



## REFERENCE GUIDE

**Cisco Small Business**

**PVC300 Network Camera Exported CGI Com-  
mands**

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# About This Document

This document describes Common Gateway Interface (CGI) commands that are used in the PVC300 camera software. The CGI commands are documented for advanced users who want to integrate camera controls into complex software solutions. Such solutions could include third party web sites designed for security or home monitoring.

## CGI Command Style

- Enter all CGI commands in lowercase.
- In CGI Commands, angle brackets indicate information that you need to provide.
  - Example: <IP> means enter your IP address.
- In CGI Responses, angle brackets can indicate formatting.
  - Example: <cr> means “new line.”
- In CGI Responses, angle brackets can indicate data returned.
  - Example: <SPD DATA> means “SPD data returned.”
- In CGI Responses, square brackets indicate one or more choices that can be returned.
  - Example: [onloff] means either on or off will be returned.

# PVC300 CGI Commands

## Security Level

The get/set commands described in this guide require the user to have certain permissions. to access all command levels. The following table describes the security levels referenced in this guide:

| Security Level | Sub-Directory   | Description  |
|----------------|---|--|
| 0              | anonymous   | Unprotected  |
| 1 [view]       | anonymous, viewer, direct in/direct out (dido), camera control (camctr)                 | The view level of access allows you to view, listen, and give commands to the camera. It also allows you to control the direct input and output of the camera. |
| 4 [operator]   | anonymous, viewer, direct in/direct out (dido), camera control (camctr), operator       | The operator level of access allows you to modify most of camera's parameters except some privilege and network options.                                       |
| 6 [admin]      | anonymous viewer, direct in/direct out (dido), camera control (camctr), operator, admin | The admin level of access allows you to fully control the camera's operation.  |
| 7              | n/a   | Internal parameters only. Cannot be changed by any external interface.   |

## GET Server Parameter Values

**Method:** GET/POST

**Description:** Use this command to retrieve information from the camera. The `<parameter>` should be `<group>[_<name>]` or `<group>[.<name>]` If you do not specify any parameters, all the parameters on the server are returned. If you specify only `<group>`, the parameters of related group are returned.

When querying parameter values, the current parameter value are returned.

**URL:** `http://<servername>/cgi-bin/anonymous/getparam.cgi? [<parameter>] [&<parameter>...]`

`http://<servername>/cgi-bin/viewer/getparam.cgi? [<parameter>] [&<parameter>...]`

`http://<servername>/cgi-bin/operator/getparam.cgi? [<parameter>] [&<parameter>...]`

`http://<servername>/cgi-bin/admin/getparam.cgi? [<parameter>] [&<parameter>...]`

A successful control request returns parameter pairs as follows.

**Return:**

---

```
HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n
Context-Length: <length>\r\n
\r\n
<parameter pair>
```

---

Where `<parameter pair>` is

```
<parameter>=<value>\r\n
[<parameter pair>]
```

and

`<length>` is the actual length of content.



**Example:**

*Request:*

To request IP address:

```
http://192.168.0.123/cgi-bin/admin/  
getparam.cgi?network_ipaddress
```

*Response:*

---

```
HTTP/1.0 200 OK\r\n  
Content-Type: text/html\r\n  
Context-Length: 33\r\n  
\r\n  
network.ipaddress=192.168.0.123\r\n
```

---

## SET Server Parameter Values

**Method:** GET/POST

**Description:** Use this command to configure the camera.

**Note:** The access right depends on the URL directory.

**URL:** `http://<servername>/cgi-bin/anonymous/setparam.cgi?  
<parameter>=<value>[&<parameter>=<value>...] [&update=<value>] [  
&return=<return page>]`

`http://<servername>/cgi-bin/viewer/setparam.cgi?  
<parameter>=<value>[&<parameter>=<value>...] [&update=<value>]  
[&return=<return page>]`

`http://<servername>/cgi-bin/operator/setparam.cgi?  
<parameter>=<value>[&<parameter>=<value>...] [&update=<value>]  
[&return=<return page>]`

`http://<servername>/cgi-bin/admin/setparam.cgi?  
<parameter>=<value>[&<parameter>=<value>...] [&update=<value>]  
[&return=<return page>]`

:

| Parameter                                 | Value             | Description   |
|---|-------------------|---|
| <code>&lt;group&gt;[_&lt;name&gt;]</code> | value to assigned | Assign <code>&lt;value&gt;</code> to the parameter <code>&lt;group&gt;_&lt;name&gt;</code> .  |
| update                                    | <boolean>         | Set to 1 to update all fields (no need to use update parameter in each group).  |
| return                                    | <return page>     | Redirect to <code>&lt;return page&gt;</code> after the parameter is assigned. The <code>&lt;return page&gt;</code> can be a full URL path or relative path according the current path. If you omit this parameter, it redirects to an empty page.<br><br>Note: The return page should be a general HTML file (.htm, .html). It can not be a CGI command, or have any extra parameters. This parameter must be put at end of parameter list. |

**Return:**

---

```
HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n
Context-Length: <length>\r\n
\r\n
<parameter pair>
```

---

Where <parameter pair> is

```
<parameter>=<value>\r\n
[<parameter pair>]
```

Only the parameters that you set as readable are returned.

**Example:**

Set the IP address of server to 192.168.0.123

**Request:**

```
http://myserver/cgi-bin/admin/
setparam.cgi?network_ipaddress=192.168.0.123
```

**Response:**

---

```
HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n
Context-Length: 33\r\n
\r\n
network.ipaddress=192.168.0.123\r\n
```

---

## Allowable Parameters and Values on the Server

If an invalid value is used within a parameter, the system ignores the invalid value and the parameter is set using the original or default value.:

| Valid Values                               | Description  |
|--|--|
| string[<n>                                 | Text string shorter than “n” characters. The characters “’,<,>,& are invalid.                    |
| password[<n>]                              | The same as string but display “*” instead.  |
| integer                                    | Any number between (-231 – 1) and (231 – 1).   |
| positive integer                           | Any number between 0 and (232 – 1).  |
| <m> to <n>                                 | Any number between ‘m’ and ‘n’.  |
| domain name[<n>]                           | A string limited to contain a domain name shorter than “n” characters (eg. www.ibm.com).         |
| email address<br>[<n>                      | A string limited to contain a email address shorter than “n” characters (eg. joe@www.ibm.com).   |
| ip address                                 | A string limited to contain an ip address (eg. 192.168.1.1).                                     |
| mac address                                | A string limited to contain mac address without hyphen or colon connected.                       |
| boolean                                    | A boolean value can be 1 or 0 to represent [Yes or No], [True or False], or [Enable or Disable]. |
| <value1>,<br><value2>,<br><value3>,<br>... | Enumeration. Only given values are valid.  |
| blank                                      | A blank string.  |
| everything inside<br><>                    | As described.  |



**NOTE** While setting parameters, do not reboot your camera.

## Get/Set Parameters

The following are all the parameters that can be used when getting or setting camera commands.

### Group: system

| Name     | Value                                | Default               | Security (get/set) | Description  |
|----------|--------------------------------------|-----------------------|--------------------|--|
| hostname | string[40]                           | Cisco Internet camera | 1/6                | Set the host name of server (i.e., network camera, video server).  |
| ledoff   | <boolean>                            | 0                     | 6/6                | Set the camera LEDs. <ul style="list-style-type: none"> <li>0 — Turn on all LED indicators.</li> <li>1 — Turn off all LED indicators.</li> </ul>                                       |
| date     | <yyyy/mm/dd>, keep, auto             | <current date>        | 6/6                | Set the current date of the system. <ul style="list-style-type: none"> <li>keep — Keep date unchanged.</li> <li>auto — Use Network Time Protocol (NTP) to synchronize date.</li> </ul> |
| time     | <hh:mm:ss>, keep, auto               | <current time>        | 6/6                | Set the current time of the system. <ul style="list-style-type: none"> <li>keep — Keep time unchanged.</li> <li>auto — Use Network Time Protocol (NTP) to synchronize time.</li> </ul> |
| ntp      | <domain name>, <ip address>, <blank> | <blank>               | 6/6                | Set the Network Time Protocol (NTP) Server.  |

| Name          | Value       | Default | Security<br>(get/set) | Description  |
|---------------|-------------|---------|-----------------------|--|
| timezoneindex | -489 to 529 | 320     | 6/6                   | <p>Indicate the time zone and area for the camera:</p> <ul style="list-style-type: none"> <li>-480 (GMT-12:00) International Date Line West</li> <li>-440 (GMT-11:00) Midway Island, Samoa</li> <li>-400 (GMT-10:00) Hawaii</li> <li>-360 (GMT-09:00) Alaska</li> <li>-321 (GMT-08:00) Tijuana, Baja California</li> <li>-320 (GMT-08:00) Pacific Time (US and Canada)</li> <li>-282 (GMT-07:00) Mountain Time (US and Canada)</li> <li>-281 (GMT-07:00) Chihuahua, La Paz, Mazatlan</li> <li>-280 (GMT-07:00) Arizona</li> <li>-243 (GMT-06:00) Saskatchewan</li> <li>-242 (GMT-06:00) Guadalajara, Mexico City, Monterrey</li> <li>-241 (GMT-06:00) Central Time (US and Canada)</li> <li>-240 (GMT-06:00) Central America</li> <li>-202 (GMT-05:00) Indiana (East)</li> <li>-201 (GMT-05:00) Eastern Time (US and Canada)</li> <li>-200 (GMT-05:00) Bogota, Lima, Quito, Rio Branco</li> <li>-180 (GMT-04:30) Caracas</li> <li>-163 (GMT-04:00) Santiago</li> </ul> |

| Name          | Value       | Default | Security<br>(get/set) | Description   |
|---------------|-------------|---------|-----------------------|---|
| timezoneindex | -489 to 529 | 320     | 6/6                   | -162 (GMT-04:00) Manaus<br>-161 (GMT-04:00) La Paz<br>-160 (GMT-04:00) Atlantic Time (Canada)<br>-140 (GMT-03:30) Newfoundland<br>-123 (GMT-03:00) Montevideo<br>-122 (GMT-03:00) Greenland<br>-121 (GMT-03:00) Buenos Aires, Georgetown<br>-120 (GMT-03:00) Brasilia<br>-80 (GMT-02:00) Mid-Atlantic<br>-41 (GMT-01:00) Cape Verde Is.<br>-40 (GMT-01:00) Azores<br>0 (GMT) Casablanca, Monrovia, Reykjavik<br>1 (GMT) Greenwich Mean Time : Dublin,<br>Edinburgh, Lisbon, London<br>40 (GMT+01:00) Amsterdam, Berlin, Bern,<br>Rome, Stockholm, Vienna<br>41 (GMT+01:00) Belgrade, Bratislava,<br>Budapest, Ljubljana, Prague<br>42 (GMT+01:00) Brussels, Copenhagen,<br>Madrid, Paris<br>43 (GMT+01:00) Sarajevo, Skopje, Warsaw,<br>Zagreb<br>44 (GMT+01:00) West Central Africa<br>80 (GMT+02:00) Amman<br>81 (GMT+02:00) Athens, Bucharest, Istanbul<br>82 (GMT+02:00) Beirut<br>83 (GMT+02:00) Cairo |

| Name          | Value       | Default | Security<br>(get/set) | Description   |
|---------------|-------------|---------|-----------------------|---|
| timezoneindex | -489 to 529 | 320     | 6/6                   | 84 (GMT+02:00) Harare, Pretoria<br>85 (GMT+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius<br>86 (GMT+02:00) Jerusalem<br>87 (GMT+02:00) Minsk<br>88 (GMT+02:00) Windhoek<br>120 (GMT+03:00) Baghdad<br>121 (GMT+03:00) Kuwait, Riyadh<br>122 (GMT+03:00) Moscow, St. Petersburg, Volgograd<br>123 (GMT+03:00) Nairobi<br>124 (GMT+03:00) Tbilisi<br>140 (GMT+03:30) Tehran<br>160 (GMT+04:00) Abu Dhabi, Muscat<br>161 (GMT+04:00) Baku<br>162 (GMT+04:00) Yerevan<br>180 (GMT+04:30) Kabul<br>200 (GMT+05:00) Ekaterinburg<br>201 (GMT+05:00) Islamabad, Karachi, Tashkent<br>220 (GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi<br>221 (GMT+05:30) Sri Jayawardenepura<br>230 (GMT+05:45) Kathmandu<br>240 (GMT+06:00) Almaty, Novosibirsk<br>241 (GMT+06:00) Astana, Dhaka<br>260 (GMT+06:30) Yangon (Rangoon)<br>280 (GMT+07:00) Bangkok, Hanoi, Jakarta |



| Name                   | Value       | Default | Security<br>(get/set) | Description  |
|------------------------|-------------|---------|-----------------------|--|
| timezoneindex          | -489 to 529 | 320     | 6/6                   | 281 (GMT+07:00) Krasnoyarsk<br>320 (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi<br>321 (GMT+08:00) Irkutsk, Ulaan Bataar<br>322 (GMT+08:00) Kuala Lumpur, Singapore<br>323 (GMT+08:00) Perth<br>324 (GMT+08:00) Taipei<br>360 (GMT+09:00) Osaka, Sapporo, Tokyo<br>361 (GMT+09:00) Seoul<br>362 (GMT+09:00) Yakutsk<br>380 (GMT+09:30) Adelaide<br>381 (GMT+09:30) Darwin<br>400 (GMT+10:00) Brisbane<br>401 (GMT+10:00) Canberra, Melbourne, Sydney<br>402 (GMT+10:00) Guam, Port Moresby<br>403 (GMT+10:00) Hobart<br>404 (GMT+10:00) Vladivostok<br>440 (GMT+11:00) Magadan, Solomon Is., New Caledonia<br>480 (GMT+12:00) Auckland, Wellington<br>481 (GMT+12:00) Fiji, Kamchatka, Marshall Is.<br>520 (GMT+13:00) Nuku'alofa |
| daylight_enable        | <boolean>   | 0       | 6/6                   | Enable automatic daylight saving to your time zone.  |
| daylight_dstactualmode | <boolean>   | 0       | 6/7                   | Check if current time is using daylight saving time.   |

| Name             | Value                           | Default | Security (get/set) | Description   |
|------------------|---------------------------------|---------|--------------------|---|
| updateinterval   | 0, 3600, 86400, 604800, 2592000 | 0       | 6/6                | Set the interval (in seconds) between Network Time Protocol (NTP) automatic updates. <ul style="list-style-type: none"> <li>0 — Disable automatic time adjustment.</li> <li>All other options — The interval (in seconds) between NTP automatic updates.</li> </ul> |
| restore          | 0, <positive integer>           | n/a     | 7/6                | Restore the system parameters to default value after <value> seconds.   |
| reset            | 0, <positive integer>           | n/a     | 7/6                | Restart the server after <value> seconds.   |
| restoreexceptnet | <Any value>                     | N/A     | 7/6                | Restore the system parameters to their default values except the following parameters: <code>ipaddress</code> , <code>subnet</code> , <code>router</code> , <code>dns1</code> , <code>dns2</code> , <code>pppoe</code> .  |
| restoreexceptdst | <Any value>                     | N/A     | 7/6                | Restore the system parameters to their default values, except all daylight saving time settings.  |

### Subgroup of System: info

The fields in this group can not be changed.

| Name               | Value         | Default                    | Security (get/set) | Description  |
|--------------------|---------------|----------------------------|--------------------|--|
| extendedmodel name | string[40]    | PVC300                     | 0/7                | Get the specific model name.   |
| serialnumber       | <mac address> | <product mac address>      | 0/7                | Get the camera's 12-character MAC address (no hyphens).  |
| firmwareversion    | string[40]    | <product firmware version> | 0/7                | Get the version of firmware, including model, company, and version number in the format <MODEL-BRAND-VERSION>. |

| Name                    | Value      | Default                       | Security (get/set) | Description  |
|-------------------------|------------|-------------------------------|--------------------|--|
| language_count          | <integer>  | 9                             | 0/7                | Get the number of webpage languages available on the server. |
| language_i<0~(count-1)> | string[16] | <product supported languages> | 0/7                | Get the camera's available language lists.                   |

### Group: status

| Name                | Value     | Default | Security (get/set) | Description   |
|---------------------|-----------|---------|--------------------|---|
| di_i<0~(ndi-1)>     | <boolean> | 0       | 1/7                | Returns current status of digital input. <ul style="list-style-type: none"> <li>0 — Inactive, normal.</li> <li>1 — Active, triggered.</li> </ul>  |
| do_i<0~ndi-1)>      | <boolean> | 0       | 1/7                | Returns current status of digital output. <ul style="list-style-type: none"> <li>0 — Inactive, normal.</li> <li>1 — Active, triggered.</li> </ul> |
| onlinenum_rtsp      | integer   | 0       | 6/7                | Get the current RTSP connection numbers.  |
| onlinenum_http push | integer   | 0       | 6/7                | Get the current HTTP push server connection numbers.  |

### Group: di\_i<0~(ndi-1)>

| Name        | Value     | Default | Security (get/set) | Description   |
|-------------|-----------|---------|--------------------|---|
| normalstate | high, low | high    | 1/1                | Enable the open circuit or the closed circuit to represent inactive status. |

**Group: do\_i<0~(ndo-1)>**

| Name        | Value          | Default | Security (get/set) | Description   |
|-------------|----------------|---------|--------------------|---|
| normalstate | open, grounded | open    | 1/1                | Enable the open circuit or the closed circuit to represent inactive status. |

**Group: security**

| Name                   | Value                   | Default | Security (get/set) | Description  |
|------------------------|-------------------------|---------|--------------------|--|
| user_i0_name           | string[64]              | root    | 6/7                | Get the user's name of root.   |
| user_i<1~20>_name      | string[64]              | <blank> | 6/7                | Get the user's name.   |
| user_i0_pass           | password[64]            | <blank> | 6/6                | Get the root password to verify it has been set. Password returned is encrypted. |
| user_i<1~20>_pass      | password[64]            | <blank> | 7/6                | Get your user password.  |
| user_i0_privilege      | viewer, operator, admin | admin   | 6/7                | Get the root privilege.  |
| user_i<1~20>_privilege | viewer, operator, admin | viewer  | 6/6                | Get the user's privilege.  |

## Group: network

| Name      | Value        | Default   | Security | Description  |
|-----------|--------------|---|----------|--|
| type      | lan, ppoe    | lan   | 6/6      | Set the network connection type.   |
| resetip   | <boolean>    | 1   | 6/6      | <p>Use to reset the IP Address.</p> <ul style="list-style-type: none"> <li>1 — Get IP Address, subnet, router, DNS 1, DNS 2 from DHCP server at next reboot.</li> <li>0 — Use preset <code>ipaddress</code>, <code>subnet</code>, <code>router</code>, <code>dns1</code>, and <code>dns2</code> values.</li> </ul> |
| ipaddress | <ip address> | Returns the IP address set by the DHCP server. If no DHCP server, the IP address returned is one provided by the setup wizard and will be in the following form:<br>169.256.X.X | 6/6      | Set the IP address of the server.  |
| subnet    | <ip address> | <blank>   | 6/6      | Set the subnet mask of the server.   |
| router    | <ip address> | <blank>   | 6/6      | Set the default gateway.   |
| dns1      | <ip address> | <blank>   | 6/6      | Set the primary DNS server.  |
| dns2      | <ip address> | <blank>   | 6/6      | Set the secondary DNS server.  |
| wins1     | <ip address> | <blank>   | 6/6      | Set the primary WINS server.   |
| wins2     | <ip address> | <blank>   | 6/6      | Set the secondary WINS server.   |

**Subgroup of network: ftp**

| Name | Value             | Default | Security | Description                    |
|------|-------------------|---------|----------|--------------------------------|
| port | 21, 1025 to 65535 | 21      | 6/6      | Set the local FTP server port. |

**Subgroup of network: http**

| Name          | Value             | Default     | Security | Description  |
|---------------|-------------------|-------------|----------|--|
| port          | 80, 1025 to 65535 | 80          | 6/6      | Set the HTTP port.   |
| alternateport | 1025 to 65535     | 8080        | 6/6      | Set the alternative HTTP port.   |
| authmode      | basic, digest     | basic       | 1/6      | Set the HTTP authentication mode.  |
| s0_accessname | string[32]        | video.mjpg  | 1/6      | Set the server push access name (i.e., backdoor.mjpg or frontdoor.jpg) for video stream 1. |
| s1_accessname | string[32]        | video2.mjpg | 1/6      | Set the server push access name (i.e., backdoor.mjpg or frontdoor.jpg) for video stream 2. |

**Subgroup of network: https**

| Name | Value              | Default | Security | Description          |
|------|--------------------|---------|----------|----------------------|
| port | 443, 1025 to 65535 | 443     | 6/6      | Set the HTTPSs port. |

## Subgroup of network: rtsp

| Name          | Value                  | Default   | Security (get/set) | Description   |
|---------------|------------------------|-----------|--------------------|---|
| port          | 554, 1025 to 65535     | 554       | 1/6                | Set the RTSP port.  |
| authmode      | disable, basic, digest | disable   | 1/6                | Set the RTSP authentication mode.   |
| s0_accessname | string[32]             | live.sdp  | 1/6                | Set the RTSP access name for stream 1.  |
| s1_accessname | string[32]             | live2.sdp | 1/6                | Set the RTSP access name for stream 2.  |
| s0_audiotrack | <integer>              | 0         | 6/6                | Set the current RTSP audio track for stream 1. <ul style="list-style-type: none"> <li>-1 — Mute the audio.</li> <li>0 — Disable audio mute</li> </ul> |
| s1_audiotrack | <integer>              | 0         | 6/6                | Set the current RTSP audio track for stream 2. <ul style="list-style-type: none"> <li>-1 — Mute the audio.</li> <li>0 — Disable audio mute</li> </ul> |

## Subgroup of rtsp\_s&lt;0~(n-1)&gt;: multicast, n is stream count

| Name            | Value         | Default  | Security (get/set) | Description                  |
|-----------------|---------------|--|--------------------|------------------------------|
| alwaysmulticast | <boolean>     | 0  | 4/4                | Enable always multicast      |
| ipaddress       | <ip address>  | For n=0,<br>239.128.1.99<br>For n=1,<br>239.128.1.100,<br>and so on. | 4/4                | Enable IP address multicast. |
| videoport       | 1025 to 65535 | 5560+n*2   | 4/4                | Enable video port multicast. |
| audioport       | 1025 to 65535 | 5562+n*2   | 4/4                | Enable audio port multicast. |

| Name | Value    | Default | Security (get/set) | Description   |
|------|----------|---------|--------------------|---|
| ttl  | 1 to 255 | 15 hops | 4/4                | Set the multicast time to live (TTL) value in number of hops. |

### Subgroup of network: sip

| Name   | Value                | Default | Security (get/set) | Description  |
|--------|----------------------|---------|--------------------|--|
| port   | 554, 1025 to 65535   | 554     | 6/6                | Set the SIP port.  |
| switch | listen, talk, twoway | twoway  | 6/6                | Set audio mode to listen, talk, or two-way. Used on the webpage for video plugin reading only. |

### Subgroup of network: rtp

| Name      | Value         | Default | Security (get/set) | Description                                  |
|-----------|---------------|---------|--------------------|--|
| videoport | 1025 to 65535 | 5556    | 6/6                | Set the camera's video channel port for RTP. |
| audioport | 1025 to 65535 | 5558    | 6/6                | Set the camera's audio channel port for RTP. |

### Subgroup of network: pppoe

| Name     | Value        | Default | Security (get/set) | Description                                 |
|----------|--------------|---------|--------------------|---|
| user     | string[128]  | <blank> | 6/6                | Set the PPPoE account user name.            |
| pass     | password[64] | <blank> | 6/6                | Set the PPPoE account password.             |
| provider | string[40]   | <blank> | 6/6                | Text field for storing PPPoE provider name. |



**Subgroup of network: ipv6**

| Name           | Value       | Default | Security (get/set) | Description   |
|----------------|-------------|---------|--------------------|---|
| enable         | boolean     | 0       | 6/6                | Enable IPv6.<br><ul style="list-style-type: none"> <li>▪ 1 — Enable</li> <li>▪ 0 — Disable</li> </ul> |
| addonipaddress | string[128] | <blank> | 6/6                | Set an optional IPV6 address.   |
| addonprefixlen | string[128] | <blank> | 6/6                | Set an optional IPV6 prefix.  |
| addonrouter    | string[128] | <blank> | 6/6                | Set an optional IPV6 router.  |
| addondns       | string[128] | <blank> | 6/6                | Set an optional IPV6 DDNS server.   |

**Group: netfilter**

| Name   | Value       | Default | Security (get/set) | Description  |
|--------|-------------|---------|--------------------|--|
| enable | boolean     | 0       | 6/6                | Enable Netfiltering. Defines the allowed or denied IP address (or range) access to the camera<br><ul style="list-style-type: none"> <li>▪ 1 — Enable</li> <li>▪ 0 — Disable</li> </ul> |
| Policy | allow, deny | deny    | 6/6                | Allow/deny IP from following rules.  |

**Subgroup of netfilter: admin**

| Name   | Value        | Default | Security (get/set) | Description  |
|--------|--------------|---------|--------------------|--|
| enable | boolean      | 0       | 6/6                | Enable Admin IP Address. <ul style="list-style-type: none"> <li>1 — Enable Admin IP</li> <li>0 — Disable Admin IP</li> </ul> |
| ip     | <ip address> | <blank> | 6/6                | Admin IP address   |

**Subgroup of netfilter: ipv4**

| Name    | Value        | Default | Security (get/set) | Description                 |
|---------|--------------|---------|--------------------|-----------------------------|
| <i0~i9> | <ip address> | <blank> | 6/6                | IP address for filtering IP |

**Subgroup of netfilter: ipv6**

| Name    | Value        | Default | Security (get/set) | Description                 |
|---------|--------------|---------|--------------------|-----------------------------|
| <i0~i9> | <ip address> | <blank> | 6/6                | IP address for filtering IP |

**Group: ipfilter**

| Name               | Value                      | Default  | Security (get/set) | Description  |
|--------------------|----------------------------|--|--------------------|--|
| allow_i<0-9>_start | 1.0.0.0 to 255.255.255.255 | allow_0_start — 1.0.0.0<br>allow_<1-9>_start — <blank> | 6/6                | Set the allowed starting IP address for RTSP connection. |

| Name              | Value                      | Default   | Security (get/set) | Description   |
|-------------------|----------------------------|---|--------------------|---|
| allow_i<0-9>_end  | 1.0.0.0 to 255.255.255.255 | allow_0_end — 255.255.255.255<br>5<br>allow_<1-9>_end — <blank> | 6/6                | Set the allowed ending IP address for RTSP connection.  |
| deny_i<0~9>_start | 1.0.0.0 to 255.255.255.255 | <blank>   | 6/6                | Set the denied starting IP address for RTSP connection. |
| deny_i<0~9>_end   | 1.0.0.0 to 255.255.255.255 | <blank>   | 6/6                | Set the denied ending IP address for RTSP connection.   |

### Group: videoin

| Name     | Value  | Default | Security (get/set) | Description                                 |
|----------|--------|---------|--------------------|---|
| cmosfreq | 50, 60 | 60      | 4/4                | Set the CMOS frequency.<br>(videoin.type=2) |

### Group: videoin\_c<0-(n-1)> for n channel products, m is stream number

| Name   | Value     | Default | Security (get/set) | Description  |
|--------|-----------|---------|--------------------|--|
| color  | 0, 1      | 1       | 4/4                | Sets the color of the video. <ul style="list-style-type: none"> <li>0 — monochrome</li> <li>1 — color</li> </ul> |
| flip   | <boolean> | 0       | 4/4                | Flips the image in the video.  |
| mirror | <boolean> | 0       | 4/4                | Mirrors the image in the video.  |

| Name                 | Value              | Default   | Security (get/set) | Description   |
|----------------------|--------------------|-----------|--------------------|---|
| ptzstatus            | <integer>          | 31        | 1/7                | <p>Sets the PTZ status. PTZ status is a 32-bit integer with each bit set separately as follows:</p> <ul style="list-style-type: none"> <li>Bit 0 — Support camera control function 0 (not support), 1 (support).</li> <li>Bit 1 — Build-in or external camera. 0 (external), 1 (build-in).</li> <li>Bit 2 — Support pan operation. 0 (not supported), 1 (supported).</li> <li>Bit 3 — Support tilt operation. 0 (not supported), 1 (supported).</li> <li>Bit 4 — Support zoom operation. 0 (not supported), 1 (supported).</li> <li>Bit 5 — Support focus operation. 0 (not supported), 1 (supported).</li> </ul> |
| text                 | string[16]         | <blank>   | 1/4                | Place the enclosed caption on the video.  |
| imprinttime stamp    | <boolean>          | 0         | 4/4                | Overlay time stamp on video.  |
| maxexposure          | 1 to 120           | 5         | 4/4                | <p>Changes the maximum exposure time of the video. Setting the exposure time to a shorter value creates a sharper image. Setting the exposure time longer creates a better image under low light conditions.</p> <ul style="list-style-type: none"> <li>120 — 1/120s</li> <li>60 — 1/60</li> <li>5 — 1/5s</li> </ul>  |
| options              | quality, framerate | framerate | 4/4                | Choose which to customize first: the video quality or the video frame rate.   |
| s<0-(m-1)>_codectype | mpeg4, mjpeg       | mpeg4     | 4/4                | Set the video codec type.   |

| Name                                 | Value   | Default           | Security (get/set) | Description   |
|--------------------------------------|---|-------------------|--------------------|---|
| s<0~(m-1)>_resolution                | VGA CMOS —<br>176x144,<br>160x120,<br>320x240,<br>640x480 | CMOS —<br>640x480 | 4/4                | Set the video resolution in pixels.   |
| s<0~(m-1)>_mpeg4_intra<br>period     | 250, 500, 1000,<br>2000, 3000,<br>4000                    | 1000              | 4/4                | Set the period between frames, in milliseconds. A larger time in ms provides less frame drops, but provides fewer details.  |
| s<0~(m-1)>_mpeg4_rate<br>controlmode | cbr, vbr  | vbr               | 4/4                | Set the video quality bit rate: <ul style="list-style-type: none"> <li>■ cbr — constant bit rate. Values are 20k bites to 4 MB per second.</li> <li>■ vbr — variable bit rate. The bit rate changes to give the best video quality depending on bandwidth. Values are: medium, standard, good, detailed, or excellent.</li> </ul> |
| s<0~(m-1)>_mpeg4_quality             | 1 to 5  | 3                 | 4/4                | Set the quality of video when choosing the <code>vbr</code> setting in the <code>ratecontrolmode</code> parameter. <ul style="list-style-type: none"> <li>■ 1 is lowest quality</li> <li>■ 5 is the highest quality.</li> </ul>   |

| Name                      | Value  | Default   | Security (get/set) | Description   |
|---------------------------|--|---|--------------------|---|
| s<0~(m-1)>_mpeg4_bitrate  | <ul style="list-style-type: none"> <li>▪ 20000</li> <li>▪ 30000</li> <li>▪ 40000</li> <li>▪ 50000</li> <li>▪ 64000</li> <li>▪ 128000</li> <li>▪ 256000</li> <li>▪ 512000</li> <li>▪ 768000</li> <li>▪ 1000000</li> <li>▪ 1500000</li> <li>▪ 2000000</li> <li>▪ 3000000</li> <li>▪ 4000000</li> </ul> | 51200   | 4/4                | Set the bit rate in BPS if you picked the <code>cbr</code> value in the <code>ratecontrolmode</code> parameter. |
| s<0~(m-1)>_mpeg4_maxframe | 1, 2, 3, 5, 10, 15, 20, 25, 30 (only for NTSC or 60 Hz CMOS)   | 25 — PAL CCD or 50Hz CMOS<br>30 — NTSC CCD or 60Hz CMOS | 4/4                | Set the maximum frame rate in FPS for MPEG-4.   |
| s<0~(m-1)>_mjpeg_quality  | 1 to 5   | 3   | 4/4                | Set the quality of the returned JPEG video. 1 is lowest quality and 5 is the highest quality.                   |
| s<0~(m-1)>_mjpeg_maxframe | 1, 2, 3, 5, 10, 15, 20, 25, 30 (only for NTSC or 60 Hz CMOS)   | 25 — PAL CCD or 50Hz CMOS<br>30 — NTSC CCD or 60Hz CMOS | 4/4                | Set the maximum frame rate in FPS (for JPEG).   |

**Group: audioin\_c<0-(n-1)> for n channel products**

| Name                    | Value  | Default | Security (get/set) | Description   |
|-------------------------|--|---------|--------------------|---|
| source                  | micin, linein                                    | linein  | 4/4                | Set the audio in source: <ul style="list-style-type: none"> <li>micin — use external microphone input.</li> <li>linein — use line input.</li> </ul> |
| mute                    | 0, 1   | 0       | 4/4                | Enable audio mute.  |
| gain                    | 0 to 31  | 0       | 4/4                | Set the gain of input.  |
| boostmic                | 0, 1   | 0       | 4/4                | Enable microphone boost.  |
| s<0~(m-1)>_codectype    | aac4, gamr                                       | gamr    | 4/4                | Set the audio codec type for input.   |
| s<0~(m-1)>_aac4_bitrate | 16000, 32000, 48000, 64000, 96000, 128000        | 128000  | 4/4                | Set the Advanced Audio Codec (AAC4) bit rate in bps.  |
| s<0~(m-1)>_gamr_bitrate | 4750, 5150, 5900, 6700, 7400, 7950, 10200, 12200 | 12200   | 4/4                | Set the Adaptive Multirate (AMR) codec bit rate in bps.   |

**Group: image\_c<0~(n-1)> for n channel products**

| Name       | Value   | Default | Security (get/set) | Description  |
|------------|---------|---------|--------------------|--|
| brightness | -5 to 5 | 0       | 4/4                | Adjust the brightness of the video image according to mode settings. |
| saturation | -5 to 5 | 0       | 4/4                | Adjust the saturation of the video image according to mode settings. |
| contrast   | -5 to 5 | 0       | 4/4                | Adjust the contrast of the video image according to mode settings.   |

**Group: imagepreview\_c<0~(n-1)> for n channel products**

| Name         | Value   | Default | Security (get/set) | Description  |
|--------------|---------|---------|--------------------|--|
| brightness   | -5 to 5 | 0       | 4/4                | Preview of adjusting brightness of the video image according to mode settings. |
| saturation   | -5 to 5 | 0       | 4/4                | Preview of adjusting saturation of the video image according to mode settings. |
| contrast     | -5 to 5 | 0       | 4/4                | Preview of adjusting contrast of the video image according to mode settings.   |
| hue          | -5 to 5 | 0       | 4/4                | Preview of adjusting color hue.  |
| enablebc     | -5 to 5 | 0       | 4/4                | Preview of adjusting backlight compensation.                                   |
| whitebalance | -5 to 5 | 0       | 4/4                | Preview of adjusting white balance.  |
| restoreatwb  | -5 to 5 | 0       | 4/4                | Indication of restore auto whitebalance.                                       |

**Group: motion\_c<0~(n-1)> for n channel product**

| Name              | Value      | Default | Security (get/set) | Description   |
|-------------------|------------|---------|--------------------|---|
| enable            | < boolean> | 0       | 4/4                | Enable motion detection.  |
| win_i<0~2>_enable | < boolean> | 0       | 4/4                | Enable motion window (1 to 3).  |
| win_i<0~2>_name   | string[14] | <blank> | 4/4                | Set the name of motion window (1 to 3).   |
| win_i<0~2>_left   | 0 to 320   | 0       | 4/4                | Set the left coordinate of the window position, where 0 is at the far left of the window and 320 is at the far right of the window. |



| Name                   | Value    | Default | Security (get/set) | Description   |
|------------------------|----------|---------|--------------------|---|
| win_i<0~2>_top         | 0 to 240 | 0       | 4/4                | Set the top coordinate of the window position, where 0 is at the top, and 240 is at the bottom of the window. |
| win_i<0~2>_width       | 0 to 320 | 0       | 4/4                | Set the width of the motion detection window.   |
| win_i<0~2>_height      | 0 to 240 | 0       | 4/4                | Set the height of the motion detection window.  |
| win_i<0~2>_objsize     | 0 to 100 | 0       | 4/4                | Set the size of the motion detection window as a percentage of the total screen size.                         |
| win_i<0~2>_sensitivity | 0 to 100 | 0       | 4/4                | Set the sensitivity of the motion detection window, where 0 is the least sensitive.                           |

## Group: ddns

| Name                     | Value   | Default       | Security (get/set) | Description  |
|--------------------------|---|---------------|--------------------|--|
| enable                   | <boolean>   | 0             | 6/6                | Enable or disable dynamic DNS.   |
| provider                 | CN993322,<br>Safe100,<br>DyndnsDynamic,<br>DyndnsCustom,<br>TZO, DHS,<br>DynInterfree,<br>CustomSafe100 | DyndnsDynamic | 6/6                | Set the DDNS provider. <ul style="list-style-type: none"> <li>■ CN993322 — 332 DDNS</li> <li>■ Safe100 — safe100.net</li> <li>■ DyndnsDynamic — dyndns.org (dynamic)</li> <li>■ DyndnsCustom — dyndns.org (custom)</li> <li>■ TZO — tzo.com</li> <li>■ DHS — dhs.org</li> <li>■ DynInterfree — dyn-interfree.it</li> <li>■ CustomSafe100 — Custom server using safe100 method</li> </ul> |
| <provider>_hostname      | string[128]   | <blank>       | 6/6                | Set your dynamic hostname.   |
| <provider>_usernameemail | string[64]  | <blank>       | 6/6                | Set your username or email address, as required to log into the DDNS service provider.   |
| <provider>_passwordkey   | string[64]  | <blank>       | 6/6                | Set your password or key, as required to log into the DDNS service provider.   |
| <provider>_servername    | string[128]   | <blank>       | 6/6                | Set the server name for safe100.<br>(This field only exists if your provider is CustomSafe100.)  |

**Subgroup of ddns: CN993322**

| Name          | Value       | Default | Security (get/set) | Description   |
|---------------|-------------|---------|--------------------|---|
| hostname      | string[128] | <blank> | 6/6                | Set your dynamic hostname.  |
| usernameemail | string[64]  | <blank> | 6/6                | Set your username or email name, as required to login to the DDNS service provider. |
| passwordkey   | string[64]  | <blank> | 6/6                | Set your password or key, as required to login to the DDNS service provider.        |

**Group: upnppresentation**

| Name   | Value     | Default | Security (get/set) | Description  |
|--------|-----------|---------|--------------------|--|
| enable | <boolean> | 1       | 6/6                | Enable or disable the UPNP presentation service, which displays icons in Microsoft Windows network neighborhood. |

**Group: upnpportforwarding**

| Name          | Value     | Default | Security (get/set) | Description   |
|---------------|-----------|---------|--------------------|---|
| enable        | <boolean> | 0       | 6/6                | Enable or disable the UPNP port forwarding service to set port forwarding automatically.  |
| upnpnatstatus | 0 to 3    | 0       | 6/7                | Get the status of UPNP port forwarding. Used locally to open your NAT status to other devices. <ul style="list-style-type: none"> <li>0 — OK</li> <li>1 — FAIL</li> <li>2 — no IGD router</li> <li>3 — no need to do port forwarding</li> </ul> |

**Group: syslog**

| Name            | Value                 | Default | Security (get/set) | Description                           |
|-----------------|-----------------------|---------|--------------------|---------------------------------------|
| enableremotelog | <boolean>             | 0       | 6/6                | Enable remote logging.                |
| serverip        | <IP address>          | <blank> | 6/6                | Set the log server IP address.        |
| serverport      | 514,<br>1025 to 65535 | 514     | 6/6                | Set the server port used for logging. |

| Name  | Value  | Default | Security (get/set) | Description   |
|-------|--------|---------|--------------------|---|
| level | 0 to 7 | 6       | 6/6                | <p>Set the levels to distinguish the importance of information.</p> <ul style="list-style-type: none"> <li>0 — LOG_EMERG</li> <li>1 — LOG_ALERT</li> <li>2 — LOG_CRIT</li> <li>3 — LOG_ERR</li> <li>4 — LOG_WARNING</li> <li>5 — LOG_NOTICE</li> <li>6 — LOG_INFO</li> <li>7 — LOG_DEBUG</li> </ul> |

### Group: camctrl\_c<0~(n-1)> for n channel product

| Name      | Value         | Default | Security (get/set) | Description  |
|-----------|---------------|---------|--------------------|--|
| panspeed  | -5 to 5       | 0       | 1/4                | Set the pan speed.   |
| tiltspeed | -5 to 5       | 0       | 1/4                | Set the tilt speed.  |
| zoomspeed | -5 to 5       | 0       | 1/4                | Set the zoom speed.  |
| autospeed | 1 to 5        | 0       | 1/4                | Set the auto pan speed.  |
| dwelling  | 0 to 9999     | 0       | 1/4                | Set how long to pause at a certain point when using patrol.  |
| axisx     | -8250 to 8250 | 0       | 1/4                | Set the axis X coordinate to define the home position of the camera. The default home position is 0,0,0. |
| axisy     | -560 to 1664  | 0       | 1/4                | Set the axis Y coordinate to define the home position of the camera. The default home position is 0,0,0. |

| Name                | Value         | Default | Security (get/set) | Description  |
|---------------------|---------------|---------|--------------------|--|
| axisz               | 0 to 780      | 0       | 1/4                | Set the axis Z coordinate to define the home position of the camera. The default home position is 0,0,0.   |
| defaulthome         | 0,1           | 1       | 1/4                | Set the home location when patrolling: <ul style="list-style-type: none"> <li>0 — User defined home location.</li> <li>1 — Default home location.</li> </ul> |
| preset_i<0~19>_name | string[40]    | <blank> | 1/4                | Set the name of preset location.   |
| preset_i<0~19>_pan  | -8250 to 8250 | <blank> | 1/4                | Set the axis x coordinate of each preset location.   |
| preset_i<0~19>_tilt | -560 to 1664  | <blank> | 1/4                | Set the axis y coordinate of each preset location.   |
| preset_i<0~19>_zoom | 0 to 780      | <blank> | 1/4                | Set the axis z coordinate of each preset location.   |
| partol_i<0~39>_name | string[40]    | <blank> | 1/4                | Set the dwelling time of each preset location.   |

### Group: capability

| Name       | Value                 | Default    | Security (get/set) | Description                                     |
|------------|-----------------------|------------|--------------------|---|
| bootuptime | <positive integer>    | 60 seconds | 0/7                | Get the static server bootup time.              |
| nir        | 0, <positive integer> | 0          | 0/7                | Get the number of IR interfaces.                |
| ndi        | 0, <positive integer> | 1          | 0/7                | Get the number of digital inputs on the camera. |

| Name          | Value                 | Default   | Security (get/set) | Description   |
|---------------|-----------------------|---|--------------------|---|
| ndo           | 0, <positive integer> | 1   | 0/7                | Get the number of digital outputs on the camera.  |
| naudioin      | 0, <positive integer> | 1   | 0/7                | Get the number of audio inputs.   |
| naudioout     | 0, <positive integer> | 1   | 0/7                | Get the number of audio outputs.  |
| nvideoin      | <positive integer>    | 1   | 0/7                | Get the number of video inputs.   |
| nmediastream  | <positive integer>    | 2   | 0/7                | Get the number of media streams per channel.  |
| nvideosetting | <positive integer>    | 2   | 0/7                | Get the number of video settings per channel.   |
| naudiosetting | <positive integer>    | 1   | 0/7                | Get the number of audio settings per channel.   |
| ptzenabled    | < positive integer >  | 31 — Support camctrl.<br>Camera support of pan, tilt, and zoom.<br>Bit: 0001 1111 | 0/7                | <p>Responds if PTZ is enabled. Each 32-bit integer is set separately as follows:</p> <ul style="list-style-type: none"> <li>Bit 0 — Support camera control function 0 (not support), 1 (support).</li> <li>Bit 1 — Build-in or external camera. 0 (external), 1 (build-in).</li> <li>Bit 2 — Support pan operation. 0 (not supported), 1 (supported).</li> <li>Bit 3 — Support tilt operation. 0 (not supported), 1 (supported).</li> <li>Bit 4 — Support zoom operation. 0 (not supported), 1 (supported).</li> <li>Bit 5 — Support focus operation. 0 (not supported), 1 (supported).</li> <li>Bit 6 — Support iris operation. 0 (not supported), 1 (supported).</li> <li>Bit 7 — External or build-in PT. 0 (build-in), 1 (external).</li> </ul> |

| Name                               | Value   | Default                               | Security (get/set) | Description  |
|------------------------------------|---|---------------------------------------|--------------------|--|
| protocol_https                     | < boolean >   | 1                                     | 0/7                | Indicates if HTTP over SSL is supported.   |
| protocol_rtsp                      | < boolean >   | 1                                     | 0/7                | Indicates if RTSP is supported.  |
| protocol_sip                       | <boolean>   | 1                                     | 0/7                | Indicates if SIP is supported.   |
| protocol_maxconnection             | <positive integer>  | 10 simultaneous unicast users         | 0/7                | Indicates the maximum allowed simultaneous connections.  |
| protocol_rtp_multicast_scalable    | <boolean>   | 1                                     | 0/7                | Indicates if scalable multicast is supported.  |
| protocol_rtp_multicast_backchannel | <boolean>   | 0                                     | 0/7                | Indicates if backchannel multicast is supported.   |
| protocol_rtp_tcp                   | <boolean>   | 1                                     | 0/7                | Indicates if RTP over TCP is supported.  |
| protocol_rtp_http                  | <boolean>   | 1                                     | 0/7                | Indicates if RTP over HTTP is supported.   |
| protocol_spush_mjpeg               | <boolean>   | 1                                     | 0/7                | Indicates if push motion jpeg to stream MJPEG video is supported.  |
| protocol_snmp                      | <boolean>   | 0                                     | 0/7                | Indicates if SNMP is supported.  |
| videoin_type                       | 0, 1, 2   | 1                                     | 0/7                | Indicates the type of video. <ul style="list-style-type: none"> <li>0 — Interlaced CCD</li> <li>1 — Progressive CCD</li> <li>2 — CMOS</li> </ul> |
| videoin_resolution                 | a list of the available resolutions in a comma separated list | 176 x 144,<br>320 x 240,<br>640 x 480 | 0/7                | Shows the available resolutions list.  |



| Name               | Value   | Default         | Security (get/set) | Description   |
|--------------------|---|-----------------|--------------------|---|
| videoin_codec      | a list of the available codec types in a comma separated list | mpeg4, mjpeg    | 0/7                | Shows the available codec list.   |
| audio_aec          | <boolean>   | 0               | 0/7                | Indicates is acoustic echo cancellation is supported.   |
| audio_extmic       | <boolean>   | 1               | 0/7                | Indicates is external microphone input is supported.  |
| audio_linein       | <boolean>   | 1               | 0/7                | Indicates if external line input is supported.  |
| audio_lineout      | <boolean>   | 0               | 0/7                | Indicates if line output is supported.  |
| audio_headphoneout | <boolean>   | 1               | 0/7                | Indicates if a headphone output is supported.   |
| audioin_codec      | a list of the available codec types in a comma separated list | aac4, gamr      | 0/7                | Gets the available audio-in codec list.   |
| audioout_codec     | a list of the available codec types in a comma separated list | AAC and GSM-AMR | 0/7                | Gets the available audio-out codec list.  |
| network_wire       | <boolean>   | 1               | 0/7                | Indicates if Ethernet is supported.   |
| derivative_brand   | <boolean>   | 1               | 0/7                | Indicates if the upgrade function for the derivative brand is supported. For example, if the value is true, the VVTK product can be upgraded to VVXX. (TCVV<->TCXX is excepted) |
| npreset            | 20  | 20              | 0/7                | Number of supported preset positions.   |

## Group: event\_i&lt;0~2&gt;

| Parameter | Value                           | Default | Security (get/set) | Description  |
|-----------|---------------------------------|---------|--------------------|--|
| name      | string[40]                      | NULL    | 6/6                | Set the identification of this entry.  |
| enable    | 0, 1                            | 0       | 6/6                | Use to enable or disable this event.   |
| priority  | 0, 1, 2                         | 1       | 6/6                | Indicate the priority of this event. <ul style="list-style-type: none"> <li>0 — indicates low priority.</li> <li>1 — indicates normal priority.</li> <li>2 — indicates high priority.</li> </ul>   |
| delay     | 1 to 999                        | 10      | 6/6                | Set the delay (in seconds) before detecting the next event.  |
| trigger   | boot, di, motion, seq, visignal | boot    | 6/6                | Indicate your trigger condition. <ul style="list-style-type: none"> <li>boot — indicates system boot.</li> <li>di — indicates digital input.</li> <li>motion — indicates video motion detection. (See parameter <code>mdwin</code>).</li> <li>seq — indicates periodic condition.</li> <li>visignal — indicates video input signal loss</li> </ul> |
| di        | <integer>                       | 0       | 6/6                | Indicate which direct input was detected. <ul style="list-style-type: none"> <li>This field is required when trigger condition is “di”.</li> <li>One bit represents one digital input. The LSB indicates DI 0.</li> </ul>  |

| Parameter | Value     | Default | Security (get/set) | Description  |
|-----------|-----------|---------|--------------------|--|
| mdwin     | <integer> | 0       | 6/6                | <p>When the <code>trigger</code> parameter is set to <code>motion</code>, indicates the windows where motion was detected.</p> <p>One bit represents one window.</p> <p>The least significant bit (LSB) indicates the 1st window.</p> <p>For example, to detect the 1st and 3rd windows, set &lt;mdwin&gt; as 5 (0101).</p>  |
| inter     | 1 to 999  | 1       | 6/6                | <p>Set the interval of period snapshot in minutes.</p> <p>This field is used when trigger condition is "seq".</p>  |
| weekday   | <integer> | 127     | 6/6                | <p>Indicate which weekday is scheduled. One bit represents one weekday.</p> <ul style="list-style-type: none"> <li>Bit0 (LSB) indicates Saturday.</li> <li>Bit1 indicates Friday.</li> <li>Bit2 indicates Thursday.</li> <li>Bit3 indicates Wednesday.</li> <li>Bit4 indicates Tuesday.</li> <li>Bit5 indicates Monday.</li> <li>Bit6 indicates Sunday.</li> </ul> <p>For example, to detect events on Friday and Sunday, set weekday as 66.</p> <p>For example:</p> <p>Friday: 00000010 (bit 1)</p> <p>Sunday: 01000000 (bit 6)</p> <p>Logical OR on Friday and Sunday</p> <p>Result: 01000010 = 66</p> |
| begintime | hh:mm     | 00:00   | 6/6                | Set the begin time of weekly schedule.   |

| Parameter                       | Value              | Default | Security (get/set) | Description   |
|---------------------------------|--------------------|---------|--------------------|---|
| endtime                         | hh:mm              | 24:00   | 6/6                | Set the end time of weekly schedule.<br>Note: Use 00:00 - 24:00 to mean always. |
| action_do_i<0~(ndo-1)>_enable   | 0, 1               | 0       | 6/6                | Enable or disable trigger digital output.                                       |
| action_do_i<0~(ndo-1)>_duration | 1 to 999           | 1       | 6/6                | Set the duration of the digital output in seconds.                              |
| action_goto_enable              | 0,1                | 0       | 6/6                | Allows you to enable or disable event goto functions.                           |
| action_goto_name                | <positive integer> | NULL    | 6/6                | Set the selected name of preset positions.                                      |
| action_server_i<0 to 4>_enable  | 0, 1               | 0       | 6/6                | Enable or disable this server action.   |
| action_server_i<0 to 4>_media   | NULL, 0~4          | NULL    | 6/6                | Set the index of attached media.  |

### Group: server\_i<0~4>

| Parameter | Value                | Default | Security (get/set) | Description  |
|-----------|----------------------|---------|--------------------|--|
| name      | string[40]           | NULL    | 6/6                | Set the identification of this entry.  |
| type      | email, ftp, http, ns | email   | 6/6                | Indicate the server type. <ul style="list-style-type: none"> <li>email—Email server.</li> <li>ftp— FTP server.</li> <li>http—HTTP server.</li> <li>ns— Network storage.</li> </ul> |
| http_url  | string[128]          | http:// | 6/6                | Set the URL of the HTTP server to upload.  |

| Parameter             | Value                    | Default | Security (get/set) | Description   |
|-----------------------|--------------------------|---------|--------------------|---|
| http_username         | string[64]               | NULL    | 6/6                | Set the username to login in the server.  |
| http_passwd           | string[64]               | NULL    | 6/6                | Set the password of the user.   |
| ftp_address           | string[128]              | NULL    | 6/6                | Set the FTP server address.   |
| ftp_username          | string[64]               | NULL    | 6/6                | Set the username to login in the server.  |
| ftp_passwd            | string[64]               | NULL    | 6/6                | Set the password of the user.   |
| ftp_port              | 0 to 65535               | 21      | 6/6                | Set the port to connect the server.   |
| ftp_location          | string[128]              | NULL    | 6/6                | Set the location to upload or store the media.  |
| ftp_passive           | 0, 1                     | 1       | 6/6                | Enable or disable the passive mode. <ul style="list-style-type: none"> <li>0 is to disable the passive mode.</li> <li>1 is to enable the passive mode.</li> </ul> |
| email_address         | string[128]              | NULL    | 6/6                | Set the email server address  |
| email_username        | string[64]               | NULL    | 6/6                | Set the username to login in the server.  |
| email_passwd          | string[64]               | NULL    | 6/6                | Set the password of the user.   |
| email_sender email    | string[128]              | NULL    | 6/6                | Set the email address of sender.  |
| email_recipient email | string[128]              | NULL    | 6/6                | Set the email address of recipient.   |
| email_port            | digital [25, 1025-65535] | 25      | 6/6                | Set the custom email server port.   |
| ns_location           | string[128]              | NULL    | 6/6                | Set the location to upload or store the media.  |
| ns_username           | string[64]               | NULL    | 6/6                | Set the username to login in the server.  |
| ns_passwd             | string[64]               | NULL    | 6/6                | Set the password of the user.   |
| ns_workgroup          | string[64]               | NULL    | 6/6                | Set the workgroup for network storage.  |

**Group: media\_i<0~4>(media\_freespace is used internally.)**

| Parameter              | Value                                | Default  | Security (get/set) | Description  |
|------------------------|--------------------------------------|----------|--------------------|--|
| name                   | string[40]                           | NULL     | 6/6                | Set the identification of this entry.  |
| type                   | snapshot,<br>systemlog,<br>videoclip | snapshot | 6/6                | The media type to send to the server or store by the server.   |
| snapshot_source        | <integer>                            | 0        | 6/6                | Indicate the source of media stream. <ul style="list-style-type: none"> <li>0 — the first stream.</li> <li>1 — the second stream.</li> </ul>                           |
| snapshot_prefix        | string[16]                           | NULL     | 6/6                | Indicate the prefix of the filename.   |
| snapshot_date suffix   | 0, 1                                 | 0        | 6/6                | Add date and time suffix to filename. <ul style="list-style-type: none"> <li>1 — add date and time suffix.</li> <li>0 — do not to add date and time suffix.</li> </ul> |
| snapshot_pre event     | 0 to 7                               | 1        | 6/6                | Indicate the number of pre-event images.   |
| snapshot_post event    | 0 to 7                               | 1        | 6/6                | Indicate the number of post-event images.  |
| videoclip_source       | <integer>                            | 0        | 6/6                | Indicate the source of the media stream. <ul style="list-style-type: none"> <li>0 — the first stream.</li> <li>1 — the second stream.</li> </ul>                       |
| videoclip_prefix       | string[16]                           | NULL     | 6/6                | Indicate the prefix of the filename.   |
| videoclip_pre event    | 0 to 9                               | 0        | 6/6                | Indicate the time of the pre-event recording in seconds.   |
| videoclip_max duration | 1 to 10                              | 5        | 6/6                | Indicate the maximum duration of one video clip in seconds.  |
| videoclip_max size     | 50 to1500                            | 500      | 6/6                | Indicate the maximum size of one video clip file in Kbytes.  |

## Group: recording\_i&lt;0~1&gt;

| Parameter | Value      | Default | Security (get/set) | Description  |
|-----------|------------|---------|--------------------|--|
| name      | string[40] | NULL    | 6/6                | Indicate the identification of this entry.   |
| enable    | 0, 1       | 0       | 6/6                | Enable or disable this recording.  |
| priority  | 0, 1, 2    | 1       | 6/6                | Indicate the priority of this recording. <ul style="list-style-type: none"> <li>0 — indicates low priority.</li> <li>1 — indicates normal priority.</li> <li>2 — indicates high priority.</li> </ul>   |
| source    | <integer>  | 0       | 6/6                | Indicate the source of media stream. <ul style="list-style-type: none"> <li>0 — the first stream.</li> <li>1 — the second stream.</li> </ul>   |
| weekday   | <integer>  | 127     | 6/6                | Indicate which weekday is scheduled. <ul style="list-style-type: none"> <li>One bit represents one weekday.</li> <li>Bit0 (LSB) indicates Saturday.</li> <li>Bit1 indicates Friday.</li> <li>Bit2 indicates Thursday.</li> <li>Bit3 indicates Wednesday.</li> <li>Bit4 indicates Tuesday.</li> <li>Bit5 indicates Monday.</li> <li>Bit6 indicates Sunday.</li> </ul> <p>For example, to detect events on Friday and Sunday, set weekday as 66.</p> <p>For example:</p> <p>Friday: 00000010 (bit 1)</p> <p>Sunday: 01000000 (bit 6)</p> <p>Logical OR on Friday and Sunday</p> <p>Result: 01000010 = 66</p> |

| Parameter   | Value      | Default | Security (get/set) | Description  |
|-------------|------------|---------|--------------------|--|
| begintime   | hh:mm      | 00:00   | 6/6                | Begin time of weekly schedule.   |
| endtime     | hh:mm      | 24:00   | 6/6                | End time of weekly schedule.<br><br>Note: Setting 00:00 to 24:00 means always.           |
| prefix      | string[16] | NULL    | 6/6                | Indicate the prefix of the filename.   |
| cyclesize   | <integer>  | 500     | 6/6                | Set the maximum size for cycle recording in Kbytes.                                      |
| maxfilesize | 50 to 6000 | 50      | 6/6                | Set the maximum size for one file in Kbytes.   |
| dest        | 0 to 4     | 0       | 6/6                | The destination to store the recording data.<br><br>▪ 0 to 4 — Index of network storage. |

### Group: https

| Name                 | Value       | Default  | Security (get/set) | Description  |
|----------------------|-------------|----------|--------------------|--|
| enable               | <boolean>   | 0        | 6/6                | Enable or disable the secure HTTP.   |
| status               | -2 to 1     | 0        | 6/6                | Specify the HTTPs certificate status.<br><br>▪ -2 — invalid public key<br>▪ -1 — waiting for certificated<br>▪ 0 — not installed<br>▪ 1 — active |
| countryname          | string[2]   | TW       | 6/6                | Set the country name in the certificate information.   |
| stateorprovince name | string[128] | Province | 6/6                | Set the state or province name in the certificate information.   |
| validdays            | 0 to 9999   | 9999     | 6/6                | Set the certification valid period.  |



| Name             | Value       | Default           | Security (get/set) | Description  |
|------------------|-------------|-------------------|--------------------|--|
| localityname     | string[128] | City Name         | 6/6                | Set the locality name in the certificate information.            |
| organizationname | string[64]  | Organization Name | 6/6                | Set the organization name in the certificate information.        |
| unit             | string[32]  | Unit Name         | 6/6                | Set the organizational unit name in the certificate information. |
| commonname       | string[64]  | IP Address        | 6/6                | Set the common name in the certificate information.              |

## Drive the Digital Output

**Method:** GET/POST

**Description:** This request requires the privilege of viewer or above.

**URL:** `http://<servername>/cgi-bin/dido/setdo.cgi?do1=<state>[&do2=<state>][&do3=<state>][&do4=<state>][&return=<return page>]`

| Parameter | Value         | Description   |
|-----------|---------------|---|
| do<num>   | 0,1           | 0 — inactive, normal state<br>1 — active, triggered state   |
| return    | <return page> | Redirect to <return page> after the parameter is assigned. The <return page> can be a full URL path or relative path according the current path. If you omit this parameter, it redirects to an empty page. |

**Example:**

Drive the digital output 1 to triggered state and redirect to an empty page:

`http://myserver/cgi-bin/dido/setdo.cgi?do1=1`

## Query Status of the Digital Input

**Method:** GET/POST

**Description:** Queries the status of the digital input. If no parameter is specified, every digital input status is returned. This request requires the privilege of viewer.

**URL:** `http://<servername>/cgi-bin/dido/getdi.cgi?[di0] [&di1] [&di2] [&di3]`

**Return:**

---

```
HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: <length>\r\n
\r\n
[di0=<state>]\r\n
[di1=<state>]\r\n
[di2=<state>]\r\n
[di3=<state>]\r\n
```

---

Where <state> can be 0 or 1.

**Example:** Query the status of digital input 1.

**Request:**

`http://myserver/cgi-bin/dido/getdi.cgi?di1`

**Response:**

---

```
HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: 7\r\n
\r\n
di1=1\r\n
```

---

## Query Status of the Digital Output

**Method:** GET/POST

**Description:** Queries the status of the digital output. If no parameter is specified, every digital input status is returned. This request requires the privilege of viewer.

**URL:** `http://<servername>/cgi-bin/dido/getdo.cgi?[do0] [&do1] [&do2] [&do3]`

**Return:**

---

```
HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: <length>\r\n
\r\n
[do0=<state>]\r\n
[do1=<state>]\r\n
[do2=<state>]\r\n
[do3=<state>]\r\n
```

---

where <state> can be 0 or 1.

**Example:** Query the status of digital output 1

**Request:** `http://myserver/cgi-bin/dido/getdo.cgi?do1`

**Response:**

---

```
HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: 7\r\n
\r\n
do1=1\r\n
```

---

## Capture Single Snapshot

**Method:** GET/POST

**Description:** This command allows you to capture a current snapshot of the selected channel and stream in JPEG format. The size and quality of the image is set according to the video settings on the server. If you request a size larger than all stream setting on the server, this request fails. This request requires normal user privilege.

**URL:** `http://<servername>/cgi-bin/viewer/  
video.jpg?[channel=<value>][&resolution=<value>]  
[&quality=<value>]`

**where:**

| Parameter  | Value                  | Default | Description                             |
|------------|------------------------|---------|---|
| channel    | 0~(n-1)                | 0       | The channel number of the video source. |
| resolution | <available resolution> | 0       | The resolution of the image.            |
| quality    | 1 to 5                 | 3       | The quality of the image.               |

**Return:**

```
HTTP/1.0 200 OK\r\n
Content-Type: image/jpeg\r\n
[Content-Length: <image size>\r\n]
<binary JPEG image data>
```

## Account Management

**Method:** GET/POST

**Description:** This command enables account activities such as adding or deleting users, or updating user account privilege. This request requires administrator privilege.

**URL:**

`http://<servername>/cgi-bin/admin/editaccount.cgi?`

`method=<value>&username=<name> [&userpass=<value>] [&privilege=<value>] [&privilege=<value>] [...] [&return=<return page>]`

| Parameter | Value                      | Description   |
|-----------|----------------------------|---|
| method    | Add                        | Add an account to server. When using this method, the <code>&lt;username&gt;</code> field is necessary. The default value of other fields are used if they are not specified.                         |
|           | Delete                     | Remove an account from server. When using this method, the <code>&lt;username&gt;</code> field is necessary. All other fields are ignored.  |
|           | Edit                       | Modify the account password and privilege. When using this method, the <code>&lt;username&gt;</code> field is necessary. All other fields are optional. If not specified, original settings are kept. |
| username  | <code>&lt;name&gt;</code>  | The name of user to add, delete, or edit  |
| userpass  | <code>&lt;value&gt;</code> | Add a password for a new user to add or modify one of an existing user. The default value is an empty string.   |
| privilege | <code>&lt;value&gt;</code> | Add or to modify user privileges.   |
|           | viewer                     | viewer's privilege  |
|           | operator                   | operator's privilege  |
|           | admin                      | administrator's privilege   |

| Parameter | Value         | Description  |
|-----------|---------------|--|
| return    | <return page> | Redirect to <return page> after the parameter is assigned. The <return page> can be a full URL path or relative path according to the current path. If you omit this parameter, it redirects to an empty page. |

## System Logs

**Method:** GET/POST

**Description:** This command returns the up-to-date system log. This request requires administrator privilege

**URL:**

`http://<servername>/cgi-bin/admin/syslog.cgi`

**Return:**

```
HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: <syslog length>\r\n
\r\n
<system log information>\r\n
```

---

## Upgrade Firmware

**Method:** POST

**Description:** This command allows the server to accept the uploaded file and upgrade the firmware and return with *<return page>*, if indicated. This request requires administrator privilege

**URL:**

http://<servername>/cgi-bin/admin/upgrade.cgi

**Post data:**

---

```
fimage=<file name>[&return=<return page>]\r\n\r\n<multipart encoded form data>
```

---

## Camera Control

**Method:** GET/POST

**Description:** This command allows you to configure movement of the camera, including pan, tilt, and zoom. This request requires privilege of viewer.

**URL:**

```
http://<servername>/cgi-bin/viewer/
camctrl.cgi?[channel=<value>] [&camid=<value>] [&move=<value>]
[&focus=<value>] [&iris=<value>] [&speedpan=<value>] [&speedtilt=<value>]
[&speedzoom=<value>] [&speedapp=<value>] [&auto=<value>] [&zoom=<value>]
[&speedlink=<value>] [&return=<return page>]
```

| Parameter | Value                | Description                    |
|-----------|----------------------|--------------------------------|
| channel   | <0~(n-1)>            | Channel of video source.       |
| camid     | 0,<positive integer> | Camera ID.                     |
| move      | home                 | Move camera to home position.  |
|           | up                   | Move camera up.                |
|           | down                 | Move camera down.              |
|           | left                 | Move camera left.              |
|           | right                | Move camera right.             |
| speedpan  | -5 to 5              | Set the pan speed.             |
| speedtilt | -5 to 5              | Set the tilt speed.            |
| speedzoom | -5 to 5              | Set the zoom speed.            |
| speedapp  | -5 to 5              | Set the auto pan/patrol speed. |
| auto      | pan                  | Auto pan.                      |
|           | patrol               | Auto patrol.                   |
|           | stop                 | Stop camera.                   |



| Parameter | Value         | Description  |
|-----------|---------------|--|
| zoom      | wide          | To zoom for larger view with the current speed.  |
|           | tele          | Zoom to a far distance with the current speed.   |
| sethome   | define        | Set current position as home position.   |
|           | default       | Use the default home position.   |
| calibrate | go            | Recalibrate the home position to the default center.   |
| return    | <return page> | Redirect to <return page> after the parameter is assigned. The <return page> can be a full URL path or relative path according to the current path. If you omit this parameter, it redirects to an empty page. |

## Recall

**Method:** GET

**Description:** This request requires privilege of viewer.

**URL:**

```
http://<servername>/cgi-bin/viewer/recall.cgi?  
recall=<value>[&channel=<value>][&return=<return page>]
```

| Parameter | Value                               | Description  |
|-----------|-------------------------------------|--|
| recall    | Text string less than 30 characters | One of the present positions to recall.  |
| channel   | <0~(n-1)>                           | channel of video source  |
| return    | <return page>                       | Redirect to <return page> after the parameter is assigned. The <return page> can be a full URL path or relative path according to the current path. If you omit this parameter, it redirects to an empty page. |

## Preset Locations

**Method:** GET/POST

**Description:** To add or delete preset positions. Coordinates and the pan, tilt, zoom speeds of the preset positions are defined through group `camctrl_c`. This request requires operator privilege

**URL:**

```
http://<servername>/cgi-bin/operator/preset.cgi?[channel=<value>]  
[&addpos=<value>][&delpos=<value>][&return=<return page>]
```

| Parameter | Value                                 | Description  |
|-----------|---------------------------------------|--|
| addpos    | <Text string less than 30 characters> | Add one preset location to preset list.  |
| channel   | <0~(n-1)>                             | Video source channel.  |
| delpos    | <Text string less than 30 characters> | Delete preset location from preset list.   |
| return    | <return page>                         | Redirect to <return page> after the parameter is assigned. The <return page> can be a full URL path or relative path according to the current path. If you omit this parameter, it redirects to an empty page. |

## IP Filtering (RTSP/Serverpush)

**Method:** GET/POST

**Description:** Defines the allowed or denied IP address (or range) access to the camera. An index is assigned to each filtering entry, which may be defined to "allow," or "deny" a single IP address, range, or network mask. This request requires administrator access privilege



**NOTE** Corresponds to [Group: netfilter, page 21](#).

**URL:**

```
http://<servername>/cgi-bin/admin/ipfilter.cgi?  
method=<value>&[start=<ipaddress>&end=<ipaddress>] [&index=<v  
alue>] [&return=<return page>]
```

| Parameter | Value        | Description  |
|-----------|--------------|--|
| Method    | addallow     | Add a range of allowed IP addresses to the server. Start and end parameters must be specified. If the index parameter is specified, this command attempts to add a starting from index position.   |
|           | adddeny      | Add a range of denied IP addresses to the server. Start and end parameters must be specified. If the index parameter is specified, this command attempts to add starting from index position.  |
|           | deleteallow  | Remove a range of allowed IP addresses from the server. If start and end parameters are specified, this command removes the matched IP address. If index is specified, this command attempts remove the address from given index position. The parameters <code>&lt;start, end&gt;</code> parameters have higher priority then the <code>&lt;index&gt;</code> parameter.     |
|           | deletedeny   | Remove a range of denied IP addresses s from the server. If start and end parameters are specified, this command removes the matched IP address. If index is specified, this command attempts to remove the address from given index position. The parameters <code>&lt;start, end&gt;</code> parameters have higher priority then the <code>&lt;index&gt;</code> parameter. |
| start     | <ip address> | The start IP address to add or delete.   |
| end       | <ip address> | The end IP address to add or delete.   |
| index     | <value>      | The start position to add or delete.   |

| Parameter | Value         | Description   |
|-----------|---------------|---|
| return    | <return page> | Redirect to <return page> after the parameter is assigned. The <return page> can be a full URL path or relative path according the current path. If you omit this parameter, it redirects to an empty page. |

## Get SDP of Streamings

**Method:** GET/POST

**Description:** Get MPEG-4 streaming. This request requires viewer access privilege.

**URL:**

`http://<servername>/<network_rtsp_s<0~m-1>_accessname>`

where:

“m” is the stream number.

“network\_accessname\_<0~(m-1)>” is the access name for stream “1” to stream “m”. Please refer to the *subgroup of network: rtsp* to set the accessname of SDP.

You can get the SDP by using the HTTP GET method.

## Open the Network Streamings

**Description:** Get MPEG-4 streaming. This request requires viewer access privilege.

**URL:**

For http push server (mjpeg):

```
http://<servername>/<network_http_s<0~m-1>_accessname>
```

For RTSP(mp4), the user needs to input the URL below for a RTSP compatible player.

```
rtsp://<servername>/<network_rtsp_s<0~m-1>_accessname>
```

where:

“m” is the stream number.

## Additional Information

### Regulatory Compliance and Safety Information

Regulatory Compliance and Safety Information for this product is available on Cisco.com at the following location:

[www.cisco.com/go/smallbusiness](http://www.cisco.com/go/smallbusiness)

### Warranty

Warranty information that applies to this product is available on Cisco.com at the following location:

[www.cisco.com/go/warranty](http://www.cisco.com/go/warranty)

### End User License Agreement (EULA)

Licensing information that applies to this product is available on Cisco.com at the following location:

[www.cisco.com/go/warranty](http://www.cisco.com/go/warranty)



## Support Contacts

Support contact information for this product is available on Cisco.com at the following location:

[www.cisco.com/go/smallbusiness](http://www.cisco.com/go/smallbusiness)

or

<http://www.cisco.com/web/partners/sell/smb/index.html>