

HTTP/CGI Command Programing Guide

Revision Log

Date	Version	Description / Major change
2011/08/12	V3.0	Create document

1 HTTP/CGI COMMAND INDEX

Please refer to document:

1. ipcam_http_api.pdf
2. ipcam_http_param.pdf

2 SAMPLE COMMAND

2.1 System Category

2.1.1 Get brand Info

Example:

http://<servername>/cgi-bin/view/param?action=list&group=General.Brand

Return:

Parameter name	value	Security level (get/set)	Description
<i>Brand</i>	<i>String</i>	<i>0/7</i>	<i>The brand of the product.</i>
<i>ProdFullName</i>	<i>String</i>	<i>0/7</i>	<i>The full name of the product.</i>
<i>ProdNbr</i>	<i>String</i>	<i>0/7</i>	<i>The product number.</i>
<i>ProdShortName</i>	<i>String</i>	<i>0/7</i>	<i>The short name of the product.</i>
<i>ProdType</i>	<i>String</i>	<i>0/7</i>	<i>The product type.</i>
<i>WebURL</i>	<i>String</i>	<i>0/7</i>	<i>The URL to visit for support and information about the product.</i>

root.General.Brand.Brand=XXXX

root.General.Brand.ProdFullName=XXXX CMOS Network Camera

root.General.Brand.ProdNbr=F12345

root.General.Brand.ProdShortName=F12345 CMOS Network Camera

root.General.Brand.ProdType=Network Camera

root.General.Brand.WebURL=www.xxxxx.com

2.1.2 Get/Set/Add/Remove account Info

Example: Get account information

http://<servername>/cgi-bin/admin/param?action=list&group=General.UserID

Return:

Parameter name	value	Security level (get/set)	Description
<i>ViewerAuthen</i>	<i>on/off</i>	<i>6/6</i>	<i>Enable/disable viewer authentication.</i>
<i>PTZAuthen</i>	<i>on/off</i>	<i>6/6</i>	<i>Enable/disable viewer PTZ control.</i>
<i>MaxCnt</i>	<i>9</i>	<i>6/7</i>	<i>Maximum of UserID lists.</i>

<i>Prefix</i>	<i>U</i>	<i>6/7</i>	<i>The prefix of dynamic child groups.</i>
<i>Admin</i>	<i>string</i>	<i>6/6</i>	<i>Based 64 encrypted account for Administrator.</i>
<i>U0.User~ U8.User</i>	<i>String</i>	<i>6/6</i>	<i>Based 64 encrypted account and security level for user .</i>

root.General.UserID.ViewerAuthen=on

root.General.UserID.PTZAuthen=on

root.General.UserID.MaxCnt=9

root.General.UserID.Prefix=U

root.General.UserID.Admin=YWRtaW46YWRtaW4=

root.General.UserID.U0.User=dHQ6dHQ=,00010000

Example: Set account information

http://<servername>/cgi-bin/admin/param?action=update&General.UserID.ViewerAuthen=off&General.UserID.U0.User=MzMzMzozMzMz,000007ff

Return:

OK

Example: Add account information

http://<servername>/cgi-bin/admin/param?action=add&group=General.UserID&template=UserID&General.UserID.U.User=MzMzMzozMzMz,000007ff

Return:

OK

Example: Remove account information

http://<servername>/cgi-bin/admin/param?action=remove&group=General.UserID.U0

Return:

OK

2.1.3 Get Firmware info

Example:

http://<servername>/cgi-bin/view/param?action=list&group=Properties.Firmware

Return:

Parameter name	value	Security level (get/set)	Description
<i>BuildDate</i>	<i>string</i>	<i>1/0</i>	<i>Firmware build date.</i>
<i>Version</i>	<i>string</i>	<i>1/0</i>	<i>Firmware version</i>

root.Properties.Firmware.BuildDate=Tue Mar 20 22:26:10 CST 2007

root.Properties.Firmware.Version=LM.0.3.14

2.1.4 Get hardware version

Example:

<http://<servername>/cgi-bin/view/param?action=list&group=Properties.Hardware>

Return:

Parameter name	value	Security level (get/set)	Description
Version	string	1/0	Hardware version

root.Properties.Hardware.Version=00

2.1.5 Get video support format

Example:

<http://<servername>/cgi-bin/view/param?action=list&group=Properties.Image.Format>

Return:

Parameter name	value	Security level (get/set)	Description
Format	string	1/0	Board support video format. (separated by “,”)

root.Properties.Image.Format=mpeg4,mjpeg

2.1.6 Get video support resolution

Example:

<http://<servername>/cgi-bin/view/param?action=list&group=Properties.Image.Resolution>

Return:

Parameter name	value	Security level (get/set)	Description
Resolution	string	1/0	Board support video resolution. (separated by “,”)

root.Properties.Image.Resolution = 176x120,352x240,720x480

2.1.7 Get PTZ support info

Example:

<http://<servername>/cgi-bin/view/param?action=list&group=Properties.PTZ.PTZ>

Return:

Parameter name	value	Security level (get/set)	Description
PTZ	yes, no	1/0	Board support PTZ capability

root.Properties.PTZ.PTZ=yes

2.1.8 Get DIDO support info

Example:

<http://<servername>/cgi-bin/view/param?action=list&group=Properties.DIDO>

Return:

Parameter name	value	Security level (get/set)	Description
<i>DI.DI</i>	<i>yes, no</i>	<i>1/0</i>	<i>Board support DI capability</i>
<i>DI.Type</i>	<i>virtual, physical</i>	<i>1/0</i>	<i>Board support DI type</i>
<i>DO.DO</i>	<i>yes, no</i>	<i>1/0</i>	<i>Board support DO capability</i>
<i>DO.Type</i>	<i>virtual, physical</i>	<i>1/0</i>	<i>Board support DO type</i>

root.Properties.DIDO.DI.DI=no

root.Properties.DIDO.DI.Type=virtual

root.Properties.DIDO.DO.DO=no

root.Properties.DIDO.DO.Type=virtual

2.1.9 Get Motion Detection support info

Example:

<http://<servername>/cgi-bin/view/param?action=list&group=Properties.Motion.Motion>

Return:

Parameter name	value	Security level (get/set)	Description
<i>Motion</i>	<i>yes, no</i>	<i>1/0</i>	<i>Board support Motion Detection capability</i>

root.Properties.Motion.Motion=yes

2.1.10 Get audio support info

Example:

<http://<servername>/cgi-bin/operator/param?action=list&group=Properties.Audio>

Return:

Parameter name	value	Security level (get/set)	Description
<i>Audio</i>	<i>yes, no</i>	<i>4/7</i>	<i>Board support Audio capability</i>

root.Properties.Audio.Audio=yes

2.1.11 Get/Set Network Interface info

Example: Get Network interface information

<http://<servername>/cgi-bin/view/param?action=list&group=General.Network.eth0>

Return:

Parameter name	value	Security level (get/set)	Description
<i>DNSAuto</i>	<i>on, off</i>	<i>6/6</i>	<i>Specifies if the DNS server should be obtained from a DHCP server.</i>

<i>DNSServer1</i>	<i>IP address</i>	<i>6/6</i>	<i>Primary Domain Name System server.</i>
<i>DNSServer2</i>	<i>IP address</i>	<i>6/6</i>	<i>Secondary Domain Name System server.</i>
<i>BootProto</i>	<i>dhcp, none</i>	<i>6/6</i>	<i>Enable/disable dynamic IP address assignment.</i>
<i>IPAddress</i>	<i>IP address</i>	<i>6/6</i>	<i>IP address. The physical address of the device on the network.</i>
<i>MACAddress</i>	<i>00:xx:xx:xx:xx:xx</i>	<i>6/4</i>	<i>MAC address. The unique identity of the device. (read only)</i>
<i>SubnetMask</i>	<i>IP address</i>	<i>6/6</i>	<i>Subnet mask. Divides the network</i>
<i>DefaultRouter</i>	<i>IP address</i>	<i>6/6</i>	<i>Default gateway address</i>
<i>IPAddressRange</i>	<i>string</i>	<i>6/6</i>	<i>Auto assign range when DHCP fail. Ex: 192.168.0.99-192.168.0.254</i>

```

root.General.Network.eth0.DNSAuto=on
root.General.Network.eth0.DNSServer1=192.168.1.253
root.General.Network.eth0.DNSServer2=192.168.1.254
root.General.Network.eth0.BootProto=dhcp
root.General.Network.eth0.IPAddress=192.168.110.
root.General.Network.eth0.MACAddress=00:1B:FE:00:11:22
root.General.Network.eth0.SubnetMask=255.255.255.0
root.General.Network.eth0.DefaultRouter=192.168.1.1
root.General.Network.eth0.IPAddressRange=192.168.1.2-192.168.1.254

```

Example: Set Network interface information

<http://<servername>/cgi-bin/admin/param?action=update&General.Network.eth0.BootProto=none&General.Network.eth0.IPAddress=192.168.1.99>

Return:

OK

2.1.12 Get/Set UPnP info

Example: Get UPnP information

<http://<servername>/cgi-bin/view/param?action=list&group=General.Network.UPnP>

Return:

Parameter name	value	Security level (get/set)	Description
<i>Enabled</i>	<i>yes, no</i>	<i>6/6</i>	<i>Enables Universal Plug and Play.</i>
<i>NATTraversal.Enabled</i>	<i>yes, no</i>	<i>6/6</i>	<i>Enables/disables NAT traversal.</i>
<i>NATTraversal.HTTPPort</i>	<i>number</i>	<i>6/6</i>	<i>Number of HTTP port for NAT traversal.</i>

<i>NATTraversal.HTTPSPort</i>	<i>number</i>	<i>6/6</i>	<i>Number of HTTPS port for NAT traversal.</i>
<i>NATTraversal.RTSPPort</i>	<i>number</i>	<i>6/6</i>	<i>Number of RTSP port for NAT traversal.</i>

root.General.Network.UPnP.Enabled=yes

root.General.Network.UPnP.NATTraversal.Enabled=no

root.General.Network.UPnP.NATTraversal.HTTPPort=80

root.General.Network.UPnP.NATTraversal.HTTPSPort=443

root.General.Network.UPnP.NATTraversal.RTSPPort=554

Example: Set UPnP information

<http://<servername>/cgi-bin/admin/param?action=update&General.Network.UPnP.Enabled=yes&General.Network.UPnP.NATTraversal.Enabled=no>

Return:

OK

2.1.13 Get/Set PPPoE info

Example: Get PPPoE information

<http://<servername>/cgi-bin/view/param?action=list&group=General.Network.PPPoE>

Return:

Parameter name	value	Security level (get/set)	Description
<i>Enabled</i>	<i>yes, no</i>	<i>6/6</i>	<i>Enables/disables PPPoE service.</i>
<i>IPAddress</i>	<i>IP address</i>	<i>6/6</i>	<i>IP address. The physical address of the device on the network. (read only)</i>
<i>UserID</i>	<i>none, string</i>	<i>6/6</i>	<i>PPPoE login user id.</i>
<i>Password</i>	<i>none, string</i>	<i>6/6</i>	<i>PPPoE login password.</i>
<i>DNSAuto</i>	<i>on, off</i>	<i>6/6</i>	<i>Specifies if the DNS server should be obtained from a DHCP server.</i>
<i>DNSServer1</i>	<i>IP address</i>	<i>6/6</i>	<i>Primary Domain Name System server.</i>
<i>DNSServer</i>	<i>IP address</i>	<i>6/6</i>	<i>Secondary Domain Name System server.</i>

root.General.Network.PPPoE.Enabled=no

root.General.Network.PPPoE.IPAddress =67.34.251.69

root.General.Network.PPPoE.UserID=none

root.General.Network.PPPoE.Password=none

root.General.Network.PPPoE.DNSAuto=on

root.General.Network.PPPoE.DNSServer1=0.0.0.0

root.General.Network.PPPoE.DNSServer2=0.0.0.0

Example: Set PPPoE information

http://<servername>/cgi-bin/admin/param?action=update&General.Network.PPPoE.Enabled=yes&General.Network.PPPoE.UserID=example@hinet.net&General.Network.PPPoE.Password=12345678&General.Network.PPPoE.DNSAuto=on

Return:

OK

2.1.14 Get/Set DDNS info

Example: Get DDNS information

http://<servername>/cgi-bin/view/param?action=list&group=General.Network.DDNS

Return:

Parameter name	value	Security level (get/set)	Description
<i>Enabled</i>	<i>yes, no</i>	<i>6/6</i>	<i>Enables/disables DDNS service.</i>
<i>DDNSServer</i>	<i>none, IP address, host name</i>	<i>6/6</i>	<i>The server that support DDNS service.</i>
<i>UserName</i>	<i>none, string</i>	<i>6/6</i>	<i>DDNS login user id.</i>
<i>Password</i>	<i>none, string</i>	<i>6/6</i>	<i>DDNS login password.</i>
<i>HostName</i>	<i>none, string</i>	<i>6/6</i>	<i>The name entered here will be associated with the product's IP address in the DDNS server.</i>

root.General.Network.DDNS.Enabled=no

root.General.Network.DDNS.DDNSServer=www.dyndns.org

root.General.Network.DDNS.UserName=none

root.General.Network.DDNS.Password=none

root.General.Network.DDNS.HostName=none

Example: Set DDNS information

http://<servername>/cgi-bin/admin/param?action=update&General.Network.DDNS.Enabled=yes&General.Network.DDNS.DDNSServer=www.dyndns.org&General.Network.DDNS.UserName=example&General.Network.DDNS.Password=12345678&General.Network.DDNS.HostName=www.example.dyndns.org

Return:

OK

2.1.15 Get/Set Time info

Example: Get Time information

<http://<servername>/cgi-bin/operator/param?action=list&group=General.Time>

Return:

Parameter name	value	Security level (get/set)	Description
ServerDate	yyyy-mm-dd	6/6	The date (yyyy-mm-dd) when the device's time was set manually or synchronized with the computer.
ServerTime	hh:mm:ss	6/6	The time (hh:mm:ss) when the device's time was set manually or synchronized with the computer.
DateFormat	ymd, mdy, dmy	6/6	Date format.
SyncSource	None, PC, NTP	6/6	The source to synchronize the time with; PC, NTP or None (manually).
TimeZone	GMT-12:00/Etc/GMT-12 GMT-11:00/Pacific/Apia GMT-10:00/Pacific/Honolulu GMT-09:00/America/Anchorage GMT-08:00/America/Los_Angeles GMT-07:00/America/Denver GMT-07:00/America/Tegucigalpa GMT-07:00/America/Phoenix GMT-06:00/America/Winnipeg GMT-06:00/America/Mexico_City GMT-06:00/America/Chicago GMT-06:00/America/Costa_Rica GMT-05:00/America/Indianapolis GMT-05:00/America/New_York GMT-05:00/America/Bogota GMT-04:00/America/Santiago GMT-04:00/America/Caracas GMT-04:00/America/Montreal GMT-03:30/America/St_Johns GMT-03:00/America/Thule GMT-03:00/America/Buenos_Aires GMT-03:00/America/Sao_Paulo GMT-02:00/Atlantic/South_Georgia GMT-01:00/Atlantic/Cape_Verde	6/6	Time zone.

GMT-01:00/Atlantic/Azores GMT 00:00/Europe/Dublin GMT 00:00/Africa/Casablanca GMT 01:00/Europe/Amsterdam GMT 01:00/Europe/Belgrade GMT 01:00/Europe/Brussels GMT 01:00/Europe/Warsaw GMT 01:00/Africa/Lagos GMT 02:00/Europe/Athens GMT 02:00/Europe/Bucharest GMT 02:00/Africa/Cairo GMT 02:00/Africa/Harare GMT 02:00/Europe/Helsinki GMT 02:00/Asia/Jerusalem GMT 03:00/Asia/Baghdad GMT 03:00/Asia/Kuwait GMT 03:00/Europe/Moscow GMT 03:00/Africa/Nairobi GMT 03:30/Asia/Tehran GMT 04:00/Asia/Dubai GMT 04:00/Asia/Baku GMT 04:30/Asia/Kabul GMT 05:00/Asia/Yekaterinburg GMT 05:00/Asia/Karachi GMT 05:30/Asia/Calcutta GMT 05:45/Asia/Katmandu GMT 06:00/Asia/Almaty GMT 06:00/Asia/Dhaka GMT 06:00/Asia/Colombo GMT 06:30/Asia/Rangoon GMT 07:00/Asia/Bangkok GMT 07:00/Asia/Krasnoyarsk GMT 08:00/Asia/Hong_Kong GMT 08:00/Asia/Irkutsk GMT 08:00/Asia/Kuala_Lumpur GMT 08:00/Australia/Perth GMT 08:00/Asia/Taipei GMT 09:00/Asia/Tokyo		
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	GMT 09:00/Asia/Seoul GMT 09:00/Asia/Yakutsk GMT 09:30/Australia/Adelaide GMT 10:00/Australia/Brisbane GMT 10:00/Australia/Sydney GMT 10:00/Pacific/Guam GMT 10:00/Australia/Hobart GMT 10:00/Asia/Vladivostok GMT 11:00/Asia/Magadan GMT 12:00/Pacific/Auckland GMT 12:00/Pacific/Fiji GMT 13:00/Pacific/Tongatapu		
UTCOffset	00:00:00	6/6	Time difference (hh:mm:ss) between the time zone and Coordinated Universal Time (UTC). -01:00:00 = -1 hour, i.e. 1 hour after UTC. 00:00:00 = 0 hour, 01:00:00 = 1 hour, i.e. before UTC.

root.General.Time.ServerDate=1970-01-01

root.General.Time.ServerTime=02:30:14

root.General.Time.DateFormat=ymd

root.General.Time.SyncSource=NTP

root.General.Time.TimeZone=GMT 08:00/Asia/Taipei

root.General.Time.UTCOffset=00:00:00

Example: Set Time information

http://<servername>/cgi-bin/admin/param?action=update&General.Time.ObtainFromDHCP=no&General.Time.ServerDate=2007-09-18&General.Time.ServerTime=18:20:24&General.Time.DateFormat=ymd&General.Time.SyncSource=NTP&General.Time.TimeZone=GMT 08:00/Asia/Taipei&General.Time.UTCOffset=00:00:00

Return:

OK

2.1.16 Get/Set Day Light Saving

Example: Get Day Light Saving information

http://<servername>/cgi-bin/operator/param?action=list&group=General.Time.DayLightSaving

Return:

Parameter name	value	Security level	Description

		(get/set)	
<i>DayLightSaving.Enabled</i>	Yes/No	6/6	<i>Enables/disables Day Light Saving service</i>
<i>Start.Type</i>	<i>Date/Week</i>	6/6	<i>Day Light Saving Type</i>
<i>Start.Month</i>	1,...12	6/6	<i>Start Date for Day Light Saving (If type is 'date', 'Month', 'Date', 'Hour', and 'Min' need to be assigned. If type is 'week', 'Month', 'Week', 'Day', 'Hour', and 'Min' need to be assigned.)</i>
<i>Start.Week</i>	1,...5	6/6	
<i>Start.Day</i>	1,...7	6/6	
<i>Start.Date</i>	1,...31	6/6	
<i>Start.Hour</i>	1,...23	6/6	
<i>Start.Min</i>	0,15,30,45	6/6	
<i>Stop.Type</i>	<i>Date/Week</i>	6/6	<i>Day Light Saving Type</i>
<i>Stop.Month</i>	1,...12	6/6	<i>End Date for Day Light Saving (If type is 'date', 'Month', 'Date', 'Hour', and 'Min' need to be assigned. If type is 'week', 'Month', 'Week', 'Day', 'Hour', and 'Min' need to be assigned.)</i>
<i>Stop.Week</i>	1,...5	6/6	
<i>Stop.Day</i>	1,...7	6/6	
<i>Stop.Date</i>	1,...31	6/6	
<i>Stop.Hour</i>	1,...23	6/6	
<i>Stop.Min</i>	0,15,30,45	6/6	

root.General.Time.DayLightSaving.Enabled=off

root.General.Time.DayLightSaving.Start.Type=date

root.General.Time.DayLightSaving.Start.Month=1

root.General.Time.DayLightSaving.Start.Week=1

root.General.Time.DayLightSaving.Start.Day=1

root.General.Time.DayLightSaving.Start.Date=1

root.General.Time.DayLightSaving.Start.Hour=0

root.General.Time.DayLightSaving.Start.Min=0

root.General.Time.DayLightSaving.Stop.Type=date

root.General.Time.DayLightSaving.Stop.Month=1

root.General.Time.DayLightSaving.Stop.Week=1

root.General.Time.DayLightSaving.Stop.Day=1

root.General.Time.DayLightSaving.Stop.Date=1

root.General.Time.DayLightSaving.Stop.Hour=0

root.General.Time.DayLightSaving.Stop.Min=0

Example: Set Day Light Saving

<http://<servername>/cgi-bin/admin/param?action=update&General.Time.DayLightSaving.Enabled=on>

Return:

OK

2.1.17 Get/Set NTP info

Example: Get NTP information

<http://<servername>/cgi-bin/operator/param?action=list&group=General.Time.NTP>

Return:

Parameter name	value	Security level (get/set)	Description
Server	IP address, host name	6/6	The NTP server to connect to when synchronizing the time in the device.
DHCP	on / off	6/6	DHCP servers may provide names/IP addresses for local/remote NTP servers. Enable this feature by setting this parameter to on.
Update	01:00:00 [time]	6/6	Time interval (hh:mm:ss) between connections to the NTP server.
VolatileServer	IP address, host name	6/6	The name/IP address of the NTP server, received from the DHCP server. Only one NTP server is currently supported. The NTP server name/IP address will be valid only until the next DHCP renewal or reboot.

root.General.Time.NTP.Server=pool.ntp.org

root.General.Time.NTP.DHCP=off

root.General.Time.NTP.Update=01:00:00

root.General.Time.NTP.VolatileServer=0.0.0.0

Example: Set NTP information

<http://<servername>/cgi-bin/admin/param?action=update&General.Time.NTP.Server=pool.ntp.org&General.Time.NTP.Update=01:00:00>

Return:

OK

2.1.18 Get/Set IPFilter info

Example: Get IPFilter information

<http://<servername>/cgi-bin/admin/param?action=list&group=Security.IPFilter>

Return:

OK

Example: Add IPFilter AllowList (or DenyList) information

<http://<servername>/cgi-bin/admin/param?action=add&group=Security.IPFilter.AllowList&template=IPFilter&Security.IPFilter.AllowList.F0.Rule=single&Security.IPFilter.AllowList.F0.SingleAddress=0.0.0.0&Security.IPFilter.AllowList.F0.Submask=0&Security.IPFilter.AllowList.F0.StartAddress=0.0.0.0&Security.IPFilter.AllowList.F0.EndAddress=0.0.0.0>

urity.IPFILTER.AllowList.F0.EndAddress=0.0.0.0

Return:

OK

Example: Remove IPFilter AllowList (or DenyList) information

http://<servername>/cgi-bin/admin/param?action=remove&group=Security.IPFILTER.AllowList.F0

Return:

OK

2.2 Image/Video/Audio Category

2.2.1 Get/Set http port number

Example: Get http port number

http://<servername>/cgi-bin/view/param?action=list&group=General.System

http://<servername>/cgi-bin/view/param?action=list&group=General.System.HTTPPort

Return:

Parameter name	value	Security level (get/set)	Description
<i>HTTPPort</i>	<i>number</i>	<i>1/6</i>	<i>Http port number</i>

root.System.HTTPPort=80

Example: Set http port number

http://<servername>/cgi-bin/admin/param?action=update&General.System.HTTPPort =80

Return:

OK

2.2.2 Get/Set RTSP port number

Example: Get RTSP port number

http://<servername>/cgi-bin/view/param?action=list&group=General.Network.RTSP.Port

Return:

Parameter name	value	Security level (get/set)	Description
<i>RTSPPort</i>	<i>number</i>	<i>1/6</i>	<i>RTSP viewer port number</i>

root.System.RTSPPort=554

Example: Set RTSP port number

http://<servername>/cgi-bin/admin/param?action=update&General.Network.RTSP.Port=554

Return:

OK

2.2.3 View Area

There is 4 View Area. The View Area-1 must not be modified. You could modify the others' view area resolution and start coordinates. Please note that their size and coordinates must be 16-aligned integer.

Example: Set View Area-2 Resolution*

<http://<servername>/cgi-bin/admin/param?action=update&Image.I0.Resolution=1280x1024>

Return:

OK

Example: Set View Area-2 Offset

<http://<servername>/cgi-bin/admin/param?action=update&Image.I0.Offset=160x128>

Return:

OK

**Note: If you modified the view area's resolution, the corresponding resolution must be set too.*

2.2.4 Profile

You could add many profiles and choose the view area you wanted to view. Please Note that if you have modified the resolution of the view area instead of 1920x1080, you must reset the corresponding profile's resolution to the new resolution size. **In the other words, the profile's resolution must be the same as the view area's resolution if the view area's resolution is not 1920x1080.**

Besides, you should add the new RTP configuration for this profile after you add new profile. You could connect to this profile using the new added RTP configuration.

Example: Add New Profile

<http://<servername>/cgi-bin/admin/param?action=add&template=StreamProfile&StreamProfile.I5.Video.Name=p6&StreamProfile.I5.Video.Description=p6&StreamProfile.I5.Video.Codec=H264&StreamProfile.I5.Video.Source=0&StreamProfile.I5.Video.Resolution=1280x720&StreamProfile.I5.Video.FPS=30&StreamProfile.I5.Video.Quality.Mode=auto&StreamProfile.I5.Video.Quality.Quant=10&StreamProfile.I5.Video.Quality.BitRate=8M&StreamProfile.I5.OSD.Enabled=on&StreamProfile.I5.Audio.Enabled=on>

Return:

OK

Example: Remove Profile

<http://<servername>/cgi-bin/admin/param?action=remove&group=StreamProfile.I5>

Return:

OK

2.2.5 Get/Set video resolution

Example: Get Profile-1 video resolution

<http://<servername>/cgi-bin/view/param?action=list&group=StreamProfile.I0.Video.Resolution>

Return:

Parameter name	value	Security level (get/set)	Description
Resolution	string	1/6	Video resolution.

root.StreamProfile.I0.Video.Resolution=1920x1080

Example: Set Profile-1 video resolution

<http://<servername>/cgi-bin/admin/param?action=update&>

[StreamProfile.I0.Video.Resolution=1920x1080](#)

Return:

OK

2.2.6 Get/Set video parameters (Brightness, Contrast, Saturation, Hue,Sharpness)

Example: Get video parameters

<http://<servername>/cgi-bin/view/param?action=list&group=ImageSource.I0.Sensor>

Example: Set video parameters

[http://<servername>/cgi-bin/admin/param?action=update&ImageSource.I0.Sensor.Brightness=50
&ImageSource.I0.Sensor.Contrast=50&ImageSource.I0.Sensor.Saturation=50&ImageSource.I0.Sensor.Hue=50&ImageSource.I0.Sensor.Sharpness=20](http://<servername>/cgi-bin/admin/param?action=update&ImageSource.I0.Sensor.Brightness=50&ImageSource.I0.Sensor.Contrast=50&ImageSource.I0.Sensor.Saturation=50&ImageSource.I0.Sensor.Hue=50&ImageSource.I0.Sensor.Sharpness=20)

Return:

Parameter name	value	Security level (get/set)	Description
Brightness	0~100	4/4	Image brightness
Contrast	0~100	4/4	Image Contrast
Saturation	0~100	4/4	Image Saturation
Hue	0~100	4/4	Image Hue
Sharpness	0~100	4/4	

root.ImageSource.I0.Sensor.Brightness=50

root.ImageSource.I0.Sensor.Contrast=50

root.ImageSource.I0.Sensor.Saturation=50

root.ImageSource.I0.Sensor.Hue=50

root.ImageSource.I0.Sensor.Sharpness=20

2.2.7 Get/Set video quality

Example: Get Profile-1 video quality

http://<servername>/cgi-bin/view/param?action=list&group=StreamProfile.I0.Video.Quality

Return:

Parameter name	value	Security level (get/set)	Description
Quant	1~31 (MPEG4) 14-51 (H264) 1-99 (MJPEG)	1/6	The Quality Quant of the Codec
Bitrate	64K – 10M	1/6	The target bit rate for CBR mode. (K: kbps, M: Mbps)
Mode	auto, cbr, vbr	1/6	Specifies whether the rate controller operates in Variable Bit Rate (VBR) or constant bit rate (CBR) mode.

root.StreamProfile.I0.Quality.Mode=vbr

root.StreamProfile.I0.Quality.Bitrate=2048

root.StreamProfile.I0.Quality.Quant=6

Example: Set Profile-1 video quality (auto rate control)

http://<servername>/cgi-bin/admin/param?action=update&StreamProfile.I0.Quality.Mode=auto

Return:

OK

Example: Set Profile-1 video quality (fixed quality)

http://<servername>/cgi-bin/admin/param?action=update&StreamProfile.I0.Video.Quality.Quant=6&StreamProfile.I0.Quality.Mode=vbr

Return:

OK

Example: Set Profile-1 video quality (constant bit rate)

http://<servername>/cgi-bin/admin/param?action=update&StreamProfile.I0.Video.Quality.Bitrate=5M&Image.I0.RateControl.Mode=cbr

Return:

OK

2.2.8 Get/Set video frame rate

Example: Get Profile-1 video frame rate

<http://<servername>/cgi-bin/view/param?action=list&group=StreamProfile.I0.Video.FPS>

Return:

Parameter name	value	Security level (get/set)	Description
<i>FPS</i>	1~30	1/6	Frame rate. Max value: 30 for NTSC/CMOS 25 for PAL.

root.StreamProfile.I0.Video.FPS=30

Example: Set Profile-1 video frame rate

<http://<servername>/cgi-bin/admin/param?action=update&StreamProfile.I0.Video.FPS=25>

Return:

OK

2.2.9 Get/Set video flip state

Example: Get video flip state

<http://<servername>/cgi-bin/view/param?action=list&group=ImageSource.I0.Sensor.Flip>

Return:

Parameter name	value	Security level (get/set)	Description
<i>Flip</i>	on, off	4/4	Enables/disables video Flip mode

root.ImageSource.I0.Sensor.Flip=off

Example: Set video flip state

<http://<servername>/cgi-bin/admin/param?action=update&ImageSource.I0.Sensor.Flip=on>

Return:

OK

2.2.10 Get/Set video mirror state

Example: Get video flip state

<http://<servername>/cgi-bin/view/param?action=list&group=ImageSource.I0.Sensor.Mirror>

Return:

Parameter name	value	Security level (get/set)	Description
<i>Mirror</i>	on, off	4/4	Enables/disables video Mirror mode

root.ImageSource.I0.Sensor.Mirror=off

Example: Set video flip state

<http://<servername>/cgi-bin/admin/param?action=update&ImageSource.I0.Sensor.Mirror=on>

Return:

OK

2.2.11 Get/Set video night mode state (CMOS support only)

Example: Get video night mode

<http://<servername>/cgi-bin/view/param?action=list&group=Image.I0.Appearance.NightMode>

Return:

Parameter name	value	Security level (get/set)	Description
<i>NightMode</i>	<i>auto, off</i>	<i>1/6</i>	<i>Enables/disables video Night mode</i>

root.Image.I0.Appearance.NightMode=off

Example: Set video night mode

<http://<servername>/cgi-bin/admin/param?action=update&Image.I0.Appearance.NightMode=auto>

Return:

OK

2.2.12 Get/Set video power frequency

Example: Get video light frequency

<http://<servername>/cgi-bin/view/param?action=list&group=ImageSource.I0.Sensor.PowerFrequency>

Return:

Parameter name	value	Security level (get/set)	Description
<i>PowerFrequency</i>	<i>auto, hold, 50, 60</i>	<i>4/4</i>	<i>Select video light frequency.</i>

root.ImageSource.I0.Sensor.PowerFrequency=60

Example: Set video frequency

<http://<servername>/cgi-bin/admin/param?action=update&ImageSource.I0.Sensor.PowerFrequency=50>

Return:

OK

2.2.13 Get/Set video white balance mode

Example: Get video white balance mode

<http://<servername>/cgi-bin/view/param?action=list&group=ImageSource.I0.Sensor.WhiteBalance>

Return:

Parameter name	value	Security level (get/set)	Description
<i>WhiteBalance</i>	<i>auto, fluorescent,</i>	<i>4/4</i>	<i>Select video White Balance mode</i>

	<i>incandescent, sunny, cloudy, sun_shade</i>		
--	---	--	--

root.ImageSource.I0.Sensor.WhiteBalance=auto

Example: Set video white balance mode

http://<servername>/cgi-bin/admin/param?action=update&ImageSource.I0.Sensor.WhiteBalance=fluorescent

Return:

OK

2.2.14 Get/Set video OSD

Example: Get http port number

http://<servername>/cgi-bin/view/param?action=list&group=Image.OSD

Return:

Parameter name	value	Security level (get/set)	Description
<i>Date</i>	<i>on, off</i>	<i>1/6</i>	<i>Enables/disables Date/Time OSD.</i>
<i>Title</i>	<i>on, off</i>	<i>1/6</i>	<i>Enables/Disables Title OSD</i>
<i>Alias</i>	<i>None, string</i>	<i>1/6</i>	<i>Alias for camera display on OSD. (must less than 6 characters)</i>

root.Image.OSD.Date=off

root.Image.OSD.Title=off

root.Image.OSD.Alias=None

Example: Set OSD

*http://<servername>/cgi-bin/admin/param?action=update& Image.OSD.Date=on
&Image.OSD.Title=on&Image.OSD.Alias=CAM1*

Return:

Ok

2.2.15 Get/Set video Mask

Example: Add new Privacy Mask

*http://<servername>/cgi-bin/view/param?action=add&group=Image.Mask&template=PrivacyMask&
&Image.Mask.M0.Name=p2&Image.Mask.M0.XPos=46&Image.Mask.M0.YPos=30&Image.Mask.M0.
Width=86&Image.Mask.M0.Height=70&Image.Mask.M0.Color=black&Image.Mask.M0.Enabled=on*

Return:

Ok

Example: Remove Privacy Mask

http://<servername>/cgi-bin/view/param?action=remove&group=Image.Mask.M0

Return:

Ok

2.2.16 Get JPEG still image

http://<servername>/cgi-bin/view/image?index=<View Area Index>

Example: *http://<servername>/cgi-bin/view/image?index=0*

Return:

Ok

http://<servername>/cgi-bin/view/image?index=0

Return:

HTTP/1.0 200 OK\r\n

Content-Type: image/jpeg\r\n

Content-Length: <image size>\r\n

\r\n

<JPEG image data>\r\n

2.2.17 Get video/audio stream

Example: Get video/audio stream

http://<servername>/video.pro1

Return: video frames

3 SAMPLE VIDEO/AUDIO STREAM GET FLOW

A. Decide video streaming format

H264, MPEG4 or MJPEG.

B. Decide device IP address and HTTP port number

Remote device IP address or host name.

Ex: "192.168.1.99" or "example.dyndns.org"

http port: 80

C. Decide device access username and password

Use base64 encryption to encode username and password

Ex: "admin:admin" to "YWRtaW46YWRtaW4=".

- D. Get viewer port corresponding to video format.

Ex:

video port

`http://<servername>/cgi-bin/view/param?action=list&group=General.System.HTTPPort`

- E. Open socket (device IP: viewer port) to send video request command and receive video frames.

Ex: `http://<servername>:<videoport>/video.pro1`

`http://<servername>:<videoport>/video.pro2`

4 VC++ SAMPLE CODE for VIDEO/AUDIO STREAM

Following sample code is only for demonstrating how to get video/audio streaming.

- a. Get Video/audio stream

```
Mpeg4ThreadProc()
{
    //Open socket
    CSocketHelper::Open(m_sIPAddr, m_Port);
    if (!CSocketHelper::IsOk())
        return FALSE;

    //Send video request command
    CString fmt, response="";
    char uri[32];
    if (m_CompressType==COMPRESS_MJPEG)
        strcpy(uri, "/video.mjpg");
    else
        strcpy(uri, "/video.mp4");

    //Add authentication
    if (strlen(m_sBase64Auth) == 0)
        fmt.Format("GET %s HTTP/1.0\r\n\r\n", uri);
    else
        fmt.Format("GET %s HTTP/1.0\r\nAuthorization: Basic %s\r\n\r\n", uri, m_sBase64Auth);

    try {
        SendStr(fmt);
        ReadUntil(response, "\r\n\r\n");

        //Main frames receive thread
        while(1)
        {
            CString content_type = "";
            do {
                response = "";
                //ReadUntil(response, "\r\n\r\n");
                ReadUntilLFLF(response);
                GetOptionAsString(response, "Content-Type:", content_type);
            } while(strcmp(content_type, "image/jpeg")!=0 &&
                strcmp(content_type, "video/mpeg")!=0 &&
                strcmp(content_type, "audio/basic")!=0);

            int recv_len;
            GetOptionAsInt(response, "Content-Length:", recv_len);
            Recv(m_ImageBuffer, recv_len);
        }
    }
}
```

```

        BOOL isAudio = FALSE;
        if(strcmp(content_type, "audio/basic")==0)
            isAudio = TRUE;

        if(m_VideoRecvFunc!=NULL)
            (*m_VideoRecvFunc)(m_ImageBuffer, recv_len, isAudio, m_VideoContext);
    }
} catch (...) {
    return 0;
}
return 0;
}

```

b. Transmit audio data

```

AudioDataTransmit(BYTE *pAudioBuf, DWORD size)
{
    BYTE* pEncodeBuf = new BYTE[size];
    int encodeSize = 0;
    m_G711Encoder.encode(pAudioBuf, size, pEncodeBuf, encodeSize);

    CSocketHelper socket;
    socket.Open(m_hostIP, m_httpPort);
    if (socket.IsOk())
    {
        NuString str, str1, str2;
        str1.Format("--myboundary\r\nContent-Type: audio/wav\r\n");
        str2.Format("\r\n--myboundary\r\n");
        str.Format("POST /cgi-bin/view/transmit HTTP/1.0\r\nContent-Type: multipart/form-data;\r\nboundary=--myboundary\r\nContent-Length: %d\r\nAuthorization: Basic %s\r\n\r\n",
            str1.length()+encodeSize+str2.length(),g_Base64Auth);
        socket.SendStr(str);
        socket.SendStr(str1);
        socket.Send(pEncodeBuf, encodeSize);
        socket.SendStr(str2);
    }
    socket.Close();

    delete pEncodeBuf;
}

```