

VPort CGI Commands User's Manual

Fourth Edition, July 2012

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VPort CGI Commands User's Manual

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Overview

This document describes the CGI commands that are used with Moxa VPort 1-channel video encoders, 4-channel video encoders, and IP cameras. Commands are included for set/get configuration parameters and PTZ control.

The following topics are covered in this chapter:

- ❑ **Release Notes**
- ❑ **General CGI URL Syntax and Parameters**

Release Notes

Version 1.0

Includes CGI commands for the VPort 251/351/25.

Version 1.1

Includes CGI commands for the VPort 451/461.

Version 2.0

Includes CGI commands for all VPort models, 1-channel and 4-channel video encoders, and IP cameras.

Version 2.1

Fixed incorrect description, and updated to account for new VPort models.

Version 4.0

Updated for new VPort models VPort 06/36, and MxNVR-MO4.

General CGI URL Syntax and Parameters

The CGI commands are organized in function-related directories under the moxa-cgi directory, and are followed by one of two actions: *setParam.cgi* or *getParam.cgi*. The file extension of the CGI is required. Parameters are written in lower-case and structured by section and item. When the CGI request includes parameters, the parameters must be written exactly as shown in this document.

Syntax:

`http://<ip>/moxa-cgi/<action>.cgi?[<section>_<item>=<value>[&<section>_<item>=<value>...]]`

Method:

GET/POST

Response:

HTTP/1.0 200 OK\r\n

Content-Type:

text/plain\r\n

\r\n

<section>_<item>=<value>\n

<section>_<item>=<value>\n

...

<section>_<item>=<value>\n

When the action of the CGI command is setParam.cgi, <parameter pair> will not be returned. If the CGI command of getParam.cgi includes an invalid parameter name, the server will not return the value of the invalid parameter. When the CGI command of setParam.cgi includes an invalid parameter name, the server will not return the value of the invalid parameter.

Example:

`http://192.168.127.100/moxa-cgi/setParam.cgi?http_httpport=80&rtsp_rtspport=554`

Response from VPort

HTTP/1.0 200 OK\r\n

Content-Type:

text/plain\r\n

\r\n

http_httpport=80\n

rtsp_rtspport=554\n

VPort Set/Get Configuration CGI URL and Parameter Items

The following topics are covered in this chapter:

- ❑ **VPort Set/Get Configuration CGI URL and Parameter items**
 - system
 - systemio
 - security/account
 - network
 - http
 - telnet
 - smtp
 - ftp
 - ipfilter
 - upnp
 - ddns
 - snmp
 - httpevent
 - modbus
 - ethport
 - rtsp
 - multicast
 - video
- ❑ **VPort 351 and VPort 251 serial and PTZ control configuration**
 - serial
 - custcam
 - custcommand
 - camctrl
- ❑ **VPort 451/461/254/354/364/364A/VPM7304 serial and PTZ control configuration**
 - ptzport
 - comport
 - camctrl
 - camctrl##
- ❑ **MJPEG Mode Media Stream CGI URL**
- ❑ **Audio Output CGI URL**
- ❑ **PTZ Control of CGI URL Command Sets and Parameters**
 - setptzctrl.cgi
 - setpreset.cgi
- ❑ **DynaStream Control CGI URL**
- ❑ **Get Snapshot CGI URL**
- ❑ **Remove PTZ Driver CGI URL**
- ❑ **Device Reboot CGI URL**
- ❑ **Get I/O Status CGI URL**
- ❑ **System Information CGI URL**

VPort Set/Get Configuration CGI URL and Parameter items

These parameters are used for different VPort function sections. The parameters include system information, security, network, video, audio, and alarm. Every section has one or many items. Detailed information about sections and items is shown in the table below.

getparam.cgi

setparam.cgi

Section names are typed in bold-face at the top of each table (e.g., system).

Example:

http://<ip>/moxa-cgi/getParam.cgi?video_size (to get the video resolution)

http:// <ip>/moxa-cgi/setParam.cgi?video_size=2 (to set the video resolution with 2)

Character set information

Name of Character Set	Available Characters
BasicString	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789
ExtensiveString	BasicString!^*()_{ }[]:./?-
UsernameString	BasicString_.
PasswordString	BasicString !^_~`
MailAddressString	BasicString@.-_
HostAddressString	BasicString_.-
FolderString	BasicString:_-
URLString	BasicString._-/:
CGIString	BasicString_-%+&=
CustCamString	abcdefABCDEF0123456789,

system

Item	Action	Value	Description
hostname	G/S	Max 40 char (ExtensiveString)	Server name
timezone	G/S	-12 to 12	Time zone setting, for NTP usage
Date	G/S	yyyy/mm/dd	date in server
Time	G/S	hh:mm:ss	time in server
timemethod	G/S	1: Keep current date and time 2: Sync with computer time 3: Manual 4: Automatic (NTP)	Server time adjustment method
ntpserver	G/S	Char or IP, max length 40 (HostAddressString)	NTP server IP or URL
ntpserver01 ntpserver02	G/S	Char or IP, max length 40 (HostAddressString)	NTP server IP or URL *Dual NTP support by VPort 451/461/354/364
updateinterval	G/S	900: 15 Minutes 1800: 30 Minutes 2700: 45 Minutes 3600: 1 hour 86400: 1 day 604800: 1 week 259200: 1 month	Sync interval with NTP Server *Item value with 15/30/45 Minutes : VPort 451/461/354/364
firmwareversion	G	xx.yy.zz	Firmware version

firmwarebuildtime	G	yymmddhh	Firmware build time
serialnumber	G	xxxxx	Product serial number
macaddress	G	aa:bb:cc:dd:ee:ff	Mac address
modelname	G	EX: VPort 351	Model name

Example:**Change Server Time:**

http://ip/moxa-cgi/setParam.cgi?system_timemethod=3&date=yyyy/mm/dd&time=hh:mm:ss

Set NTP:

http://ip/moxa-cgi/setParam.cgi?system_timemethod=4&ntpserver=bitsy.mit.edu&timezone=8&updateinterval=3600

systemio

Item	Action	Value	Description
do01	G/S	0: Close 1: Open	DO1 Status
do02	G/S	0: Close 1: Open	DO2 Status *Only valid for models supporting Second Relay Output

Set DO 2:

http://ip/moxa-cgi/setParam.cgi?system_do02=1

security/account

Item	Action	Value	Description
username01	G	Admin	Administrator account
userpass01	G/S	Max 14 char (BasicString)	Administrator password
userattr01	G	talk camctrl do1 do2 conf talk : Audio Output camctrl : PTZ Control do1 : DO1 Control do2 : DO2 Control conf : Configuration	Administrator privileges
username02 to username11	G/S	Max 16 char (BasicString)	User2 to User10 account
userpass02 to userpass11	G/S	Max 14 char (BasicString)	User1 to User10 password
userattr 02 to userattr11	G/S	camctrl do1 do2 camctrl : PTZ Control do1 : DO1 Control do2 : DO2 Control	User2 to User 10 privileges of PTZ, DO1, and DO2 control right. *Item camctrl only support the model with PTZ Port *Item DO2 only support the model with second relay output.

network

Item	Action	Value	Description
networktype	G/S	1: Get IP address automatically 2: Use fixed IP address 3: DHCP with Auto configure	Method used to get the IP address <ul style="list-style-type: none"> Auto configure is based on DHCP option 66/67 Auto configure
ipaddress	G/S	xxx.yyy.zzz.www	IP address
subnet	G/S	xxx.yyy.zzz.www	Subnet mask
router	G/S	xxx.yyy.zzz.www	Router IP address
dns01	G/S	xxx.yyy.zzz.www	First DNS IP address
dns02	G/S	xxx.yyy.zzz.www	Second DNS IP address

http

Item	Action	Value	Description
httpport	G/S	1 to 65535	HTTP server port number Default value is 80
httpsport	G/S	1 to 65535	HTTPs port number. Default value is 443
httpmode	G/S	1: http only 2: http+https	Enable/disable https Default is http only.

telnet

Item	Action	Value	Description
enable	G/S	0 or 1	Enable/disable telnet

smtp

Item	Action	Value	Description
serverip01, serverip02	G/S	Max 40 char (HostAddressString)	First and second SMTP IP or URL
username01, username02	G/S	Max 16 char (UsernameString)	Username of first and second SMTP server
password01, password02	G/S	Max 16 char (PasswordString)	Password of first and second SMTP server
returnemail01, returnemail02	G/S	Max 80 char (MailAddressString)	Sender's email address of first and second SMTP server
mailto01, mailto02	G/S	Max 80 char (MailAddressString)	First and second recipient's email address

ftp

Item	Action	Value	Description
serverip01, serverip02	G/S	Max 40 char (HostAddressString)	First and second FTP server IP or URL
port01, port02	G/S	1 to 65535	Port Number of first and second FTP server
username01, username02	G/S	Max 60 char (UsernameString)	Username of first and second FTP server
password01, password02	G/S	Max 15 char (PasswordString)	Password of first and second FTP server
folder01, folder02	G/S	Max 40 char (FolderString)	Folder path of first and second FTP server
pasvmode01, pasvmode02	G/S	1: enable passive mode 0: disable passive mode	Passive mode of first and second SMTP server

ipfilter

Item	Action	Value	Description
allowip01 to allowip10	G/S	xxx.yyy.zzz.www	IP address of Accessible IP List 01 to 10
allowmask01 to allowmask10	G/S	xxx.yyy.zzz.www	Subnet mask of Accessible IP List 01 to 10
enable	G/S	1: enable "Accessible IP list"function 0: disable "Accessible IP list"function	Enable or disable "Accessible IP list" function

upnp

Item	Action	Value	Description
enable	G/S	0: disable UPnP 1: enable UPnP	Enable/disable UPnP function

ddns

Item	Action	Value	Description
enable	G/S	1: enable DDNS function 0: disable DDNS function	Enable or disable DDNS function
provider	G/S	1: DynDNS.org(Dynamic) 2: DynDNS.org(Custom) 3: TZO.com 4: dhs.org	Select the DDNS provider
hostname	G/S	Max 60 char (HostAddressString)	Registration host name for DDNS server
usernameemail	G/S	Max 60 char (HostAddressString)	Registration host name for DDNS server
passwordkey	G/S	Max 20 char (PasswordString)	Password or key for the DDNS account

snmp

Item	Action	Value	Description
versions	G/S	1: V1, V2c, V3 2: V1, V2c 3: V3 only	SNMP version
rocomm	G/S	Max 40 char (ExtensiveString)	V1,V2c Read Community
rwcomm	G/S	Max 40 char (ExtensiveString)	V1,V2c Write/Read Community
adminauthtype	G/S	1: No-Auth 2: MD5 3: SHA	Administrator authentication type
admindpvcy	G/S	Max 40 char (ExtensiveString)	Administrator Data Encryption Key
enableadpvcy	G/S	1: enable administrator encryption key 0: disable administrator encryption key	Enable/Disable administrator encryption key
trapserver01, trapserver02	G/S	Max 40 char (HostAddressString)	First and second TRAP server IP or URL
trapcomm01, trapcomm02	G/S	Max 40 char (ExtensiveString)	First and second TRAP community

httpevent

Item	Action	Value	Description
server01, server02, server03, server04	G/S	Max 100 char (URLString)	URL of HTTP event server (1 to 4)
username01, username02, username03, username04	G/S	Max 40 char (UsernameString)	Username of HTTP event server (1 to 4)
password01, password02, password03, password04	G/S	Max 40 char (PasswordString)	Password of HTTP event server (1 to 4)

modbus

Item	Action	Value	Description
Enable	G/S	0: Disable 1: Enable	Enable modbus/TCP <i>Models supported:</i> VPort 451/461/254/ 354/364

ethport

Item	Action	Value	Description
Mode	G/S	1: Cascade Mode 2: Redundant Mode 3: Single Port Mode	Select the link mode of Ethernets <i>Models with dual Ethernet port supported</i>
activeport	G/S	1: Enable Ethernet Port 1 2: Enable Ethernet Port 2	The link mode is set up in Single Port Mode. Value is for enabling port 1 or port 2. When one port is enabled, the other port will be disabled.

rtsp

Item	Action	Value	Description
Rtspport	G/S	1 to 65535 Default Value: 554	RTSP server port number
udpaccessname	G	Udpstream	RTSP unicast access name <i>Read only, fixed string</i>
Multicastaccessname	G	Multicaststream	RTSP multicast access name <i>Read only, fixed string</i>
httpaccessname	G	Udpstream	HTTP unicast access name <i>Read only, fixed string</i>

RTSP (Real Time Streaming Protocol): Streaming on Moxa VPorts follows the RFC 2326 standard (<http://tools.ietf.org/html/rfc2326>). VPort streaming supports different RTSP connection modes, including unicast (UDP), unicast (RTSP over TCP), unicast (RTSP over HTTP Tunnel), and multicast.

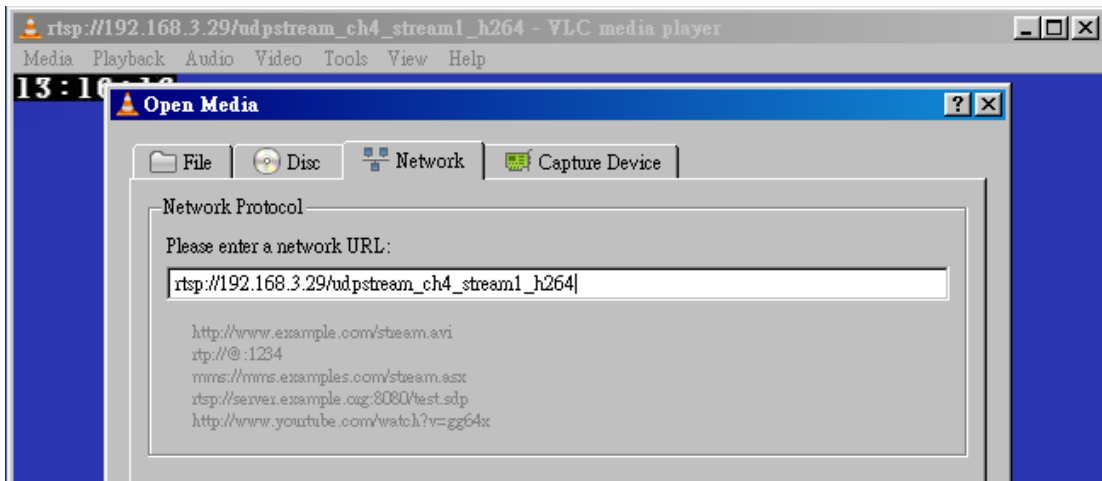
RTSP keep-alive mechanism: When using RTSP, the Moxa VPort uses the keep-alive mechanism to check whether the client is still alive or not. For the "SETUP" response, the "timeout" item is inserted into the "session" header. The value of the "timeout" item is 60 seconds. The client needs to send an "OPTIONS" request to reset the timeout timer. If the client doesn't send an "OPTIONS" value of more than 30 seconds, then the MOXA VPort sends the "SET_PARAMETER" request to the client. The client should respond to the request ("200 OK" is the usual response, but any response is okay). When the client doesn't send an "OPTIONS" request or "SET_PARAMETER" response of over 60 seconds, then the MOXA VPort will shut down the client's connection.

RTSP access naming rule for multiple video streams: An RTSP client player, such as VideoLAN VLC Media Player, can use the RTSP URL to access VPort.

RTSP URL Syntax Format supported by VPort:

rtsp://<ip address>:<rtsp port>/access Name_(channel index)_(stream index)_(codec type)

Example: rtsp://192.168.127.100:554/udpstream_ch4_stream1_h264 (test by VLC version 1.1.5)



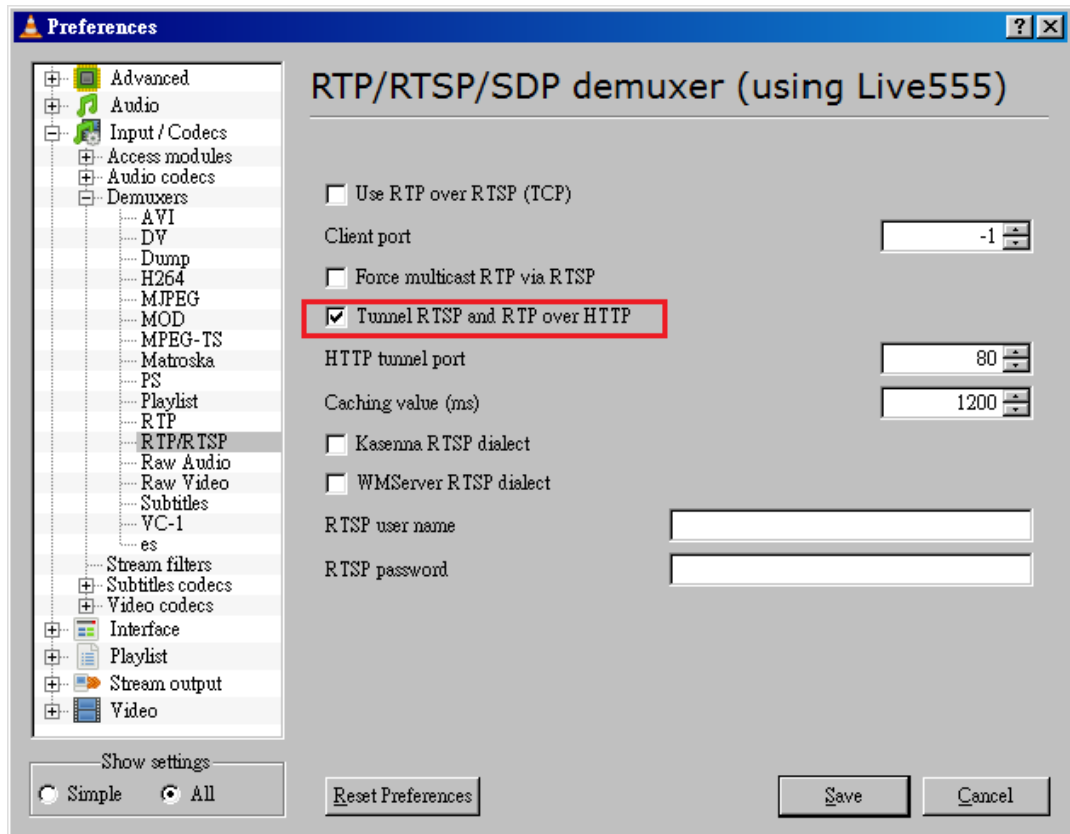
Setting an RTSP URL in VLC media player

RTSP over HTTP Tunnel access name:

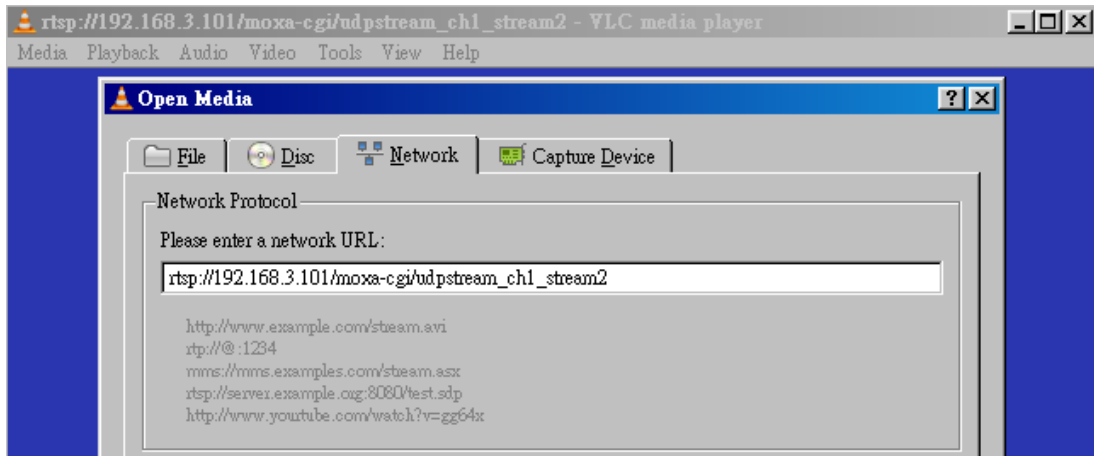
HTTP URL Syntax Format:

rtsp://<ip>:<http port>/moxa-cgi/**access name_(channel index)_(stream index)_(codec type)**

example: rtsp://192.168.127.100/moxa-cgi/udpstream_ch4_stream2



Enabling RTSP over HTTP in VLC Media Player



VLC media player works with RTSP using an HTTP URL.

Table of Unicast Access Names, for all models:

Models	Access Name
VPort 251/351/25/15	<p>MPEG4 mode: (supported by RTSP protocol)</p> <p>udpstream or udpstream_ch1 or udpstream_ch1_stream1 or udpstream_ch1_stream1_mp4v</p> <p>Only valid with selecting MPEG4 codec mode</p>
VPort 451	<p>MPEG4 codec of stream 1:</p> <p>udpstream or udpstream_ch1 or udpstream_ch1_stream1 or udpstream_ch1_stream1_mp4v</p> <p>MPEG4 codec of stream 2:</p> <p>udpstream_ch1_stream2 or udpstream_ch1_stream2_mp4v</p>
VPort 461	<p>H.264 codec of stream 1:</p> <p>udpstream or udpstream_ch1 or udpstream_ch1_stream1 or udpstream_ch1_stream1_h264</p> <p>H.264 codec of stream 2:</p> <p>udpstream_ch1_stream2 or udpstream_ch1_stream2_h264</p>
VPort 254/VPM 7304	<p>MPEG4 mode:</p> <p>udpstream(default value = udpstream_ch1_stream1) Channel #: (# = 1/2/3/4) udpstream_ch# or udpstream_ch#_stream1 or udpstream_ch#_stream1_mp4v</p> <p>* Only valid with selecting MPEG4 codec mode</p>
VPort 354	<p>MPEG4 codec:</p> <p>udpstream(default value = udpstream_ch1_stream1) Channel #: (# = 1/2/3/4) udpstream_ch# or udpstream_ch#_stream1 or udpstream_ch#_stream1_mp4v</p>

VPort 364	H264 codec: udpstream(default value = udpstream_ch1_stream1) Channel #: (# = 1/2/3/4) udpstream_ch# or udpstream_ch#_stream1 or udpstream_ch#_stream1_h264
-----------	--

Table of Multicast Access Names, for all products

Models	Access Name
VPort 251/351/25/15	MPEG4 mode: (supported by RTSP protocol) multicaststream or multicaststream_ch1 or multicaststream_ch1_stream1 or multicaststream_ch1_stream1_mp4v Only valid with selecting MPEG4 codec mode
VPort 451	MPEG4 codec of stream 1: multicaststream or multicaststream_ch1 or multicaststream_ch1_stream1 or multicaststream_ch1_stream1_mp4v MPEG4 codec of stream 2: multicaststream_ch1_stream2 or multicaststream_ch1_stream2_mp4v
VPort 461/VPort 06/26/36	H.264 codec of stream 1: multicaststream or multicaststream_ch1 or multicaststream_ch1_stream1 or multicaststream_ch1_stream1_h264 H.264 codec of stream 2: multicaststream_ch1_stream2 or multicaststream_ch1_stream2_h264
VPort 254/VPM 7304	MPEG4 mode: multicaststream (default value = multicaststream_ch1_stream1) Channel #: (# = 1/2/3/4) multicaststream_ch# or multicaststream_ch#_stream1 or multicaststream_ch#_stream1_mp4v * Only valid with selecting MPEG4 codec mode
VPort 354	MPEG4 codec: multicaststream (default value = multicaststream_ch1_stream1) Channel #: (# = 1/2/3/4) multicaststream_ch# or multicaststream_ch#_stream1 or multicaststream_ch#_stream1_mp4v
VPort 364/VPort 364A/ MxNVR-MO4	H264 codec: multicaststream (default value = multicaststream_ch1_stream1) Channel #: (# = 1/2/3/4) multicaststream_ch# or multicaststream_ch#_stream1 or multicaststream_ch#_stream1_h264

Note: MJPEG video streaming can be implemented with different streaming protocols and by using HTTP push technology (http://en.wikipedia.org/wiki/Push_technology#HTTP_server_push), which is popular with IP video related products. Refer to the section that discusses the MJPEG Mode Media Stream CGI URL.

multicast

This section describes the RTSP multicast address group parameter settings for Moxa VPort 1-channel video encoders and IP cameras.

VPort 251/351/25/15 items

Item	Action	Value	Description
ipaddress	G/S	xxx.yyy.zzz.www	Media multicast IP address
videoport	G/S	1024 to 65535 (The video and audio port numbers must be at least 2 integers apart)	Video multicast port number
audioport	G/S	1024 to 65535 (The video and audio port numbers must be at least 2 integers apart)	Audio multicast port number
ttl	G/S	1 to 255	TTL value of multicast packet

VPort 451/461/06/16/26/36 items

Item	Action	Value	Description
ipaddress01, ipaddress02	G/S	xxx.yyy.zzz.www	Media multicast IP address
videoport01, videoport02	G/S	1024 to 65535 (video port & audio port; must be separated by at least 2)	Video multicast port number
audioport01, audioport02	G/S	1024 to 65535 (video port & audio port; must be separated by at least 2)	Audio multicast port number (Only valid for models with the audio feature)
ttl01, ttl02	G/S	1 to 255	TTL value of multicast packet

VPort 451/461/16/26 support multiple H264 streaming: 01 indicates the first video stream and 02 indicates the second video stream.

multicast##

This section applies to 4-channel video encoders; "###" indicates the channel number of the video encoder (01 to 04). For example: multicast02_ipadress is the multicast group address of channel 2.

Item	Action	Value	Description
ipaddress	G/S	xxx.yyy.zzz.www	Media multicast IP address
videoport	G/S	1024 to 65535 (The video and audio port numbers must be at least 2 integers apart)	Video multicast port number
audioport	G/S	1024 to 65535 (The video and audio port numbers must be at least 2 integers apart)	Audio multicast port number
ttl	G/S	1 to 255	TTL value of multicast packet

video

This section describes CGI commands for 1-channel video encoders and IP cameras.

For example, the CGI command format to get information about the video is:

```
http://<server>/moxa-cgi/getparam.cgi?video_text
```

The CGI command format for setting the video resolution is:

```
http://<server>/moxa-cgi/setparam.cgi?video_size=1
```


VPort 251/351/25 items

Item	Action	Value	Description
text	G/S	Max 14 char (ExtensiveString)	Information about the video
imprinttimestamp	G/S	0: Not Shown 1: Shown in the caption 2: Shown in the image	The location of the shown video information
codectype	G/S	1,[1,1,(1,1)]: MPEG4 1,[1,1,(1,2)]: MJPEG	Video codec type selection
size	G/S	1: 720x480(NTSC), 720x576(PAL) 2: 640x480(NTSC), 640x576(PAL) 3: 352x240(NTSC), 352x288(PAL) 4: 320x240(NTSC), 320x288(PAL) 5: 704x480(NTSC), 704x576(PAL)	Video resolution
maxframe	G/S	1: 1 (NTSC), 1(PAL) 2: 3(NTSC), 3(PAL) 3: 10(NTSC), 8(PAL) 4: 15(NTSC), 12(PAL) 5: 30(NTSC), 25(PAL)	Maximum frame rate (fps)
keyinterval	G/S	5, 13, 30, 60, 90	Key frame interval
bitrate	G/S	20: B1 Kbps 40: B2 Kbps 60: B3 Kbps 80: B4 Kbps 100: B5 Kbps 120: B6 Kbps 140: B7 Kbps 160: B8 Kbps 180: B9 Kbps *Refer to the "VPort 251/351/25 Bit-rate mapping" table for exact Kbps values	Fixed bit rate selection: The B1 to B9 values are different for different video resolutions. The values are listed in the table below.
quant	G/S	13: Medium 11: Standard 8: Good 6: Detailed 4: Excellent	Video quality
quality	G/S	1: Fixed bit rate 2: Fixed quality	Video quality type. <i>This item only works with MPEG4. MJPEG does not support this setting.</i>
modulation	G/S	0: Auto (auto detection) 1: NTSC 2: PAL	Select video input modulation format <i>For this item, the VPort 25 is read-only.</i>
actualmodulation	G	1: NTSC 2: PAL	Auto detection result of video input modulation format

VPort 251/351/25 bit-rate mapping:

Video Size	720x480(NTSC)	704x480(NTSC)	640x480(NTSC)	352x240(NTSC)	320x240(NTSC)
Bit rate	720x576(PAL)	704x576(PAL)	640x576(PAL)	352x288(PAL)	320x288(PAL)
B1	600 Kbps	570 Kbps	534 Kbps	144 Kbps	132 Kbps
B2	1200 Kbps	1140 Kbps	1068 Kbps	288 Kbps	264 Kbps
B3	1800 Kbps	1710 Kbps	1602 Kbps	432 Kbps	396 Kbps
B4	2400 Kbps	2280 Kbps	2136 Kbps	576 Kbps	528 Kbps
B5	3000 Kbps	2850 Kbps	2670 Kbps	720 Kbps	660 Kbps
B6	3600 Kbps	3420 Kbps	3204 Kbps	864 Kbps	792 Kbps
B7	4200 Kbps	3990 Kbps	3738 Kbps	1008 Kbps	924 Kbps
B8	4800 Kbps	4560 Kbps	4272 Kbps	1152 Kbps	1056 Kbps
B9	5400 Kbps	5130 Kbps	4806 Kbps	1296 Kbps	1188 Kbps

VPort 451/461/16/26 items:

Item	Action	Value	Description
text	G/S	Max 14 char (ExtensiveString)	Information about the video
imprinttimestamp	G/S	0: Not Shown 1: Shown in the caption 2: Shown in the image	The location of shown video information
codectype	G	1,[1,2,(1,1),(2,3)]	Video codec type selection
size01_h264, size02_h264, size02_mjpg size01_mp4v, size02_mp4v, size02_mjpg	G/S	1: 720x480(NTSC), 720x576(PAL) 2: 640x480(NTSC/PAL) 3: 352x240(NTSC), 352x288(PAL) 4: 320x240(NTSC), 320x288(PAL) 5: 704x480(NTSC), 704x576(PAL) 10: 800x600 *800x600(SVGA) are only valid for VPort 16/26	Video resolution
maxframe01_h264, maxframe02_h264, maxframe02_mjpg maxframe01_mp4v, maxframe02_mp4v, maxframe02_mjpg	G/S	1 (NTSC), 1(PAL) 3(NTSC), 3(PAL) 10(NTSC), 8(PAL) 15(NTSC), 12(PAL) 30(NTSC), 25(PAL)	Maximum frame rate (fps)
keyinterval01_h264, keyinterval02_h264, keyinterval02_mjpg keyinterval01_mp4v, keyinterval02_mp4v, keyinterval02_mjpg	G	Default Value: 15	Key frame interval <i>Read only, fixed value.</i>
bitrate01_h264, bitrate02_h264, bitrate02_mjpg bitrate01_mp4v, bitrate02_mp4v, bitrate02_mjpg	G/S	10: B0 Kbps 20: B1 Kbps 40: B2 Kbps 60: B3 Kbps 80: B4 Kbps 100: B5 Kbps 120: B6 Kbps 140: B7 Kbps *Refer to the "VPort 451/461/16/26 Bit-rate mapping" table for exact Kbps values	Fixed bit rate selection: The B0 to B9 values are different for different video resolutions. The values are listed in the table below. <i>This item only works with MPEG4 or H264. MJPEG does not support this setting.</i>

quant01_h264, quant02_h264, quant02_mjpg	G/S	13: Medium 11: Standard 8: Good 6: Detailed 4: Excellent	Video quality
quant01_mp4v, quant02_mp4v, quant02_mjpg			
quality01_h264, quality02_h264	G/S	1: Fixed bit rate 2: Fixed quality	Video quality type.
quality01_mp4v, quality02_mp4v			
modulation	G/S	0: Auto (auto detection) 1: NTSC 2: PAL	Select Video input.
actualmodulation	G	1: NTSC 2: PAL	The auto detection result of video input modulation format.
frameratetype	G	1: default value	For identify frame rate setting mode.
enable01_h264, enable02_h264, enable02_mjpg	G/S	0: Disable 1: Enable	Enable/Disable Streaming
enable01_mp4v, enable02_mp4v, enable02_mjpg			

VPort 451/461 bit-rate mapping:

Video Size	720x480(NTSC)	704x480(NTSC)	640x480(NTSC)	352x240(NTSC)	176x122(NTSC)
Bit rate	720x576(PAL)	704x576(PAL)	640x480(PAL)	352x288(PAL)	320x288(PAL)
B0	267 Kbps	261 Kbps	237 Kbps	64 Kbps	16 Kbps
B1	600 Kbps	588 Kbps	534 Kbps	144 Kbps	36 Kbps
B2	1200 Kbps	1176 Kbps	1068 Kbps	288 Kbps	72 Kbps
B3	1800 Kbps	1764 Kbps	1602 Kbps	432 Kbps	108 Kbps
B4	2400 Kbps	2352 Kbps	2136 Kbps	576 Kbps	144 Kbps
B5	3000 Kbps	2940 Kbps	2670 Kbps	720 Kbps	180 Kbps
B6	3600 Kbps	3528 Kbps	3204 Kbps	864 Kbps	216 Kbps
B7	4200 Kbps	4116 Kbps	3738 Kbps	1008 Kbps	252 Kbps

VPort 16/26 bit-rate mapping:

Video Size	800x600	720x480(NTSC)	704x480(NTSC)	640x480(NTSC)	352x240(NTSC)	176x122(NTSC)
Bit rate		720x576(PAL)	704x576(PAL)	640x480(PAL)	352x288(PAL)	320x288(PAL)
B0	267 Kbps	230 Kbps	225 Kbps	170 Kbps	56 Kbps	14 Kbps
B1	600 Kbps	518 Kbps	507 Kbps	384 Kbps	126 Kbps	31 Kbps
B2	1200 Kbps	1036 Kbps	1014 Kbps	768 Kbps	253 Kbps	63 Kbps
B3	1800 Kbps	1555 Kbps	1521 Kbps	1152 Kbps	379 Kbps	95 Kbps
B4	2400 Kbps	2073 Kbps	2028 Kbps	1536 Kbps	506 Kbps	126 Kbps
B5	3000 Kbps	2592 Kbps	2535 Kbps	1920 Kbps	633 Kbps	158 Kbps
B6	3600 Kbps	3110 Kbps	3042 Kbps	2304 Kbps	759 Kbps	290 Kbps
B7	4200 Kbps	3628 Kbps	4549 Kbps	2688 Kbps	886 Kbps	221 Kbps

VPort 06/36 items:

Item	Action	Value	Description
text	G/S	Max 14 char (ExtensiveString)	Information about the video
imprinttimestamp	G/S	0: Not Shown 1: Shown in the caption 2: Shown in the image	The location of shown video information
codectype	G	1,[1,2,(1,1),(2,3)]	Video codec type selection
size01_h264, size02_h264, size02_mjpg \	G/S	1: 720x480(NTSC), 720x576(PAL) 2: 640x480(NTSC/PAL) 3: 352x240(NTSC), 352x288(PAL) 5: 704x480(NTSC), 704x576(PAL) 10: 800x600 11:1280x720 12:1280x800	Video resolution
maxframe01_h264, maxframe02_h264, maxframe02_mjpg	G/S	1 (NTSC), 1(PAL) 3(NTSC), 3(PAL) 10(NTSC), 8(PAL) 15(NTSC), 12(PAL) 30(NTSC), 25(PAL)	Maximum frame rate (fps)
keyinterval01_h264, keyinterval02_h264, keyinterval02_mjpg	G	Default Value: 15	Key frame interval <i>Read only, fixed value.</i>
bitrate01_h264, bitrate02_h264, bitrate02_mjpg	G/S	400 ~ 12000	Fixed bit rate Kbps.
quant01_h264, quant02_h264, quant02_mjpg	G/S	13: Medium 11: Standard 8: Good 6: Detailed 4: Excellent	Video quality
quality01_h264, quality02_h264	G/S	1: Fixed bit rate 2: Fixed quality	Video quality type.
modulation	G/S	0: Auto (auto detection) 1: NTSC 2: PAL	Select Video input.
actualmodulation	G	1: NTSC 2: PAL	The auto detection result of video input modulation format.
frameratetype	G	1:default value	For identify frame rate setting mode.
enable01_h264, enable02_h264, enable02_mjpg	G/S	0: Disable 1: Enable	Enable/Disable Streaming

video##

This section applies to 4-channel video encoders; "###" indicates the channel number of the video encoder (01 to 04), for example:

To get the information about the channel 2 video, the CGI command format:

http://<server>/moxa-cgi/getparam.cgi?video02_text

To set the size of channel 4 video resolution, the CGI command format:

http://<server>/moxa-cgi/setparam.cgi?video04_size=1

VPort 254/VPM7304/VPort 354/VPort 364/VPort 364A/MxMVR-MO4 items

Item	Action	Value	Description
text	G/S	Max 14 char (ExtensiveString)	Information about the video
imprinttimestamp	G/S	0: Not Shown 1: Shown in the caption 2: Shown in the image	The location of shown video information
codectype	G	1,[1,1,(1,1)]: MPEG4	Video codec type selection for VPort 254/ VPM7304
		1,[1,1,(1,2)]: MJPEG	
		1,[1,2,(1,1),(2,2)]	Video codec type selection for VPort 354
size	G/S	1,[1,1,(1,6)]	Video codec type selection for VPort 364
		1: 720x480(NTSC), 720x576(PAL) 2: 640x480(NTSC), 640x576(PAL) 3: 352x240(NTSC), 352x288(PAL) 4: 320x240(NTSC), 320x288(PAL) 5: 704x480(NTSC), 704x576(PAL)	Video resolution for VPort 254/ VPM7304 <i>If Frame Rate Mode is used, only 352x240(288) and 320x240(288) resolutions are supported.</i>
		3: 352x240(NTSC), 352x288(PAL) 5: 704x480(NTSC), 704x576(PAL) 6: 704x240(NTSC), 704x288(PAL) 7: 224x160(NTSC), 224x192(PAL) 8: 176x112(NTSC), 176x144(PAL)	Video resolution for VPort 354
size01_h264 size01_mjpg	G/S	1: 720x480(NTSC), 720x576(PAL) 2: 640x480(NTSC), 640x480(PAL) 3: 352x240(NTSC), 352x288(PAL) 5: 704x480(NTSC), 704x576(PAL) 8: 176x112(NTSC), 176x144(PAL)	Video resolution for VPort 364
maxframe	G/S	NTSC Frame Rate Mode:1, 3, 5, 10, 15, 30 Resolution Mode:1, 2, 3, 7 PAL Frame Rate Mode:1, 3, 5, 8, 12, 25 Resolution Mode:1, 2, 3, 6	Maximum frame rate (fps) for VPort 254 and VPM7304
maxframe	G/S	NTSC 1, 3, 5, 10, 15, 20, 25, 30 PAL 1, 3, 5, 8, 12, 16, 20, 25	Maximum frame rate (fps) for VPort 354
maxframe01_h264 maxframe01_mjpg	G/S	NTSC h264: 1, 3, 5, 10, 15, 20, 25, 30 mjpeg: 1,3,5,10,15 PAL h264: 1, 3, 5, 8, 12, 16, 20, 25 mjpeg: 1, 3, 5, 8, 12	Maximum frame rate (fps) for VPort 364 <i>The frame rate setting h264 and mjpg will depend on each other.</i>
keyinterval	G/S	5, 15, 30, 60, 90	Key frame interval for VPort 254 and VPM7304
keyinterval	G/S	5, 15, 30, 60, 90	Key frame interval for VPort 354

keyinterval01_h264	G	Default Value: 15	Key frame interval for VPort 364 <i>Read only, fixed value.</i>
bitrate	G/S	20: B1 Kbps 40: B2 Kbps 60: B3 Kbps 80: B4 Kbps 100: B5 Kbps 120: B6 Kbps 140: B7 Kbps 160: B8 Kbps 180: B9 Kbps *Refer to the "VPort 254/VPM 7304 bit-rate mapping" table below for exact Kbps values	Fixed bit rate selection for VPort 254 and VPM 7304: <i>The B1 to B9 values are different for different video resolutions. The values are listed in the table below.</i>
bitrate	G/S	20: B1 Kbps 40: B2 Kbps 60: B3 Kbps 80: B4 Kbps 100: B5 Kbps 120: B6 Kbps 140: B7 Kbps *Refer to the "VPort 354 bit-rate mapping" table below for exact Kbps values	Fixed bit rate selection for VPort 354: <i>The B1 to B9 values are different for different video resolutions. The values are listed in the table below.</i>
bitrate01_h264	G/S	10: B0 Kbps 20: B1 Kbps 40: B2 Kbps 60: B3 Kbps 80: B4 Kbps 100: B5 Kbps 120: B6 Kbps 140: B7 Kbps *Refer to the "VPort 364/364A/MxNVR-MO4 bit-rate mapping" table below for exact Kbps values	Fixed bit rate selection for VPort 364/364A/MxNVR-MO4: <i>The B1 to B9 values are different for different video resolutions. The values are listed in the table below.</i>
quant	G/S	13: Medium 11: Standard 8: Good 6: Detailed 4: Excellent	Video quality for VPort 254/VPM 7304.
quant			Video quality for VPort 354.
quant01_h264 quant01_mjpg			Video quality for VPort 364.
quality	G/S	1: Fixed bit rate 2: Fixed quality	Video quality type for VPort 254 and VPM7304. <i>This item only works with MPEG4. MJPEG does not support this setting.</i>
quality	G/S	1: Fixed bit rate 2: Fixed quality	Video quality type for VPort 354. <i>This item only works with MPEG4. MJPEG does not support this setting.</i>
quality01_h264	G/S	1: Fixed bit rate 2: Fixed quality	Video quality type for VPort 364.

modulation	G/S	0: Auto (auto detection) 1: NTSC 2: PAL	Select video input modulation format
actualmodulation	G	1: NTSC 2: PAL	The auto detection result of video input Modulation format
frameratetype	G	1: default value	For identifying the frame rate setting mode.
enable	G/S	0: Disable 1: Enable	Enable/Disable streaming for VPort 254 and VPM7304.
enable	G/S	0: Disable 1: Enable	Enable/Disable streaming for VPort 354.
enable01_h264, enable01_mjpg	G/S	0: Disable 1: Enable	Enable/Disable streaming for VPort 364.
enablesnapshot	G/S	0: Disable 1: Enable	Enable Snapshot CGI
mode	G/S	1: Frame Rate Mode 2: Resolution Mode	Codec Mode Selection. Only applies to VPort 254 and VPM7304

VPort 254/VPM 7304 bit-rate mapping table

Video Size	720x480(NTSC)	704x480(NTSC)	640x480(NTSC)	352x240(NTSC)	320x240(NTSC)
Bit rate	720x576(PAL)	704x576(PAL)	640x576(PAL)	352x288(PAL)	320x288(PAL)
B1	600 Kbps	570 Kbps	534 Kbps	144 Kbps	132 Kbps
B2	1200 Kbps	1140 Kbps	1068 Kbps	288 Kbps	264 Kbps
B3	1800 Kbps	1710 Kbps	1602 Kbps	432 Kbps	396 Kbps
B4	2400 Kbps	2280 Kbps	2136 Kbps	576 Kbps	528 Kbps
B5	3000 Kbps	2850 Kbps	2670 Kbps	720 Kbps	660 Kbps
B6	3600 Kbps	3420 Kbps	3204 Kbps	864 Kbps	792 Kbps
B7	4200 Kbps	3990 Kbps	3738 Kbps	1008 Kbps	924 Kbps
B8	4800 Kbps	4560 Kbps	4272 Kbps	1152 Kbps	1056 Kbps
B9	5400 Kbps	5130 Kbps	4806 Kbps	1296 Kbps	1188 Kbps

VPort 354 bit-rate mapping table

Video Size	720x480(NTSC)	704x240(NTSC)	352x240(NTSC)	224x160(NTSC)	176x112(NTSC)
Bit rate	720x576(PAL)	704x288(PAL)	352x288(PAL)	224x192(PAL)	176x144(PAL)
B1	600 Kbps	300 Kbps	150Kbps	132 Kbps	36 Kbps
B2	1200 Kbps	600 Kbps	300 Kbps	264 Kbps	72 Kbps
B3	1800 Kbps	900 Kbps	450 Kbps	396 Kbps	108 Kbps
B4	2400 Kbps	1200 Kbps	600 Kbps	528 Kbps	144 Kbps
B5	3000 Kbps	1500 Kbps	750 Kbps	660 Kbps	180 Kbps
B6	3600 Kbps	1800 Kbps	900 Kbps	792 Kbps	216 Kbps
B7	4200 Kbps	2100 Kbps	1050 Kbps	924 Kbps	252 Kbps

VPort 364/VPort 364A/MxNVR-MO4 bit-rate mapping table

Video Size	720x480(NTSC)	704x480(NTSC)	640x480(NTSC)	352x240(NTSC)	176x112(NTSC)
Bit rate	720x576(PAL)	704x576(PAL)	640x480(PAL)	352x288(PAL)	176x144(PAL)
B0	267 Kbps	261 Kbps	237 Kbps	64 Kbps	16 Kbps
B1	600 Kbps	588 Kbps	534 Kbps	144 Kbps	36 Kbps
B2	1200 Kbps	1176 Kbps	1068 Kbps	288 Kbps	72 Kbps
B3	1800 Kbps	1764 Kbps	1602 Kbps	432 Kbps	108 Kbps
B4	2400 Kbps	2352 Kbps	2136 Kbps	576 Kbps	144 Kbps
B5	3000 Kbps	2940 Kbps	2670 Kbps	720 Kbps	180 Kbps
B6	3600 Kbps	3528 Kbps	3204 Kbps	864 Kbps	216 Kbps
B7	4200 Kbps	4116 Kbps	3738 Kbps	1008 Kbps	252 Kbps

Image

This section applies to 1-channel video encoders or IP cameras.

Item	Action	Value	Description
mode	S	Save	Save the adjusted image setting to the server
brightness	G/S	-5 to 5	Video brightness adjustment
contrast	G/S	-5 to 5	Video contrast adjustment
hue	G/S	-5 to 5	Video hue adjustment
saturation	G/S	-5 to 5	Video saturation adjustment

image##

This section applies to 4-channel video encoders; "##" indicates the channel number of the video encoder (01/02/03/04). For example: image04_hue, HUE value of Channel 4.

Item	Action	Value	Description
Mode	S	Save	Saves the adjusted image setting to the server
Brightness	G/S	-5 to 5	Video brightness adjustment
Contrast	G/S	-5 to 5	Video contrast adjustment
Hue	G/S	-5 to 5	Video hue adjustment
Saturation	G/S	-5 to 5	Video saturation adjustment

audio

Item	Action	Value	Description
source	G/S	1: Line in 2: Microphone	Audio input type

NOTE The VPort 364-M12 has 2 audio input sources: source01 and source02

VPort 351 and VPort 251 serial and PTZ control configuration

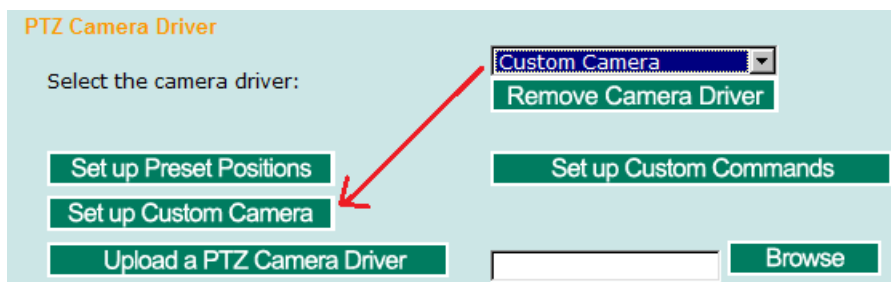
serial

This section covers PTZ port settings of the **VPort 251** and **VPort 351** video encoders. Selecting the PTZ driver requires choosing the related PTZ camera. When the PTZ camera receives PTZ control CGI commands (refer to page??), "move up" for example, it will translate into a PTZ serial command pattern that is sent to the PTZ camera through the serial interface. If the VPort is configured for driverless Transparent PTZ Control, the VPort will convert the serial data to Ethernet packets, but will not translate any commands.

CGI command example for setting the PTZ UART interface mode to RS485:

http://<ip>/moxa-cgi/setparam.cgi?serial_uartmode=1

Item	Action	Value	Description
camid	G/S	0 to 255	PTZ camera ID (or address)
uartmode	G/S	0: RS232 1: RS485 2: RS422	UART interface mode
baudrate	G/S	110, 300, 600, 1200, 2400, 3600, 4800, 7200, 9600, 19200, 38400, 57600	Baud Rate (bps)
databit	G/S	5 to 8	Data bit
dtopbit	G/S	1, 1.5, 2	Stop bit
paritybit	G/S	0: None 1: Odd 2: Even	Parity bit
ptzdriver	G/S	1: Transparent PTZ 2: Custom Camera 3: Pelco D 4: Pelco P 5: DynaColor	PTZ camera selection *Custom Camera: in this mode, VPort will send the command string that is defined in the related "custcam_customcmd" CGI commands.



Relation between the Custom Camera PTZ driver and Custom Camera Command setting.

custcam

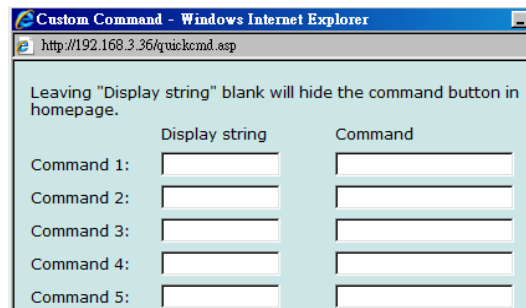
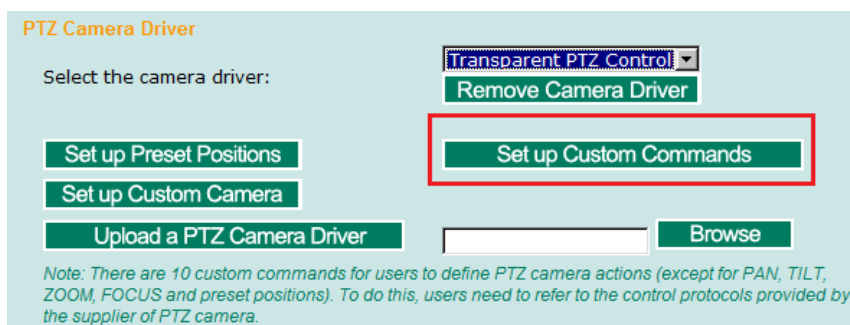
In this section we define the PTZ command strings for assigning the PTZ driver the "Custom Camera" (**serial_ptzdriver=2**) mode. The VPort will send this string pattern to the PTZ camera through the PTZ port.

Item	Action	Value	Description
customcmd01 to custtomcmd10	G/S	Max. 60 char (CustCamString)	01: "Up" command 02: "Down" command 03: "Left" command 04: "Right" command

			05: "Zoom In" command 06: "Zoom Out" command 07: "Focus Near" command 08: "Focus Far" command 09: "Home" command 10: "Stop" command
--	--	--	--

custcommand

Item	Action	Value	Description
speedlinkname01 to speedlinkname10	G/S	Max. 8 char (BasicString)	User defined command name
speedlinkcmd01 to speedlinkcmd10	G/S	Max. 60 char (CustCamString)	User defined command instruction



Interface for defining custom commands to specify PTZ command strings.

camctrl

Item	Action	Value	Description
presetname01 to presetname20	G	Max 60 char	Name of preset position of camera control

VPort 451/461/254/354/364/364A/VPM7304 serial and PTZ control configuration

ptzport

This section covers PTZ port settings for video encoders; 2 different modes are used: Specific PTZ driver mode and Transparent Mode. A suitable PTZ driver must be used for PTZ driver mode, in which case the VPort receives PTZ control CGI commands (refer to page ??) such as "move up." It will be translated into a PTZ serial command pattern that is sent to the PTZ camera through the serial interface.

CGI command example for setting the PTZ UART interface mode to RS485:

http://<ip>/moxa-cgi/setparam.cgi?ptzport_uartmode=1

Item	Action	Value	Description
baudrate	G/S	110, 300, 600, 1200, 2400, 3600, 4800, 7200, 9600, 19200, 38400, 57600, 115200	Baud rate (bps)
databit	G/S	5 to 8	Data bit
paritybit	G/S	0: None 1: Odd 2: Even	Parity bit
stopbit	G/S	1, 1.5, 2	Stop bit
uartmode	G/S	0: RS232 1: RS485 2: RS422	UART interface mode
ptzdriver	G/S	1: Transparent PTZ 2: Custom Camera 3: Pelco D 4: Pelco P 5: DynaColor 6: Cohu	PTZ camera selection
controlmode	G/S	0: Transparent PTZ Control 1: Specific PTZ Driver	PTZ control mode.
speedlinkname01 to speedlinkname24	G/S	Max. 8 char (BasicString)	User defined command name. These commands can be used for extended PTZ control.
speedlinkcmd01 to speedlinkcmd24	G/S	Max. 60 char (CustCamString)	User defined string pattern for command instruction
customcmd01 to customcmd10	G/S	Max. 60 char (CustCamString)	01: "Up" command 02: "Down" command 03: "Left" command 04: "Right" command 05: "Zoom In" command 06: "Zoom Out" command 07: "Focus Near" command 08: "Focus Far" command 09: "Home" command 10: "Stop" command *PTZ driver=2(Custom Camera) VPort will use these commands

comport

Some VPorts have a DB9 COM port, which can act as the NPort's COM port. This port can be used to control the PTZ camera, or for pure Serial-to-Ethernet communications, just like a Moxa NPort series product. For Real-COM driver details, please refer to VPort ActiveX SDK Plus, which includes the windows driver installation utility. ***This section only applies to models with a COM Port serial interface.**

Item	Action	Value	Description
method	G/S	0: Serial Device Control 1: PTZ Camera Control	Select the software function for the COM Port.
baudrate	G/S	110, 300, 600, 1200, 2400, 3600, 4800, 7200, 9600, 19200, 38400, 57600, 115200	Baudrate (bps)
databit	G/S	5 to 8	Data bits
paritybit	G/S	0: None 1: Odd 2: Even	Parity bit
stopbit	G/S	1, 1.5, 2	Stop bit
uartmode	G/S	0: RS232 1: RS485 2: RS422	UART Interface mode
mode	G/S	0: RealCom Mode 1: TCP Server Mode 2: TCP Client Mode	Serial to Ethernet Operation Mode
rlcomdelimiter1, rlcomdelimiter2	G/S	0 to 255	Data Packing delimiter
rldelimiterenable1, rldelimiterenable2	G/S	0: Disable 1: Enable	Data Packing delimiter Enable
rlforcetransmit	G/S	0 to 65535	Force Transmit time (msec)
srvacttime	G/S	0 to 65535	Inactivity time
srvdelimiter1, srvdelimiter2	G/S	0 to 255	Data Packing delimiter
srvdelimiterenable1, srvdelimiterenable2	G/S	0: Disable 1: Enable	Data Packing delimiter Enable
srvforcetransmit	G/S	0 to 65535	Force Transmit time (msec)
srvlocaltcpport	G/S	1 to 65535	Local TCP Port
cliacttime	G/S	0 to 65535	Inactivity time
clidelimiter1, clidelimiter2	G/S	0 to 255	Data Packing delimiter
clidelimiterenable1, clidelimiterenable2	G/S	0: Disable 1: Enable	Data Packing delimiter Enable
cliforcetransmit	G/S	0 to 65535	Force Transmit time (msec)
clidestipaddress	G/S	xxx.yyy.zzz.www	Destination IP address
clidesttcpport	G/S	0 to 65535	Destination TCP Port
clidesigenable	G/S	0: Disable 1: Enable	Enable Local Port
clidestlocaltcpport	G/S	0 to 65535	Local TCP Port
tcpconnecton	G/S	0: start up 1: any character	Connect on
ptzdriver	G/S	1: Transparent PTZ 2: Custom Camera 3: Pelco D 4: Pelco P 5: DynaColor	PTZ camera selection

		6: Cohu	
controlmode	G/S	0: Transparent PTZ Control 1: Specific PTZ Driver	PTZ control mode.
speedlinkname01 to speedlinkname24		Max. 8 char (BasicString)	User defined command name. These commands can be used for extended PTZ control.
speedlinkcmd01 to speedlinkcmd24		Max. 60 char (CustCamString)	User defined string pattern for command instruction
customcmd01 to customcmd10		Max. 60 char (CustCamString)	01: "Up" command 02: "Down" command 03: "Left" command 04: "Right" command 05: "Zoom In" command 06: "Zoom Out" command 07: "Focus Near" command 08: "Focus Far" command 09: "Home" command 10: "Stop" command <i>Note: If PTZ driver=2 (Custom Camera), the VPort will use these commands.</i>

camctrl

This parameter is used in 1-channel video servers for interacting with the PTZ camera through the serial bus.

Item	Action	Value	Description
presetname01 to presetname20	G	Max 60 char	Name of preset position of camera control
Camid	G/S	0 to 255	PTZ camera ID (or address)
uartport	G/S	0: PTZ port 1: COM port	Serial interface. <i>Note: Only applicable in models with two serial interfaces</i>

camctrl##

This section applies to 4-channel video encoders; "##" indicates the channel number of the video encoder (01/02/03/04). For example, camctrl04_camid indicates the PTZ camera ID of channel 4.

Item	Action	Value	Description
presetname01 to presetname20	G	Max. 60 char	Name of preset position of camera control
camid	G/S	0 to 255	PTZ camera ID (or address)
uartport	G/S	0: PTZ port 1: COM port	Serial interface. <i>Note: Only supports models with 2 serial interfaces.</i>

MJPEG Mode Media Stream CGI URL

JPEG video streaming is implemented using HTTP push technology (http://en.wikipedia.org/wiki/Push_technology#HTTP_server_push), which is popular for IP video products. VLC media player is also compatible with the MJPEG HTTP push protocol.

mjpeg.cgi

pcmu.cgi

These command are used to get the MJPEG video stream and audio stream.

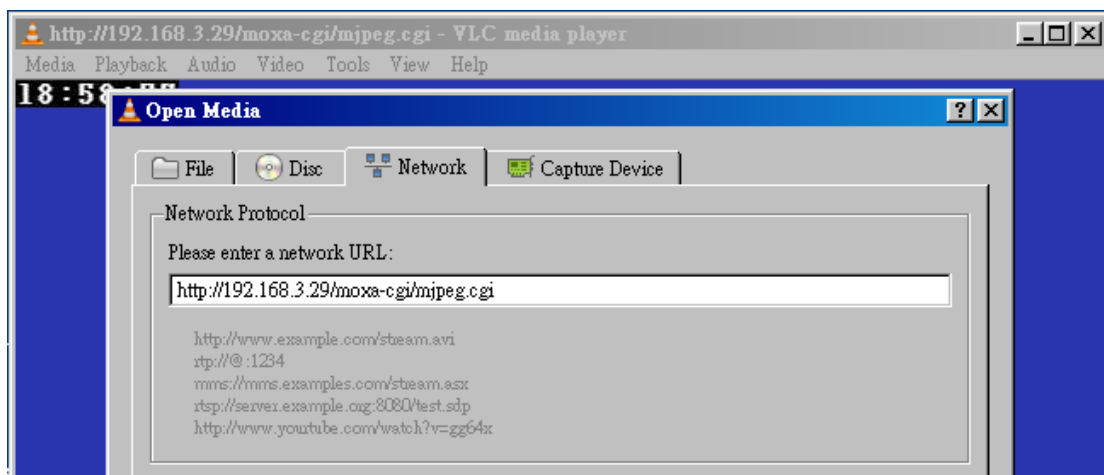
Example: To get channel 2's MJPEG video stream:.

<http://192.168.127.100/moxa-cgi/mjpeg.cgi?channel=2>

Example: To get audio stream:

<http://192.168.127.100/moxa-cgi/pcmu.cgi>

Item	Value	Description
channel	1 to 4	Specify channel index. Defaults to 1 if not specified



VLC media player example.

Audio Output CGI URL

VPorts that support an audio output interface support audio post. The mechanism for uploading audio streaming to the VPort device is based on **HTTP POST method protocol**. The VPort device only supports audio PCM(μ -law) codec in 16 bits, at an 8 KHz sampling rate. The suggested data length buffer is 256 to 1024 bytes.

audiopost.cgi

Example: To uploading audio stream:

<http://192.168.127.100/moxa-cgi/audiopost.cgi>

PTZ Control of CGI URL Command Sets and Parameters

PTZ Control CGIs are used to control the PTZ action of cameras and devices. The CGIs are organized by function-related directories under the moxa-cgi directory, and are followed by one of two actions: **setptzctrl** and **setpreset**. The file extension of the CGI is required. The first parameter **move** indicates the command of this request. The next parameter is **item**; note that "item" must be written exactly the same as shown in this document.

NOTE This section is for VPorts that have a PTZ port or COM port for controlling a camera.

setptzctrl.cgi

These commands are used to control PTZ movement.

Example: To command channel 1's PTZ camera to pan up at speed 3:

<http://192.168.127.100/moxa-cgi/setptzctrl.cgi?move=up&speedtilt=3&channel=1>

Example: To command channel 1's PTZ camera to go to preset position 12:

<http://192.168.127.100/moxa-cgi/setptzctrl.cgi?move=gopreset&recall=12>

Item	Value	Description
channel	1 to 4	Specifies the channel index; defaults to 1 if not specified.
move	up, down, left, right, home upleft, upright, downleft, downright, stop, pstop, tstop, fstop, zstop, irisstop	PTZ movement includes 8 directions plus the home position: stop: stop all action pstop: pan stop tstop: tilt stop fstop: focus stop zstop: zoom stop irisstop: iris stop <i>Note: all of these commands need to match the implementation of the PTZ driver.</i>
move	zout, zin, focusnear, focusfar, autofocus, irisclose, irisopen, autoiris	zout: zoom out zin: zoom in
move	osdon, osdoff, osdup, osddown, osdleft, osdright	Operations of PTZ OSD Menu <i>E.g.: Pelco's Preset95 OSD menu.</i>
move	wiperon, wiperoff, washon, washoff	Wash and wiper operations of PTZ camera.
speedtilt	1 to 16	Increase or decrease the tilt speed of the PTZ device.
speedpan	1 to 16	Increase or decrease the pan speed of the PTZ device.
speedzoom	1 to 16	Increase or decrease the zoom speed of the PTZ device.
move	gopreset	Go to preset position of PTZ Camera
recall	1 to 25	Preset position index

setpreset.cgi

This function is used to edit the preset position of the PTZ camera. There are three “move” values, **clearpreset**, and **addpreset**.

- **addpreset** is used to add the current PTZ position to a preset position with a specified *presetindex*.
- **clearpreset** is used to remove a preset position.

The maximum number of preset positions is 25.

NOTE Preset positions actually keep in the PTZ camera. VPort only execute the recall command regarding the index of preset list.

Example: To add preset position 4 into channel 2's PTZ camera.

http://192.168.127.100/moxa-cgi/setpreset.cgi?move=addpreset&channel=2&presetindex=4&speedtilt=6&speedpan=8&speedzoom=2

Item	Value	Description
channel	1 to 4	Specify channel index. Defaults to 1 if not specified.
move	addpreset	Add a new preset position
move	clearpreset	Clear the preset position information stored in the PTZ camera
presetindex	1 to 25	Preset position index
speedtilt	1 to 16	Adding preset with speed of tilt/pan/zoom action
speedpan	1 to 16	Adding preset with speed of tilt/pan/zoom action.
speedzoom	1 to 16	Adding preset with speed of tilt/pan/zoom action.

DynaStream Control CGI URL

Moxa DynaStream is a useful and easy way to control VPort video streaming's bandwidth consumption. DynaStream can be configured to automatically adjust the frame rate for a set period of time when triggered.

dynastream.cgi

These commands are used to control DynaStream.

Example: To enable DynaStream in channel 2 for 15 second duration:

http://192.168.127.100/moxa-cgi/dynastream.cgi?channel=2&mode=15

Example: To stop DynaStream immediately:

http://192.168.127.100/moxa-cgi/dynastream.cgi?mode=0

Item	Value	Description
channel	1 to 4	Specifies the channel index; defaults to 1, if not specified
mode	0 to 999	How long (in seconds) that DynaStream will last once triggered. 0: disable
mode	alwaysrun	Always enable DynaStream
mode	forcestop	Disable DynaStream

Get Snapshot CGI URL

The Get Snapshot CGI is used to get a JPEG snapshot from a Moxa VPort.

getsnapshot.cgi

Example:

<http://192.168.127.100/moxa-cgi/getsnapshot.cgi?chindex=2>

Item	Value	Description
chindex	1 to 4	Specify channel index. Default value is 1, if omit this item.

Remove PTZ Driver CGI URL

The Remove PTZ driver CGI is used to remove the customer uploaded PTZ driver.

removeptzdriver.cgi

Example:

<http://192.168.127.100/moxa-cgi/removeptzdriver.cgi?index=6&channel=1>

Item	Value	Description
channel	1 to 4	Specifies the channel index; the default value is 1, if this item is omitted.
index	1 to 10	Specifies which camera driver is to be removed.

Device Reboot CGI URL

The Reboot CGI is used to reboot the Moxa VPort.

reboot.cgi

Example:

<http://192.168.127.100/moxa-cgi/reboot.cgi>

Get I/O Status CGI URL

This CGI command is used to get the LED status and information about devices.

getiostatus.cgi

Example:

<http://192.168.127.100/moxa-cgi/getiostatus.cgi>

VPort Reply Parameters:

Information Item	Value	Description
SYS	1: Red 2: Green	Status of STAT LED in device
PWR	0: no power input 1: power input	PWR1: power 1 PWR2: power 2 *depend on number of power inputs on VPort
FAULT	0: OFF 1: ON	Status of Fault LED
PTZ	0: No data transmit	

	1: data transmit	
VIDEO	0: no video signal 1: video signal detected	Status of video signal
SD	0: no SD card inserted 1: SD card insert	Status of SD insertion
DI	0: non-active 1: active	DI1 to DI# Note: Depends on the number of digital inputs on the VPort.
DO	0: non-active 1: active	DO1 to DO# Note: Depends on the number of replay outputs on the VPort.

System Information CGI URL

The system information CGI command is used to get VPort system information.

systeminfo.cgi

Example:

<http://192.168.127.100/moxa-cgi/systeminfo.cgi>

VPort Reply Parameters:

Information Item	Value	Description
Model	String	Model name
HostName	Max 40 chars	Server name
RTSPPort	1 to 65535	RTSP port number
CameraNumber	1 to N	Camera number
UartNumber	0 to N	Uart number
DINumber	0 to N	DI number
DONumber	0 to N	DO number
VideoCodec	MP4V, MJPG, H264	Supported video codec type. (MPEG4, MJPEG, H264)
AudioCodec	PCMU	Supported audio codec type.
FirmwareVersion	xx.yy.zz	Firmware version
MotionDetectionMethod	3	Number of motion detection windows
StreamingSupport	1,[1,1,(1,3,2)]	All supported codec type by VPort model
StreamingNowCodec	1,[1,1,(1,1)]	Codec type for current configuration
MagicCode	00008001	To identified module type
Deinterlace	0 or 1	Build-in de-interlace processing
MACAddress	xx:xx:xx:xx:xx	Mac Address of device

Description: format of StreamingSupport and StreamingNowCodec:

StreamingSupport:

Channels,[Channel1,**Streams**,(S1,**Codectype**,**Mode**),(S2,**CodecType**,**Mode**)...],[Channel2,**Streams**,(S1,**Codec type**,**Mode**),(S2,**CodecType**,**Mode**)...],.....

StreamingNowCodec:

Channels,[Channel1,**Streams**,(S1,**Codectype**),(S2,**CodecType**)...],[Channel2,**Streams**,(S1,**Codectype**),(S2,**CodecType**)...],.....

Channels	video input numbers for MOXA VPort.
Streams	video stream numbers of video stream support by each video input.
Mode	2 = Dual stream, 1 = Single stream
Codectype	MPEG4(=1), MJPEG(=2), H264(=4) ("OR" all of multiple codec supported)
Channel(n)	Configuration of n-th channel.
S(n)	Configuration of n-th stream.

Examples:

Example 1:

StreamingSupport =1,[1,1,(1,3,2)]

- There is only one video input channel.
- Channel can only output one video stream.
- Stream1 can only provide MPEG4 or MJPEG stream at the same time.

Example 2:

StreamingSupport =2,[1,2,(1,2,1),(2,3,1)],[2,1,(1,3,2)]

- There are two video input channels.
- First channel provides two different streams.
- Stream1 can only support MJPEG stream.
- Stream2 can provide MJPEG and MPEG4 at the same time.
- Second channel provides one video stream. This stream can only provide MJPEG or MPEG4 stream at the same time.

Example 3:

StreamingNowCodec =1,[1,1,(1,1)]

- There is one video input channel.
- This input channel only provides one stream and the stream codec type is MPEG4.

Example 4:

StreamingNowCodec =1,[1,1,(1,2)]

- There is one video input channel.
- This input channel only provides one stream and the stream codec type is MJPEG.