The MV5 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	226.1.2.20	
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/cgibin/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
MV.BORDER_OFF	None	CHX	ENCODER	Used to turn border off, per channel. CHX= {1, 2, 3, 4, ALL}
MV.BORDER_ON	None	CHX	ENCODER	Used to turn border on, per channel. CHX= {1, 2, 3, 4, ALL}
MV.BUTTON	None	UP, DOWN, LEFT, RIGHT, OSD, ENTER, AUDIO, BACK, MODE, RES	ENCODER	Used to emulate the front panel buttons of the MV5.
MV.CUSTOM_POS	None	{HS|VS|HW|VW}	ENCODER	Only available in Custom Mode. Used to set the custom size and position of a channel. HS=Horz start, VS=Vert start, HW=Horz Size, VW=Vert Size
MV.RESOLUTION	1080	1080P, 2160P	ENCODER	Used to set the MV5 encoder/HDMI output resolution.
MV.FDEFAULT	None	TRUE	ENCODER	Used to perform factory default.
MV.HRESET	None	TRUE	ENCODER	Used to reset/reboot the MV5.
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 MV5 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, DECODER	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 MV5 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	SOURCE for Encoder, 1_X for Decoder	REJECT, SOURCE, 1_X, 2_X	ENCODER, DECODER	This determines HDCP setting for the encoder or decoder. REJECT (Encoder Only) = tells the source the encoder is not HDCP compliant device, SOURCE = will pass on the encrypted or non-encrypted signals from the source, 1_X = will request version 1.x encryption from source and will also apply 1.x encryption to the AV stream, 2_X = will request version 2.x encryption from source and will also apply 1.x encryption to the AV stream
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

Example: Set MV5 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 MV5 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 MV5 front panel Mode button to change the MV5 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 border off for channel 2

GET:

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.BORDER_OFF=2&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.BORDER_OFF=2&CMD=END”

Example: Turn border on for channel 2

GET:

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.BORDER_ON=2&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.BORDER_ON=2&CMD=END”

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

GET:

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

Example: 2 Vertically Centered Windows (4K):

GET:

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&STREAM.VIDEO=PIP&MV.CUSTOM_POS=1|0|540|1920|1080&MV.CUSTOM_POS=2|1920|540|1920|1080&MV.CUSTOM_POS=3|0|540|1|1&MV.CUSTOM_POS=4|1920|540|1|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=PIP&MV.CUSTOM_POS=1|0|540|1920|1080&MV.CUSTOM_POS=2|1920|540|1920|1080&MV.CUSTOM_POS=3|0|540|1|1&MV.CUSTOM_POS=4|1920|540|1|1&CMD=END”

Example: 3 Windows (4K):

GET:

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&STREAM.VIDEO=PIP&MV.CUSTOM_POS=1|0|0|1920|1080&MV.CUSTOM_POS=2|1920|0|1920|1080&MV.CUSTOM_POS=3|960|1080|1920|1080&MV.CUSTOM_POS=4|960|1080|1|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=PIP&MV.CUSTOM_POS=1|0|0|1920|1080&MV.CUSTOM_POS=2|1920|0|1920|1080&MV.CUSTOM_POS=3|960|1080|1920|1080&MV.CUSTOM_POS=4|960|1080|1|1&CMD=END”

Example: 4 Windows (4K) (Virtual Quad):

GET:

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&STREAM.VIDEO=PIP&MV.CUSTOM_POS=1|0|0|1920|1080&MV.CUSTOM_POS=2|1920|0|1920|1080&MV.CUSTOM_POS=3|0|1080|1920|1080&MV.CUSTOM_POS=4|1920|1080|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&STREAM.VIDEO=PIP&MV.CUSTOM_POS=1|0|0|1920|1080&MV.CUSTOM_POS=2|1920|0|1920|1080&MV.CUSTOM_POS=3|0|1080|1920|1080&MV.CUSTOM_POS=4|1920|1080|1920|1080&CMD=END”

Example: 2 Vertically Centered Windows (1080P):

GET:

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.CUSTOM_POS=1|0|270|960|540&MV.CUSTOM_POS=2|960|270|960|540&MV.CUSTOM_POS=3|0|270|1|1&MV.CUSTOM_POS=4|960|270|1|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&MV.CUSTOM_POS=1|0|270|960|540&MV.CUSTOM_POS=2|960|270|960|540&MV.CUSTOM_POS=3|0|270|1|1&MV.CUSTOM_POS=4|960|270|1|1&CMD=END”

Example: 3 Windows (1080P):

GET:

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&MV.CUSTOM_POS=1|0|0|960|540&MV.CUSTOM_POS=2|960|0|960|540&MV.CUSTOM_POS=3|480|540|960|540&MV.CUSTOM_POS=4|480|540|1|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&MV.CUSTOM_POS=1|0|0|960|540&MV.CUSTOM_POS=2|960|0|960|540&MV.CUSTOM_POS=3|480|540|960|540&MV.CUSTOM_POS=4|480|540|1|1&CMD=END”

Example: 4 Windows (1080P) (Virtual Quad):

GET:

http://admin:admin@192.168.8.101/cgi-bin/wapi.cgi?CMD=START&UNIT.ID=ALL&STREAM.VIDEO=PIP&MV.CUSTOM_POS=1|0|0|960|540&MV.CUSTOM_POS=2|960|0|960|540&MV.CUSTOM_POS=3|0|540|960|540&MV.CUSTOM_POS=4|960|540|960|540&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=PIP&MV.CUSTOM_POS=1|0|0|960|540&MV.CUSTOM_POS=2|960|0|960|540&MV.CUSTOM_POS=3|0|540|960|540&MV.CUSTOM_POS=4|960|540|960|540&CMD=END”