnum] |   |
| Param.    | None   |   |
| Return    | stream_num                                   | Count for users, var stream_num = "1" ; |
| Note      | None   |   |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getstreamnum   |   |

## getservertime

|          |                                       |
|----------|---------------------------------------|
| Function | Get the start time of system running. |
|----------|---------------------------------------|

|           |   |  |
|-----------|---|--|
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=getservertime] |  |
| Param.    | None  |  |
| Return    | time  | The current time,<br>[yyyy][mm][dd][hh][mm][ss]<br>For example, time="20110802182638"; |
|           | timeZone                                      | Time zone, timeZone="Asia/Hong_Kong";  |
|           | dstmode                                       | Whether to enable the DST:<br>on: Enable<br>off: Disable                               |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=getservertime   |  |

## setservertime

|           |   |  |
|-----------|---|--|
| Function  | Set the time of camera system.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setservertime&-time=&-timezone=&-dstmode=]                                     |  |
| Param.    | stime   | Current time:<br>[yyyy].[mm].[dd].[hh].[mm].[ss]<br>For example, 2011.08.23.10.35.08 |
|           | timezone  | Time zone, like timeZone="Asia/Hong_Kong";<br>Please see appendix II for reference.  |
|           | dstmode   | Whether to enable the DST:<br>on: Enable<br>off: Disable                             |
| Return    | Success: Success.<br>Fail: Error.   |  |
| Note      | The DST is not used for all time zone.  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setservertime&-time=2011.08.23.10.35.08&-timezone=Asia%2FHong_Kong&-dstmode=off |  |

## getntpattr

|           |                            |
|-----------|----------------------------|
| Function  | Get the attributes of NTP. |
| Privilege | admin                      |



|         |  |  |
|---------|--|--|
| Usage   | /cgi-bin/hi3510/param.cgi[?cmd=getntpattr] |  |
| Param.  | None                                       |  |
| Return  | ntpenable                                  | Whether to enable the NTP:<br>1: Enable<br>0: Disable                                      |
|         | ntpserver                                  | NTP Server name:<br>time.nist.gov<br>time.kriss.re.kr<br>time.windows.com<br>time.nuri.net |
|         | ntpinterval                                | The interval for NTP time synchronization.   |
| Note    | None                                       |  |
| Example | /cgi-bin/hi3510/param.cgi?cmd=getntpattr   |  |

## setntpattr

|           |   |  |
|-----------|---|--|
| Function  | Set the attributes of NTP.  |  |
| Privilege | admin   |  |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=setntpattr&-ntpenable=&-ntpserver=&-ntpinterval=]                  |  |
| Param.    | ntpenable   | Whether to enable the NTP:<br>1: Enable<br>0: Disable                                      |
|           | ntpserver   | NTP Server name:<br>time.nist.gov<br>time.kriss.re.kr<br>time.windows.com<br>time.nuri.net |
|           | ntpinterval   | The interval for NTP time synchronization, the range is [1-24] hours.                      |
| Return    | Success: Success.<br>Fail: Error.   |  |
| Note      | None  |  |
| Example   | /cgi-bin/hi3510/param.cgi?cmd=setntpattr&-ntpenable=1&-ntpinterval=2<br>&-ntpserver=time.nuri.net |  |

## web/tmpfs/auto.jpg

|           |  |
|-----------|--|
| Function  | Snap pictures in web browser.                          |
| Privilege | Admin, user, guest                                     |
| Usage     | /web/tmpfs/auto.jpg                                    |
| Param.    | None   |
| Return    | snap.jpg   |
| Note      | None   |
| Example   | http://192.168.1.183/cgi-bin/hi3510/web/tmpfs/auto.jpg |

## Sysreset.cgi

|           |  |
|-----------|--|
| Function  | Restore the camera settings to default values. |
| Privilege | admin  |
| Usage     | /cgi-bin/hi3510/sysreset.cgi                   |
| Param.    | None   |
| Return    | Success: Success.<br>Fail: Error.              |
| Note      | None   |
| Example   | /cgi-bin/hi3510/sysreset.cgi                   |

## Sysreboot.cgi

|           |                                   |
|-----------|-----------------------------------|
| Function  | Reboot the camera system.         |
| Privilege | admin                             |
| Usage     | /cgi-bin/hi3510/sysreboot.cgi     |
| Param.    | None                              |
| Return    | Success: Success.<br>Fail: Error. |
| Note      | None                              |
| Example   | /cgi-bin/hi3510/sysreboot.cgi     |

## backup.cgi

|           |                                   |
|-----------|-----------------------------------|
| Function  | Backup the camera configurations. |
| Privilege | admin                             |

|         |                            |
|---------|----------------------------|
| Usage   | /cgi-bin/hi3510/backup.cgi |
| Param.  | None                       |
| Return  | config_backup.bin          |
| Note    | None                       |
| Example | /cgi-bin/hi3510/backup.cgi |

## restore.cgi

|           |  |
|-----------|--|
| Function  | Restore the camera configurations.   |
| Privilege | admin  |
| Usage     | /cgi-bin/hi3510/restore.cgi[?-setting_file=]   |
| Param.    | setting_file      The path of the configurations file.   |
| Return    | None   |
| Note      | This command should use the POST HTTP method.  |
| Example   | <pre>&lt;form name="form6" method="post" enctype="multipart/form-data" action="/cgi-bin/hi3510/restore.cgi" &gt;   &lt;input type="file" name="setting_file" &gt;   &lt;input type="submit" value="restore" &gt; &lt;/form&gt;</pre> |

## logsync

|           |   |
|-----------|---|
| Function  | Get the log of system running.  |
| Privilege | admin   |
| Usage     | /cgi-bin/hi3510/param.cgi[?cmd=logsync]   |
| Param.    | None  |
| Return    | None  |
| Note      | <ol style="list-style-type: none"> <li>1. This command will read the log from /log/syslog.txt.</li> <li>2. The log will be cleared automatically after reboot.</li> </ol> |
| Example   | <pre>/cgi-bin/hi3510/param.cgi?cmd=logsync /log/syslog.txt</pre>  |

## cleanlog

|           |                                  |
|-----------|----------------------------------|
| Function  | Clear the log of system running. |
| Privilege | admin                            |

|         |  |     |
|---------|--|-----|
| Usage   | /cgi-bin/hi3510/param.cgi[?cmd=cleanlog&-name=]  |     |
| Param.  | name   | sys |
| Return  | Success: Success.<br>Fail: Error.                |     |
| Note    | None   |     |
| Example | /cgi-bin/hi3510/param.cgi?cmd=cleanlog&-name=sys |     |

## 15. RTSP URL

### 1. Verify the authorization by client.

**rtsp://IP address:port/11 or 12 or 13.**

- 11 represents the first stream.
- 12 represents the second stream.
- 13 represents the third stream
- The default port for RTSP is 554

For example, rtsp://192.168.1.108:444/11

### 2. Include the authorization in the URL.

**rtsp://username:password@IP address:port/11 or 12 or 13.**

For example, rtsp://admin:admin@192.168.1.108:444/11

## 16. Appendix

### Appendix I Defines for device type

1. The device type is a 32 bytes ACSII code, which is used to distinguish between different devices with different features.

2. Each field has 2 bytes. The first byte represents the general type and the second byte represents the sub type.

|         |         |
|---------|---------|
| Field 3 | Field 4 |
| Lens    | PTZ     |
| 'S'     | 'Z'     |

3. The field for lens 'S'

|     |           |   |
|-----|-----------|---|
| 'e' | CMOS 720P | Brightness [0-100], Saturation [0-255], Contrast [0-100],<br>Hue [0-100], Sharpness [0-100], Shutter [0-65535], |
|-----|-----------|---|

|     |                                    |   |
|-----|------------------------------------|---|
|     |                                    | <p>Flip, Mirror, WDR, Night vision mode.</p> <p>The first stream: 720P, Q720P.</p> <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p>  |
| 'f' | <p>CMOS 720P</p> <p>CMOS 960P</p>  | <p>Brightness [0-100], Saturation [0-255], Contrast [0-100], Hue [0-100], Sharpness [0-100], Shutter [0-65535], Flip, Mirror, WDR, Night vision mode.</p> <p>720P:</p> <p>The first stream: 720P.</p> <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p> <p>960P:</p> <p>The first stream: 960P.</p> <p>The second stream: VGA, QVGA.</p> <p>The third stream: QVGA.</p> <p>Snapshots for mobile phone: VGA, QVGA.</p>             |
| 'g' | <p>CMOS 1080P</p> <p>CMOS 720P</p> | <p>Brightness [0-100], Saturation [0-255], Contrast [0-100], Hue [0-100], Sharpness [0-100], Shutter [0-65535], Flip, Mirror, WDR, Night vision mode.</p> <p>1080P:</p> <p>The first stream: 1080P.</p> <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p> <p>720P:</p> <p>The first stream: 720P.</p> <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p> |
| 'h' | <p>CMOS 720P WDR</p>               | <p>Brightness [0-6], Saturation [0-6], Contrast [0-8], Hue [0-255], Sharpness [0-4], Shutter [0-3], WDR, Night vision mode.</p> <p>The first stream: 720P, Q720P.</p> <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p>   |
| 'l' | <p>CMOS 1080P</p> <p>CMOS 720P</p> | <p>Brightness [0-100], Saturation [0-255], Contrast [0-100], Hue [0-100], Sharpness [0-100], Shutter [0-65535], Flip, Mirror, WDR, Night vision mode.</p> <p>1080P:</p> <p>The first stream: 1080P.</p>   |

|     |                                    |   |
|-----|------------------------------------|---|
|     |                                    | <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p> <p>720P:</p> <p>The first stream: 720P.</p> <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p>   |
| 'j' | <p>CMOS 1080P</p> <p>CMOS 720P</p> | <p>Brightness [0-100], Saturation [0-255], Contrast [0-100], Hue [0-100], Sharpness [0-100], Shutter [0-65535], Flip, Mirror, WDR, Night vision mode.</p> <p>1080P:</p> <p>The first stream: 1080P.</p> <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p> <p>720P:</p> <p>The first stream: 720P.</p> <p>The second stream: Q720P, QQ720P.</p> <p>The third stream: QQ720P.</p> <p>Snapshots for mobile phone: Q720P, QQ720P.</p> |
| 'k' | D1                                 | <p>Brightness [0-100], Saturation [0-255], Contrast [0-100], Hue [0-100], Sharpness [0-100], Shutter [0-65535], Flip, Mirror, Night vision mode.</p> <p>The first stream: D1, CIF.</p> <p>The second stream: CIF.</p> <p>The third stream: CIF.</p> <p>Snapshots for mobile phone: D1.</p>  |

#### 4. The field for PTZ 'Z'

|     |                  |   |
|-----|------------------|---|
| '0' | User-defined PTZ | <p>Up, Down, Left, Right, Horizontal Curise, Vertical Curise, Back to center point, Call preset point (Up to 8 points). Do not support set by serial port, and set the PTZ speed.</p> |
| '3' | 485 PTZ          | <p>Up, Down, Left, Right, Zoom in, Zoom out, Call preset points. Supports to set 485 attributes.</p>  |

#### Appendix II Time zone list

| Time zone         | Descriptions                               |
|-------------------|--|
| Etc/GMT-12        | (GMT-12:00) Date line in the west          |
| Pacific/Apia      | (GMT-11:00) Midway Islands, Samoan Islands |
| Pacific/Honolulu  | (GMT-10:00) Hawaii                         |
| America/Anchorage | (GMT-09:00) Alaska                         |

|                        |  |
|------------------------|--|
| America/Los_Angeles    | (GMT-08:00) Pacific Standard(US and Canada)                    |
| America/Denver         | (GMT-07:00) Mountain Standard(US and Canada)                   |
| America/Tegucigalpa    | (GMT-07:00) Chihuahua, LA PAZ, Mazatlan.                       |
| America/Phoenix        | (GMT-07:00) Arizona  |
| America/Winnipeg       | (GMT-06:00) Saskatchewan                                       |
| America/Mexico_City    | (GMT-06:00) Guadalajara, Mexico City, Monterey                 |
| America/Chicago        | (GMT-06:00) Central Standard(US and Canada)                    |
| America/Costa_Rica     | (GMT-06:00) Central America                                    |
| America/Indianapolis   | (GMT-05:00) Indiana (East)                                     |
| America/New_York       | (GMT-05:00) Eastern Standard (US and Canada)                   |
| America/Bogota         | (GMT-05:00) Bogota, Lima, Rio Branco                           |
| America/Santiago       | (GMT-04:00) San Diego  |
| America/Caracas        | (GMT-04:00) LA PAZ   |
| America/Montreal       | (GMT-04:00) Atlantic time (Canada)                             |
| America/St_Johns       | (GMT-03:30) Newfoundland                                       |
| America/Thule          | (GMT-03:00) Greenland  |
| America/Buenos_Aires   | (GMT-03:00) Buenos Aires, Georgetown                           |
| America/Sao_Paulo      | (GMT-03:00) Brasilia   |
| Atlantic/South_Georgia | (GMT-02:00) Mid-Atlantic                                       |
| Atlantic/Cape_Verde    | (GMT-01:00) Cape Verde Islands                                 |
| Atlantic/Azores        | (GMT-01:00) Azores Islands                                     |
| Europe/Dublin          | (GMT) Greenwich Mean Time: Dublin, Edinburgh, London, Lisbon   |
| Africa/Casablanca      | (GMT) Dj TK Remix, Monrovia, Reykjavik                         |
| Europe/Amsterdam       | (GMT+01:00) Amsterdam, Berlin, Berne, Roman, Stockholm, Vienna |
| Europe/Belgrade        | (GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague  |
| Europe/Brussels        | (GMT+01:00) Brussels, Copenhagen, Madrid, Paris                |
| Europe/Warsaw          | (GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb                   |
| Africa/Lagos           | (GMT+01:00) In central west Africa                             |
| Europe/Athens          | (GMT+02:00) Athens, Istanbul, Minsk                            |
| Europe/Bucharest       | (GMT+02:00) Bucharest  |
| Africa/Cairo           | (GMT+02:00) Cairo  |
| Africa/Harare          | (GMT+02:00) Harare, Pretoria                                   |
| Europe/Helsinki        | (GMT+02:00) Helsinki, Kiev, Riga, Sofia, Tallinn, Vilnius      |
| Asia/Jerusalem         | (GMT+02:00) Jerusalem  |
| Asia/Baghdad           | (GMT+03:00) Baghdad  |
| Asia/Kuwait            | (GMT+03:00) Kuwait, Riyadh                                     |
| Europe/Moscow          | (GMT+03:00) Moscow, St.Petersburg, Volgograd                   |
| Africa/Nairobi         | (GMT+03:00) Nairobi  |
| Asia/Tehran            | (GMT+03:30) Teheran  |

|                    |   |
|--------------------|---|
| Asia/Dubai         | (GMT+04:00) Abu Dhabi, Muscat                           |
| Asia/Baku          | (GMT+04:00) Baku, Tbilisi, Yerevan                      |
| Asia/Kabul         | (GMT+04:30) Kabul                                       |
| Asia/Yekaterinburg | (GMT+05:00) Ekaterinburg                                |
| Asia/Karachi       | (GMT+05:00) Islamabad, Karachi, Tashkent                |
| Asia/Calcutta      | (GMT+05:30) Madras, Calcutta, Bombay, New Delhi         |
| Asia/Katmandu      | (GMT+05:45) Katmandu                                    |
| Asia/Almaty        | (GMT+06:00) Alma-Ata, Novosibirsk                       |
| Asia/Dhaka         | (GMT+06:00) Astana, Dacca                               |
| Asia/Colombo       | (GMT+06:00) Colombo                                     |
| Asia/Rangoon       | (GMT+06:30) Rangoon                                     |
| Asia/Bangkok       | (GMT+07:00) Bangkok, Hanoi, Djakarta                    |
| Asia/Krasnoyarsk   | (GMT+07:00) Krasnoyarsk                                 |
| Asia/Hong_Kong     | (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumchi      |
| Asia/Irkutsk       | (GMT+08:00) Irkutsk, Ulan Bator                         |
| Asia/Kuala_Lumpur  | (GMT+08:00) Kuala Lumpur, Singapore                     |
| Australia/Perth    | (GMT+08:00) Perth                                       |
| Asia/Taipei        | (GMT+08:00) Taipei                                      |
| Asia/Tokyo         | (GMT+09:00) Osaka, Sapporo, Tokyo                       |
| Asia/Seoul         | (GMT+09:00) Seoul                                       |
| Asia/Yakutsk       | (GMT+09:00) Yakutsk                                     |
| Australia/Adelaide | (GMT+09:30) Adelaide                                    |
| Australia/Brisbane | (GMT+10:00) Brisbane                                    |
| Australia/Sydney   | (GMT+10:00) Canberra, Melbourne, Sydney                 |
| Pacific/Guam       | (GMT+10:00) Guam, Port Moresby                          |
| Australia/Hobart   | (GMT+10:00) Hobart                                      |
| Asia/Vladivostok   | (GMT+10:00) Vladivostok                                 |
| Asia/Magadan       | (GMT+11:00) Magadan, Solomon Islands, New Caledonia     |
| Pacific/Auckland   | (GMT+12:00) Auckland, Wellington                        |
| Pacific/Fiji       | (GMT+12:00) Fiji, Kamchatka Peninsula, Marshall Islands |
| Pacific/Tongatapu  | (GMT+13:00) Nukualofa                                   |