

The MV4 IP Multiviewer is capable of being controlled from a variety of third-party manufacturers, supported systems include Crestron, Extron, AMX, RTI, QSC and Symterix. The API is a human readable key value pair accessible via, HTTP GET/POST, UDP unicast, and UDP multicast. Please note that although most of the HTTP examples below are shown as GET for simplicity, use of POST for HTTP API is recommended. UDP API is more efficient if your control system supports it.

When using the API, it is important to keep in mind that all changes are volatile. This means that without a save, changes will be lost upon reboot!

All commands start with CMD=START and end with CMD=END to allow multiple key value pairs per command sequence. All keys and values are case sensitive.

#### Architecture:

Key Value System	Port/IP Address	Notes
HTTP	Port 80	
UDP Socket	Port 8000	Will listen on unicast and multicast
Multicast Address	226.0.0.19	
HTTP GET	Port 80	Queries
HTTP POST	Port 80	Set values
&		Separates Key Value Pairs
=		Separates Keys and Values
CMD=START		Start of all commands
CMD=END		End of all commands

#### HTTP GET:

Require authentication (Default: username=admin, password=admin)

**Example Query** `http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&QUERY.ALL=TRUE&CMD=END`

#### HTTP POST:

**Example:** Set decoder to connect to the encoder at 192.168.8.101 and display the stream

1. URL: `http://192.168.8.101/cgi-bin/wapi.cgi`
2. Request Header: "Content-Type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to "Basic YWRtaW46YWRtaW4="
4. Post Data:  
"CMD=START&UNIT.ID=ALL&STREAM.HOST=192.168.8.101&STREAM.CONNECT=TRUE&CMD=END"

**Example:** Flash Unit LEDs

#### GET:

`http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&UNIT.FU=TRUE&CMD=END`

#### POST:

1. `http://192.168.8.101/cgi-bin/wapi.cgi`
2. Request Header: "Content-type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to Basic YWRtaW46YWRtaW4=
4. POST Data: "CMD=START&UNIT.ID=ALL&UNIT.FU=TRUE&CMD=END"

Key	Default Value	Values	Applies To:	Notes
AUDIO.MUTE	FALSE	TRUE, FALSE	DECODER	Mute/Unmute the audio in the HDMI output for monitors where the volume may get inadvertently set.
AUDIO.VOLUME	80	0-100	DECODER	Set the analog volume. For Encoders it sets the input volume, for Decoders, the output volume.
MV.BORDER_OFF	None	{CHX MODE}	ENCODER	Used to turn boarder off, per channel. CHX= {1, 2, 3, 4, ALL} MODE= {FULL, QUAD, POP, PIP, ALL}
MV.BORDER_ON	None	{CHX MODE}	ENCODER	Used to turn boarder on, per channel. CHX= {1, 2, 3, 4, ALL} MODE= {FULL, QUAD, POP, PIP, ALL}
MV.BUTTON	None	UP, DOWN, ENTER, BACK, RES, INFO, AUDIO, MODE	ENCODER	Used to emulate the front panel buttons of the MV4.
MV.CUSTOM_MOV	None	{RES CHX HS VS}	ENCODER	Only available in Custom Mode. Used to set the custom position of a channel. RES={4k,1080p} CHX={4k:1,2 or 1080p:1,2,3,4} HS=Horz start, VS=Vert start
MV.CUSTOM_POS	None	{RES CHX HS VS HW VW}	ENCODER	Only available in Custom Mode. Used to set the custom size and position of a channel. RES={4k,1080p} CHX={4k:1,2 or

				1080p:1,2,3,4} HS=Horz start, VS=Vert start, HW=Horz Size, VW=Vert Size
MV.RESOLUTION	1080	4K, 1080	ENCODER	Used to set the MV4 encoder/HDMI output resolution.
MV.FDEFAULT	None	TRUE	ENCODER	Used to perform factory default.
MV.HRESET	None	TRUE	ENCODER	Used to reset/reboot the MV4.
STREAM.AUDIO	DECODER_1	DECODER_1, DECODER_2, DECODER_3, DECODER_4	ENCODER	Used to select which decoder audio is being sent with AV stream/HDMI output being transmitted by the MV4 encoder.
STREAM.HOST	None	Any valid Unicast IP Address of an ENCODER	DECODER	IP address of the encoder that the decoder is tuned in to.
STREAM.MODE	multicast	multicast, unicast	ENCODER	Changes steam mode between multicast and unicast.
STREAM.VIDEO	QUAD	DECODER_1, DECODER_2, DECODER_3, DECODER_4, QUAD, PIP, POP	ENCODER	Used to set the mode of the AV stream/HDMI output being transmitted by the MV4 encoder.
VIDEO.GENLOCK	False	True, False	DECODER	Allows the decoder output to free run and not be genlocked to the source encoder. Useful for some projectors that cannot accommodate wide clock range. Should be set to TRUE for video wall setups.
VIDEO.HDCP_FORCE_ON	TRUE for D4X00	TRUE, FALSE	DECODER	This determines whether a unit forces HDCP for all

	FALSE for E4X00			sources or sinks (TRUE) or allows non-encrypted to go through natively (FALSE). When FALSE switching can be slow if you need to renegotiate the HDMI link.
VIDEO.INFO_TEXT	TRUE	TRUE, FALSE	DECODER	Enables (TRUE) or Disables (FALSE) the showing of IP addresses and connection information on the splash screen
VIDEO.OSD_TEXT	NONE	Text to be displayed on OSD	DECODER	Can be used to put user text onto the screen as an overlay.
VIDEO.FORMAT	SOURCE	Source, (Codes from Video Format Table below)	DECODER	This value controls the output scaling of the decoder. See Table 1 for Values to Codes
VIDEO.OUTPUT	NORMAL	NORMAL, OFF, STANDBY, LOGO	DECODER	OFF is HDMI output disabled. STANDBY is HDMI output blank screen. LOGO is HDMI output of splash screen. NORMAL is normal operation
VIDEO.POWER_SAVE	FALSE	TRUE, FALSE	DECODER	After VIDEO.SOURCE_TIMEOUT when there is no IP Video Stream detected, TRUE sets HDMI output to off, FALSE sets output to display the splash screen
VIDEO.SOURCE_TIMEOUT	TRUE	TRUE, FALSE	DECODER	When set to TRUE, decoder output will switch to off or splash screen depending upon setting of VIDEO.POWER_SAVE

				when there is no IP Video Stream detected
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**Example:** Set MV4 to quad mode, displaying all 4 sources simultaneously

**GET:**

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&STREAM.VIDEO=QUAD&CMD=END

**POST:**

1. http://192.168.8.101/cgi-bin/wapi.cgi
2. Request Header: "Content-type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to Basic YWRtaW46YWRtaW4=
4. POST Data: "CMD=START&UNIT.ID=ALL& STREAM.VIDEO=QUAD&CMD=END"

**Example:** Set MV4 to display decoder 1 only

**GET:**

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&STREAM.VIDEO=DECODER\_1&CMD=END

**POST:**

1. http://192.168.8.101/cgi-bin/wapi.cgi
2. Request Header: "Content-type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to Basic YWRtaW46YWRtaW4=
4. POST Data: "CMD=START&UNIT.ID=ALL& STREAM.VIDEO=DECODER\_1&CMD=END"

**Example:** Emulate pressing the MV4 front panel Mode button to change the MV4 output mode

**GET:**

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.BUTTON=MODE&CMD=END

**POST:**

1. http://192.168.8.101/cgi-bin/wapi.cgi
2. Request Header: "Content-type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to Basic YWRtaW46YWRtaW4=
4. POST Data: "CMD=START&UNIT.ID=ALL& MV.BUTTON=MODE&CMD=END"

**Example:** Turn boarder off for channel 2 when in Quad Mode

**GET:**

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.BOARDER\_OFF=2|QUAD&CMD=END

**POST:**

1. http://192.168.8.101/cgi-bin/wapi.cgi
2. Request Header: "Content-type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to Basic YWRtaW46YWRtaW4=
4. POST Data: "CMD=START&UNIT.ID=ALL&MV.BOARDER\_OFF=2|QUAD&CMD=END"

**Example:** Turn boarder on for channel 2 when in Quad Mode

**GET:**

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.BOARDER\_ON=2|QUAD&CMD=END

**POST:**

1. http://192.168.8.101/cgi-bin/wapi.cgi
2. Request Header: "Content-type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to Basic YWRtaW46YWRtaW4=
4. POST Data: "CMD=START&UNIT.ID=ALL&MV.BOARDER\_ON=2|QUAD&CMD=END"

**Example:** Set the custom size and position for channel 1 in Custom Mode: Resolution 1080P, Position 300x100, Size 1920x1080

**GET:**

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.CUSTOM\_POS=1080p|1|300|100|1920|1080&CMD=END

**POST:**

1. http://192.168.8.101/cgi-bin/wapi.cgi
2. Request Header: "Content-type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to Basic YWRtaW46YWRtaW4=
4. POST Data: "CMD=START&UNIT.ID=ALL&MV.CUSTOM\_POS=1080p|1|300|100|1920|1080&CMD=END"

**Example:** Move channel 1 to a specific position in Custom Mode: Resolution 1080P, Position 300x100

**GET:**

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.CUSTOM\_MOV=1080p|1|300|100&CMD=END

**POST:**

1. http://192.168.8.101/cgi-bin/wapi.cgi
2. Request Header: "Content-type", "application/x-www-form-urlencoded"
3. Request Header: "Authorization", "Basic " + Base64EncodedString("admin:admin") this evaluates to Basic YWRtaW46YWRtaW4=
4. POST Data: "CMD=START&UNIT.ID=ALL&MV.CUSTOM\_MOV=1080p|1|300|100&CMD=END"