Magewell Pro Convert Decoder

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Introduction

For Pro Convert, we have rich APIs for developers to interact with products such as obtaining basic information about the device (device name, firmware version and etc.), modifying device configuration and upgrading firmware. These APIs are based on the HTTP protocol and are lightweight, connectionless interfaces that respond to data in JSON format. This document gives you a detailed understanding of each API's functions and request method.

APIs in this document apply to these products:

- Pro Convert for $NDI^{\mathbb{R}}$ to AIO
- Pro Convert for $NDI^{\textcircled{R}}$ to HDMI
- Pro Convert for $NDI^{\mathbb{R}}$ to HDMI 4K
- Pro Convert for $NDI^{\mathbb{R}}$ to SDI

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API Agreement

Overview

- Request protocol: HTTP
- Request mode: by default, GET is used to request data and commit, and POST is used to upload a file.
- Request URL: http://IP/mwapi?method=xxx¶m1=value1¶m2=value2...
- Return data format: when the status code is 200, it returns JSON data, otherwise it returns HTTP status codes.
- Login authentication: carry sid=xxxxxxxx in cookies

Response Example

The JSON formatted data is as follows, the attribute of status refers to API Status Codes. The status 0 indicates successful requests, otherwise the request is failed.

```
{
  status: 0,
  enable: true,
  enable-web-control: true
  ...
}
```

API Status Codes

{

0: MW_STATUS_SUCCESS, 1: MW_STATUS_PENDING, 2: MW_STATUS_TIMEOUT, 3: MW_STATUS_INTERRUPTED, 4: MW_STATUS_TRY_AGAIN, 5: MW_STATUS_NOT_IMPLEMENTED, 6: MW_STATUS_UNKNOWN_ERROR, 7: MW_STATUS_INVALID_ARG, 8: MW_STATUS_NO_MEMORY, 9: MW_STATUS_UNSUPPORTED, 10: MW_STATUS_FILE_BUSY, 11: MW_STATUS_DEVICE_BUSY, 12: MW_STATUS_DEVICE_LOST, 13: MW_STATUS_IO_FAILED, 14: MW_STATUS_READ_FAILED, 15: MW_STATUS_WRITE_FAILED, 16: MW_STATUS_NOT_EXIST, 17: MW_STATUS_TOO_MANY, 18: MW_STATUS_TOO_LARGE, 19: MW_STATUS_OVERFLOW, 20: MW_STATUS_UNDERFLOW, 21: MW_STATUS_FORMAT_ERROR, 22: MW_STATUS_FILE_EXISTS, 23: MW_STATUS_FILE_TYPE_ERROR, 24: MW_STATUS_DEVICE_TYPE_ERROR, 25: MW_STATUS_IS_DIRECTORY, 26: MW_STATUS_READ_ONLY, 27: MW_STATUS_RANGE_ERROR, 28: MW_STATUS_BROKEN_PIPE, 29: MW_STATUS_NO_SPACE, 30: MW_STATUS_NOT_DIRECTORY, 31: MW_STATUS_NOT_PERMITTED, 32: MW_STATUS_BAD_ADDRESS, 33: MW_STATUS_SEEK_ERROR, 34: MW_STATUS_CROSS_DEVICE_LINK, 35: MW_STATUS_NOT_INITIALIED, 36: MW_STATUS_AUTH_FAILED, 37: MW_STATUS_NOT_LOGGED_IN, 38: MW_STATUS_WRONG_STATE, 39: MW_STATUS_MISMATCH, 40: MW_STATUS_VERIFY_FAILED, 41: MW_STATUS_CONSTRAINT_VIOLATION }

Cloud API Status Code

{			
	errLogin	= -200,	// The device has not been logged-in when being called by the cloud.
	errSn	= -109,	// Invalid serial number
	errParam	= -10,	// parameters error
	errDevice	= -4,	// unsupported device
	errPasswd	= -1,	// invitation code error
	retSuccess	= 0,	
	retRepeat	= 1,	// repeat registration
	retRegistering	= 2,	// registering
	retInit	= 27,	<pre>// parameters of Cloud is in initialization state.</pre>
	retOnline	= 35,	// Cloud platform is online
	retOffline	= 36,	<pre>// Cloud platform is offline</pre>
	retDeleted	= 104,	
	retWaiting	= 103,	
	retRefused	= 102,	
	retAccepted	= 101,	
}			

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DEMO: Command Line Tool

To call Pro Convert Decoder API, wget and curl are supported in Linux, Windows, and Mac OS.

The location of cookie files varies according to the OS. Adjust the file path for your situation. The following examples are for Linux.

wget

1 Save your login information on cookies

wget --save-cookies=/var/tmp/sid.txt --keep-session-cookies "http://192.168.66.1/mwapi?method=login&id=Admin&pas s=e3afed0047b08059d0fada10f400c1e5" -q -0 -

2 List all users

```
wget --load-cookies=/var/tmp/sid.txt --keep-session-cookies "http://192.168.66.1/mwapi?method=get-users" -q -O -
```

3 Add a new user

```
wget --load-cookies=/var/tmp/sid.txt --keep-session-cookies "http://192.168.66.1/mwapi?method=add-user&id=test&p
ass=c4ca4238a0b923820dcc509a6f75849b" -q -0 -
```

curl

1 Save your login information on cookies

```
curl --cookie-jar /var/tmp/sid.txt "http://192.168.66.1/mwapi?method=login&id=Admin&pass=e3afed0047b08059d0fada1
0f400c1e5"
```

2 List all users

```
curl --cookie /var/tmp/sid.txt "http://192.168.66.1/mwapi?method=get-users"
```

3 Add a new user

curl --cookie /var/tmp/sid.txt "http://192.168.66.1/mwapi?method=add-user&id=test&pass=c4ca4238a0b923820dcc509a6
f75849b"

DEMO: Node.js

This chapter introduces how to call the Pro Convert Decoder API in Node.js.

Download DEMO: pro-convert-api-demo-nodejs.zip

DEMO Structure

pro-convert-api-demo-nodejs
|
|-- httpUtils.js // based on HTTP get and upload in Node.js
|-- DEMO_EDID.bin // the default upload file when upload.js calls upload-edid, replace it with your own EDID fi
le
|-- get.js // request data using GET
|-- upload.js // upload file using POST

Requirements

- Operating System: Linux, OS X or Windows.
- Node.js Runtime: 8.x or newer; it is recommended that you use LTS Releases.

Running Mode

1.Run the DEMO in the terminal

cd pro-convert-api-demo-nodejs

2.Run get.js

node get

3.Run upload.js

node upload

DEMO: C

Requirements

Operating System: Linux, OS X or Windows.

Compilation

- Prepare the cURL for transferring data with URLs, reference to the curl tutorial.
- Download DEMO: pro-convert-api-demo-c.zip
- Compile "pro_convert_curl.c", and link to "libcurl"
- Build the pro_convert_curl.exe file

Example

• Navigate into the bin directory and run the pro_convert_curl.exe

```
cd pro-convert-api-demo-c/bin/linux
./pro_convert_curl <hostip:port>
```

• Sample response

```
***** 1. login *****
login response data:
{
    "status": 0
}
***** 2. get caps *****
get caps response data:
{
    "status": 0,
    "max-input-width": 4096,
    "max-input-height": 2160,
    "max-output-width": 4096,
    "max-output-height": 2160,
    "has-input": true,
    "has-output": true,
    "has-loop-through": true,
    "has-fan": true,
    "has-input-edid": true,
    "has-output-edid": true,
    "has-sdcard": true,
    "has-ptz": true
}
***** 3. upload EDID *****
upload EDID response data:
{
    "status": 0,
```

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}

ping

To detect whether the device is accessible without login.

This function is used to ensure that the device has restarted completely after firmware update , reset all settings or change IP add ress .

HTTP Request

GET http://ip/mwapi?method=ping

Parameter	Description
method	ping

Response Body

{
 "status": 0
}

Name	Description
status	0: the device is ready. Refer to API Status Codes to find specific description for other values.

sync-time

Use the interface to synchronize clock with UTC with administrative right.

To ensure that the system time is accurate, it is recommended to sync after administrative login.

HTTP Request

GET http://ip/mwapi?method=sync-time&date=xxx&time=xxx

Parameter	Description
method	sync-time
date	UTC date format: dd/MM/yyyy
time	UTC time format: HH:mm:ss

Response Body

{	
"status":	0
}	

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

Example

http://192.168.66.1/mwapi?method=sync-time&date=03%2F19%2F2019&time=07:02:26

get-caps

The specifications vary considerably between different Pro Convert products. Use the interface to get the specifications of the connected product.

HTTP Request

GET http://ip/mwapi?method=get-caps

Parameter	Description
method	get-caps

Response Body

```
{
  "status": 0,
  "max-input-width": 1920,
  "max-input-height": 1080,
  "max-output-width": 4096,
  "max-output-height": 2160,
  "has-input": false,
  "has-output": true,
  "has-loop-through": false,
  "has-fan": false,
  "has-input-edid": false,
  "has-output-edid": true,
  "has-sdcard": true,
  "has-ptz": false,
  "has-ndi": true,
  "has-alpha-disp-mode": true
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
max-input-width	Shows the total number of horizontal pixels of the input signal.
max-input-height	Shows the total number of vertical pixels of the input signal.
max-output-width	Shows the total number of horizontal pixels of the output signal.
max-output-height	Shows the total number of vertical pixels of the output signal.
has-input	True indicates there is an input interface, otherwise it is false.
has-output	True indicates whether there is an output interface, otherwise it is false.
has-loop-through	True indicates there is a loopthrough interface, otherwise it is false.
has-fan	True indicates there is a fan in the device, otherwise it is false.
has-sdcard	True indicates the device supports SD card, otherwise it is false.
has-ptz	True indicates the device supports PTZ function, otherwise it is false.
has-input-edid	True indicates the device supports input port EDID, otherwise it is false.
has-output-edid	True indicates the device supports output port EDID, otherwise it is false.
has-ndi	True indicates the device supports NDI, otherwise it is false.
has-alpha-disp- mode	True indicates the device supports alpha display, otherwise it is false.

reboot

Reboot the Pro Convert as an administrator and log in again after rebooting.

The reboot process may take a few minutes. You can use ping to determine whether the restart is finished.

HTTP Request

http://ip/mwapi?method=reboot

Parameter	Description
method	reboot

Response Body

{
 "status": 0
}

Name	Description
status	0 indicates that the request was accepted successfully, and the device will restart. Refer to API Status Codes to find specific description for other values.

get-auto-reboot

Use the interface to get the configuration information of auto reboot.

HTTP Request

GET http://ip/mwapi?method=get-auto-reboot

Parameter	Description
method	get-auto-reboot

Response Body

"enab "hour "min"	
} Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

	· · · · · · · · · · · · · · · · · · ·
enable	True indicates the auto reboot function is enabled, otherwise it is false.
week- flags	The sum of the masks for the selected days. The masks for Monday to Sunday are: 1, 2, 4, 8, 16, 32, 0. For example: When Monday and Wednesday are selected, week-flags=1+4=5
hour	Time, 24-hour format. Value ranges from 0 to 23.
min	Minute. Value ranges from 0 to 59.

The set time needs to be converted to UTC time.

set-auto-reboot

Use the interface to configure auto reboot.

HTTP Request

GET http://ip/mwapi?method=set-auto-reboot&enable=true&week-flags=2&hour=12&min=21

Parameter	Description
method	set-auto-reboot
enable	True indicates the auto reboot function is enabled, otherwise it is false.
week-flags	The sum of the masks for the selected days. The masks for Monday to Sunday are: 1, 2, 4, 8, 16, 32, 0. For example: When Monday and Wednesday are selected, week-flags=1+4=5
hour	Time, 24-hour format. Value ranges from 0 to 23.
min	Minute. Value ranges from 0 to 59.

The set time needs to be converted to UTC time.

Response Body

```
{
    "status": 0
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-reset-all-permission

Use the interface to determine whether to provide the reset all settings function to users.

Only available when the decoder is connected to Ethernet over USB. The reset all settings interface refers to reset-all-settings.

HTTP Request

GET http://ip/mwapi?method=get-reset-all-permission

Parameter	Description
method	get-reset-all-permission

Response Body

```
{
  "status": 0,
  "reset-all-enabled": true
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
reset-all- enabled	True indicates to offer the reset function, otherwise it is false.

reset-all-settings

Use the interface to reset all settings back to the default values.

Only available when the decoder connect to Ethernet over USB.

The reset process may take a few minutes, and all configuration data will be lost. After resetting, the device will restart, you can use the ping interface to check the device state.

HTTP Request

GET http://ip/mwapi?method=reset-all-settings

Parameter	Description
method	reset-all-settings

Response Body

```
{
   status: 0,
   ip-addr: "192.168.66.1",
   estimated-duration: 120
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
ip-addr	Shows the USB RNDIS IP address, which may be changed after resetting if user has changed the IP address.
estimated- duration	Shows the estimated wait time for resetting in seconds.

login

Use the interface to log in. The cookie will carry the Session ID after you log in successfully. For example, Cookie: sid=e0f6b33dd2b575eff40733b3778beaab.

HTTP Request

GET http://ip/mwapi?method=login&id=xxx&pass=xxx

Parameter	Description
method	login
id	Shows user ID.
pass	Shows MD5 encrypted password.

Response Body

```
{
    "status": 0
}
```

Name	Description
status	0 indicates that the request was accepted successfully. 36 indicates that the user name or password is incorrect. Refer to API Status Codes to find specific description for other values.

Example

http://192.168.66.1/mwapi?method=login&id=Admin&pass=e3afed0047b08059d0fada10f400c1e5

logout

Use the interface to log out and return to the "SIGN IN" page.

HTTP Request

GET http://ip/mwapi?method=logout

Parameter	Description
method	logout

Response Body

}	{ "status": 0			
	}			

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-summary-info

Use the interface to retrieve status and parameters of the Pro Convert device, including device information, Ethernet status, USB RNDIS status, and NDI status.

HTTP Request

GET http://ip/mwapi?method=get-summary-info

Parameter	Description
method	get-summary-info

Response Body

JSON structure is as follows:

```
{
   "status": 0,
   "device": {...},
   "ethernet": {...},
   "rndis": {...},
   "ndi": {...}
}
```

1. Request Body

"status": 0

Name	Description
status	0 indicates a successful data acquisition. Refer to API Status Codes to find specific description for other values.

2. Basic Information (device {...})

```
"device": {
    "name": "Pro Convert",
    "model": "NDI to HDMI",
    "serial-no": "101",
    "hw-revision": "A",
    "fw-version": "1.1.157",
    "up-to-date": true,
    "output-state": "connected",
    "cpu-usage": 60.00,
    "memory-usage": 37.46,
    "core-temp": 69.23,
    "board-id": 0,
    "up-time": 19972,
    "sd-size": 0
}
```

Name	Description
name	Shows the family name of the Pro Convert unit.
model	Shows the model name of the Pro Convert unit.
serial-no	Shows the serial number of the Pro Convert unit.
hw-revision	Shows the hardware version of the Pro Convert unit, the value ranges from A to Z.
fw-version	Shows the current firmware version that's installed in the Pro Convert unit.
up-to-date	True indicates that the firmware is up to date, otherwise it shows false.
output-state	Shows whether a loop-through device is connected to the Pro Convert device, including unconnected, unsupported, active.
cpu-usage	Shows the current CPU usage (the load on the processor, shown as a percentage) of the Pro Convert device.
memory-usage	Shows the current memory usage.

core-temp	Shows the current temperature (°C) of the unit's processor.	
board-id	Shows the rotary switch number, from 0 to F.	
up-time	Shows the elapsed time since the Pro device's last boot-up, in seconds.	
sd-size	Shows the SD memory in MB.	

3. Ethernet Status (ethernet {...})

```
"ethernet": {
   "state": "disconnected",
   "mac-addr": "70:B3:D5:75:D2:41",
   "ip-addr": "0.0.0.0",
   "ip-mask": "0.0.0.0",
   "gw-addr": "0.0.0.0",
   "dns-addr": "0.0.0.0",
   "tx-speed-kbps": 0,
   "rx-speed-kbps": 0
}
```

Name	Description
state	Shows Ethernet connection status, including down, disconnected, 10m, 100m, 1000m, 2500m, 5000m, 10000m.
mac-addr	Shows the MAC address.
ip-addr	Shows the IP address.
ip-mask	Shows the subnet mask address.
gw-addr	Shows the gateway address.
dns-addr	Shows the DNS server address.
tx-speed-kbps	Shows the Ethernet send speed in Kbps.
rx-speed-kbps	Shows the Ethernet receive speed in Kbps.

4. USB RNDIS Status (rndis {...})

```
"rndis": {
  "state": "high-speed",
  "ip-addr": "192.168.66.1",
  "tx-speed-kbps": 0,
  "rx-speed-kbps": 0
}
```

Name	Description
state	Shows Ethernet over USB connection status, including disconnected, full-speed, high-speed, super-speed-5g, super-speed- 10g.
ip-addr	Shows Ethernet over USB IP Address.
tx-speed- kbps	Shows current Ethernet over USB send speed, in Kbps.
rx-speed- kbps	Shows current Ethernet over USB receive speed, in Kbps.

```
"ndi": {
   "name": "#00 (B401180706020)",
   "connected": true,
   "tally-preview": false,
   "tally-program": false,
   "audio-drop-frames": 0,
   "video-drop-frames": 0,
   "video-bit-rate": 0,
   "video-bit-rate": 0,
   "video-height": 0,
   "video-height": 0,
   "video-field-rate": 0.00,
   "audio-num-channels": 0,
```

```
"audio-sample-rate": 0,
"audio-bit-count": 16,
"audio-jitter": 26,
"video-jitter": 7
}
```

Name	Description
name	Shows NDI source name.
connected	True indicates the NDI function is enabled, otherwise it is false.
tally-preview	True indicates the NDI stream has been selected to the Preview bus by any client, otherwise it is false.
tally-program	True indicates that the NDI stream has been selected to the Program bus by any client, otherwise it is false.
audio-drop-frames	Shows dropped audio frames in the previous second.
audio-bit-rate	Shows the audio bitrate for the previous second in Kbps.
audio-num-channels	Shows the total number of NDI audio output channels.
audio-sample-rate	Shows the sampling rate of the audio output, such as 32000, 44100,
audio-bit-count	Shows the sampling bit depth of the audio output, including 16, 20, 24,
video-drop-frames	Shows dropped video frames in the previous second.
video-bit-rate	Shows the video bitrate for the previous second in kbps.
video-width	Shows the total number of pixels, horizontally.
video-height	Shows the total number of pixels, vertically.
video-scan	Shows the video scan format, including progressive, interlaced, psf.
video-field-rate	Shows the video frame, including 24, 25, 29.97, 30, 48, 50, 59.94, 60.
audio-jitter	Shows the audio difference between the estimated and actual arrival time of a frame of source image.
video-jitter	Shows the video difference between the estimated and actual arrival time of a frame of source image.

get-signal-info

Use the interface to retrieve the input signal information.

HTTP Request

```
GET http://ip/mwapi?method=get-signal-info
```

Parameter	Description
method	get-signal-info

Response Body

JSON structure is as follows:

```
{
   "status": 0,
   "signal-info-types": ["video-info", "audio-info", "hdmi-info", "sdi-info", "info-frames"], // The items in the
array correspond to the following property one by one
   "video-info": {...},
   "audio-info": {...},
   "hdmi-info": {...},
   "sdi-info": {...}
}
```

Status

"status": 0

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

Signal type

```
"signal-info-types": [
  "video-info", // video status
  "audio-info", // audio status
  "hdmi-info", // HDMI status
  "sdi-info", // SDI status
  "info-frames" // InfoFrame
]
```

VIDEO STATUS (video-info: {...})

```
"video-info": {
    "codec": "uncompressed",
    "width": 1920,
    "height": 1080,
    "scan": "progressive",
    "field-rate": 60.00,
    "color-depth": 8,
    "color-format": "rgb",
    "aspect-ratio": "16:9",
    "sampling": "4:4:4",
    "quant-range": "full",
    "sat-range": "full",
    "frame-struct": "2d"
}
```

Name	Description
codec Shows the video codecs, including uncompressed, dsc, mpeg2,	

width	Shows the total number of pixels, horizontally.	
height	Shows the total number of pixels, vertically.	
scan	Shows the scanning mode, including progressive, interlaced, psf	
field-rate	Shows the field rate, including 24, 25, 29.97, 30, 48, 50, 59.94, 60.	
color-depth	Shows the color depth, including 8, 10, 12.	
color-format	Shows the color space, including rgb, bt.601, bt.709, bt.2020.	
aspect-ratio	Shows the aspect ratio, including 16:9, 4:3,	
sampling	Shows the sampling rate, including 4:2:0, 4:2:2, 4:4:4, 4:4:4.	
quant-range	Shows the quantization range, including limited, full.	
sat-range	Shows the saturation range, including limited, extended, full.	
frame-struct	Shows the input video frame type, 2d, 3d-left-right, 3d-top-bottom, 3d-left-right-half, 3d-top-bottom-half.	

AUDIO STATUS (audio-info: {...})

```
"audio-info": {
   "codec": "lpcm",
   "num-channels": 2,
   "sample-rate": 48000,
   "bit-count": 16
}
```

Name	Description
codec	Shows the encoding type, including lpcm, ac3, aac,
num-channels	Shows the number of channels, including 1, 2, 16
sample-rate	Shows the sampling rate, including 32000, 44100,
bit-count	Shows the bit rate, including 16, 20, 24,

HDMI STATUS (hdmi-info: {...})

```
"hdmi-info": {
   "mode": "dvi",
   "vic": 0,
   "scramble": false,
   "clock-ratio": 1,
   "hdcp": "none",
   "repeat-count": 0,
   "it-content": false,
   "timing-mode-line": "148.50 1920 2008 2052 2200 1080 1084 1089 1125 +hsync +vsync"
}
```

Name	Description
mode	Shows the signal type, including hdmi, dvi.
vic	Shows the Video Identification Code, which is defined for CEA formats.
scramble	True indicates to scramble to prevent signal parsing problems, otherwise it is false.
clock-ratio	Shows the clock ratio, including 1, 4.
hdcp	Shows HDCP encrypted type, including none, hdcp-1.x, hdcp-2.2.
repeat-count	Shows the signal repeat times, 0, 1, 2, 4,
it-content	True indicates that the transmission package is content, otherwise it is false.
timing-mode-line	Shows the modeline. Syntax: pclk hdisp hsyncstart hsyncend htotal vdisp vsyncstart vsyncend vtotal [flags] flags: +hsync, -hsync, +vsync, -vsync, interlace, double-scan, sog, +csync, -csync For example: 23.86 640 656 720 800 480 481 484 497 -hsync +vsync The unit of pclk is MHz, and that of the other parameters are in pixels.

SDI STATUS (sdi-info: {...})

"sdi-info": {
 "link-type": "",
 "link-speed": "",

```
"stream-type": "",
"level-b": true,
"interlaced": true,
"assignment": 0,
"st352-payload-id": 3423424,
"h-total": 2250,
"v-total": 1125,
"h-active": 1920,
"v-active": 1080
}
```

Name	Description	
link-type	Shows link type of input SDI signal, including unknown, single-link, dual-link, quad-link.	
link-speed	Shows the current data speed, including unknown, sd, hd, 3g, 6g, 12g.	
stream-type	Shows the number of streams that is contained in the data source, including single-stream, dual-stream, 3d.	
level-b	True indicates that the input signal is level B format, otherwise it is false.	
interlaced	True indicates that the input signal is interlaced, otherwise it is false.	
assignment	Shows the link number, especially when be fed into a source of multi-link interfaces.	
st352-payload- id	Shows the SMPTE ST 352 video payload identification code for SDI. which is an unsigned 32-bit integer and be displayed in HEX.	
h-total	Shows the total number of pixels, horizontally.	
v-total	Shows the total number of pixels, vertically.	
h-active	Shows the number of active pixels, horizontally.	
v-active	Shows the number of active pixels, vertically.	

InfoFrame (info-frames: {...})

```
"info-frames": [
{
 "id": "AVI",
 "type": 130,
 "version": 2,
 "checksum": 96,
 "data": "ACgAIgAAADkEAACBBw=="
},
 {
 "id": "Audio",
 "type": 132,
 "version": 1,
 "checksum": 112,
 "data": "AQAAAAAAAAAAAA=="
}
]
```

Name	Description
id	Shows the infoFrame type, including AVI, Audio,
type	Shows the packet type.
version	Shows the packet version.
checksum	Shows the packet checksum.
data	Shows the InfoFrame payload, which is encoded in base64 and displayed in hex.

get-video-config

Use the interface to retrieve the video settings.

HTTP Request

GET http://ip/mwapi?method=get-video-config

Parameter	Description
method	get-video-config

Response Body

{ "status": 0, "show-title": false, "show-tally": false, "show-vu-meter": true, "vu-meter-mode": "none", "show-center-cross": false, "safe-area-mode": "none", "ident-mode": "none", "ident-text": "", "h-flip": false, "v-flip": false, "switch-mode": "blank", "deinterlace-mode": "bob", "in-auto-color-fmt": true, "in-color-fmt": "bt.709", "ar-convert-mode": "full", "alpha-disp-mode": "alpha-blend-checkerboard", "follow-input-mode": true }

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
show-title	True indicates to show the name and resolution of the source video, otherwise it is false.	
show-tally	True indicates to show the Tally light status of selected NDI stream on the connected presentation and delivery applications, otherwise it is false.	
show-vu- meter	True indicates to show the VU meter, otherwise it is false.	
vu-meter- mode	Shows the measurement of the volume, including none, db, post-gain-db, post-gain-dbfs.	
show- center-cross	True indicates to show a center cross on the connected presentation and delivery applications which determines the center position of the entire image, otherwise it is false.	
safe-area- mode	Shows the safe area dimension including none, 4:3, 80%, and square.	
ident-mode	Indicates to show or hide the device name or ident text that overlays the output, including none, ident-text, device-name.	
ident-text	Shows the digital label text overlaid on the output. The label text ranges from 1 to 32 characters which contains A to Z, a to z, 0 to 9, and special characters including spaces, dash(_), minus(-) and plus(+) sign.	
h-flip	True indicates to set a mirror effect for the video, otherwise it is false.	
v-flip	True indicates to reverse the active image vertically, otherwise it is false.	
switch-mode	Shows the image, either Black screen(blank) or the last picture of the previous video(keep-last), when the NDI source is changed.	
deinterlace- mode	Shows the method to convert interlaced video into a progressive form including bob, weave.	
in-auto- color-fmt	True indicates to auto-set color space, which means the color space will be BT.601 for SD and BT.709 for HD according to the source, otherwise it is false.	
in-color-fmt	Shows the color space including bt.601 and bt.709.	

ar-convert- mode	Shows the method to convert the aspect ratio of the decoded video. Options are windowbox, full and zoom.	
alpha-disp- mode	Shows the background for the alpha channel display. Options are alpha-only, alpha-blend-white, alpha-blend-black, alpha- blend-checkerboard.	
follow-input- mode	True indicates the output resolution keeps consistent with that of the input source, otherwise it is false. It only applies to NDI to AIO, NDI to HDMI and NDI to SDI.	

get-def-video-config

Use the interface to retrieve the default video settings.

HTTP Request

GET http://ip/mwapi?method=get-def-video-config

Parameter	Description
method	get-def-video-config

Response Body

{ "status": 0, "show-title": false, "show-tally": false, "show-vu-meter": true, "vu-meter-mode": "none", "show-center-cross": false, "safe-area-mode": "none", "ident-mode": "none", "ident-text": "", "h-flip": false, "v-flip": false, "switch-mode": "blank", "deinterlace-mode": "bob", "in-auto-color-fmt": true, "in-color-fmt": "bt.709", "ar-convert-mode": "full", "alpha-disp-mode": "alpha-blend-checkerboard" }

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
show-title	True indicates to overlay the name and resolution of the video source on the output, otherwise it is false.	
show-tally	True indicates to overlay the Tally light status of selected NDI source stream on the output, otherwise it is false.	
show-vu- meter	True indicates to show the VU meter, otherwise it is false.	
vu-meter- mode	Shows the measurement of the volume, including none, db, post-gain-db, post-gain-dbfs.	
show-center- cross	True indicates to overlay a center cross on the output, otherwise it is false.	
safe-area- mode	Shows the safe area mode including none, 4:3, 80%, and square.	
ident-mode	Indicates to show or hide the device name or ident text that overlays the output, including none, ident-text, device-name.	
ident-text	Shows the digital label text overlaid on the output. The label text ranges from 1 to 32 characters which contains A to Z, a to z, 0 to 9, and special characters including spaces, dash(_), minus(-) and plus(+) sign.	
h-flip	True indicates to set a mirror effect for the video, otherwise it is false.	
v-flip	True indicates to reverse the active image vertically, otherwise it is false.	
switch-mode	Shows the image, either Black screen(blank) or the last picture of the previous video(keep-last), when the NDI source is changed.	
deinterlace- mode	Shows the mode to convert interlaced video into a progressive form including bob, weave.	
in-auto-color- fmt	True indicates to auto-set color space, which means the color space will be BT.601 for SD sources and BT.709 for HD sources, otherwise it is false.	
in-color-fmt	Shows the color space including bt.601 and bt.709.	
ar-convert-	Shows the method to convert the aspect ratio of the decoded video. Options are windowbox, full and zoom.	

mode	Shows the method to convert the aspect ratio of the decoded video. Options are windowbox, full and zoom.
alpha-disp- mode	Shows the background for the alpha channel display. Options are alpha-only, alpha-blend-white, alpha-blend-black, alpha- blend-checkerboard.

set-video-config

Use the interface to modify the video settings.

HTTP Request

GET http://ip/mwapi?method=set-video-config¶m1=value1¶m2=value2...

Response Body

```
{
"status": 0
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

Example

1. Set OSD

http://ip/mwapi?method=set-video-config&show-title=true&show-tally=true&show-vu-meter=true&vu-meter-mode=dbu&saf
e-area-mode=4:3&show-center-cross=true

Parameter	Description
method	set-video-config
show-title	True indicates to overlay the name and resolution of the video source on the output, otherwise it is false.
show-tally	True indicates to overlay the Tally light status of selected NDI stream on the output, otherwise it is false.
show-vu- meter	True indicates to overlay the VU meter, a volume bar, on the output, otherwise it is false.
vu-meter- mode	Specify the measurement of the volume, including none, dbu, dbvu, dbfs, if audio gain is set, the post-gain-dbu, post-gain- dbvu, and post-gain-dbfs will show the gain effect.
show-vu- meter	True indicates to show the VU meter, otherwise it is false.
vu-meter- mode	Specify the measurement of the volume, including none, db, post-gain-db, post-gain-dbfs.
show- center- cross	True indicates to overlay a center cross on the output which determines the center position of the entire image, otherwise it is false.
safe-area- mode	Specify the dimension of a rectangular to mark the most important part of the picture which can be seen by the majority presentation device, including none, 4:3, 80%, and square.
ident-mode	Set to show/hide the device name or ident text that overlays the output, including none, ident-text, device-name.
ident-text	Specify digital label overlaid on the output. The label text ranges from 1 to 32 characters which contains A to Z, a to z, 0 to 9, and special characters including spaces, dash(_), minus(-) and plus(+) sign.

2. Set video process

http://ip/mwapi?method=set-video-config&h-flip=false&v-flip=false&deinterlace-mode=weave&ar-convert-mode=full&al
pha-disp-mode=alpha-blend-checkerboard

Parameter	Description
method	set-video-config
h-flip	True indicates to set a mirror effect, otherwise it is false.
v-flip	True indicates to reverse the active image vertically, otherwise it is false.
deinterlace- mode	Convert interlaced video into a progressive form using bob or weave method.

ar-convert- mode	Specify the method to convert the aspect ratio of the decoded video. Options are windowbox, full and zoom.
alpha-disp-	Specify the background for the alpha channel display. Options are alpha-only, alpha-blend-white, alpha-blend-black, alpha-
mode	blend-checkerboard.

3. Set video source

http://ip/mwapi?method=set-video-config&in-auto-color-fmt=false&in-color-fmt=bt.709&switch-mode=blank

Parameter	Description
method	set-video-config
in-auto- color-fmt	True indicates to auto-set color space, which means the color space will be BT.601 for SD and BT.709 for HD according to the source, otherwise it is false.
in-color-fmt	Specify the color space to bt.601 or bt.709.
switch-mode	Specify the image to either black screen(blank) or the last picture of the previous video(keep-last) when the NDI source is changed.

4. Set whether to keep the output resolution consistent with that of the input source

http://ip/mwapi?method=set-video-config&follow-input-mode=false

Name	Description
follow-input- mode	True indicates the output resolution keeps consistent with that of the input source, otherwise it is false. It only applies to NDI to AIO, NDI to HDMI and NDI to SDI.

get-supported-video-modes

Use the interface to retrieve video resolutions supported by the presentation device.

HTTP Request

GET http://ip/mwapi?method=get-supported-video-modes

Parameter	Description
method	get-supported-video-modes

Response Body

JSON structure is as follows:

```
{
    "status": 0,
    "modes": [...]
}
```

1. Request Body

"status": 0

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

2. Resolutions of presentation applications (modes {...})

```
{
  "modes": [
    {
      "width": 2560,
      "height": 1440,
      "interlaced": false,
      "field-rate": 5995,
      "aspect-ratio": 1.77777779,
      "pref-mode": true,
      "curr-mode": true
   },
    {
      "width": 2560,
      "height": 1440,
      "interlaced": false,
      "field-rate": 14391,
      "aspect-ratio": 1.7777779,
      "pref-mode": false,
      "curr-mode": false
    }
```

• • •

}

Name	Description
width	Shows the width of video in pixels.
height	Shows the height of video in pixels.
interlaced	True indicates to convert interlaced video into a progressive form, otherwise it is false.
field-rate	Shows the decoded NDI video field rate.
aspect-ratio	Shows the decoded NDI stream aspect ratio.
pref-mode	True indicates to use the preference mode, otherwise it is false.
curr-mode	True indicates to use current mode, otherwise it is false.

set-video-mode

Use the interface to set the video resolution to playback. The value must be listed in the result of get-supported-video-modes.

HTTP Request

GET http://ip/mwapi?method=set-video-mode¶m1=value1¶m2=value2...

Response Body

```
{
    "status": 0,
    "width": 720,
    "height": 576,
    "interlaced": false,
    "field-rate": 5000,
    "aspect-ratio": 1.25000000
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
width	Shows the width of video in pixels.
height	Shows the height of video in pixels.
interlaced	True indicates that convert the video into an interlaced signal, otherwise it is false.
field-rate	Shows the field rate of the decoded NDI video.
aspect-ratio	Shows the aspect ratio of the decoded NDI stream.

Example

http://ip/mwapi?method=set-video-mode&width=720&height=576&aspect-ratio=1.25&field-rate=5000&interlaced=false

Parameter	Description
method	set-video-mode
width	Specifies the width of video in pixels.
height	Specifies the height of video in pixels.
interlaced	True indicates that convert the video into an interlaced form, otherwise it is false.
field-rate	Specifies the field rate.
aspect-ratio	Specifies the aspect ratio.

reset-video-config

Use the interface to reset all video settings back to the default values.

HTTP Request

GET http://ip/mwapi?method=reset-video-config

Parameter	Description
method	reset-video-config

Response Body

{ "status": 0, "show-title": false, "show-tally": false, "show-vu-meter": true, "vu-meter-mode": "none", "show-center-cross": false, "safe-area-mode": "none", "ident-mode": "none", "ident-text": "", "h-flip": false, "v-flip": false, "switch-mode": "blank", "deinterlace-mode": "bob", "in-auto-color-fmt": true, "in-color-fmt": "bt.709", "ar-convert-mode": "full", "alpha-disp-mode": "alpha-blend-checkerboard" }

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
show-title	True indicates to show the name and resolution of the source video, otherwise it is false.	
show-tally	True indicates to show the Tally light status of selected NDI stream on the connected presentation and delivery applications, otherwise it is false.	
show-vu- meter	True indicates to show the VU meter, otherwise it is false.	
vu-meter- mode	Shows the measurement of the volume, including none, db, post-gain-db, post-gain-dbfs.	
show- center-cross	True indicates to show a center cross on the connected presentation and delivery applications which determines the center position of the entire image, otherwise it is false.	
safe-area- mode	Shows the safe area dimension including none, 4:3, 80%, and square.	
ident-mode	Indicates to show or hide the device name or ident text that overlays the output, including none, ident-text, device-name.	
ident-text	Shows the digital label text overlaid on the output. The label text ranges from 1 to 32 characters which contains A to Z, a to z, 0 to 9, and special characters including spaces, dash(_), minus(-) and plus(+) sign.	
h-flip	True indicates to set a mirror effect for the video, otherwise it is false.	
v-flip	True indicates to reverse the active image vertically, otherwise it is false.	
switch-mode	Shows the image, either Black screen(blank) or the last picture of the previous video(keep-last), when the NDI source is changed.	
deinterlace- mode	Shows the method to convert interlaced video into a progressive form including bob, weave.	
in-auto- color-fmt	True indicates to auto-set color space, which means the color space will be BT.601 for SD and BT.709 for HD according to the source, otherwise it is false.	
in-color-fmt	Shows the color space including bt.601 and bt.709.	

ar-convert- mode	Shows the method to convert the aspect ratio of the decoded video. Options are windowbox, full and zoom.
alpha-disp-	Shows the background for the alpha channel display. Options are alpha-only, alpha-blend-white, alpha-blend-black, alpha-
mode	blend-checkerboard.

get-video-format

Use the interface to get the video format.

HTTP Request

GET http://ip/mwapi?method=get-video-format

Parameter	Description
method	get-video-format

Response Body

	0, rmat": "rgb", nge": "full"
属性	说明
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
color-format	Shows the color space, including rgb, yuv444, yuv422.
quant-range	Shows the quantization range, including limited and full. It only takes effect when color-format=rgb.

set-video-format

Use the interface to set the video format

HTTP Request

GET http://ip/mwapi?method=set-video-format&color-format=rgb&quant-range=full

Parameter	Description
method	set-video-format
color-format	Sets the color space, including rgb, yuv444, yuv422.
quant-range	Sets the quantization range, including limited and full. It only takes effect when color-format=rgb.

Response Body

```
{
   "status": 0,
   "color-format": "rgb",
   "quant-range": "full"
}
```

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
color-format	Shows the color space, including rgb, yuv444, yuv422.	
quant-range	Shows the quantization range, including limited and full. It only takes effect when color-format=rgb.	

get-hdmi-output

Use the interface to get the status whether to output after decoding.

HTTP Request

GET http://ip/mwapi?method=get-hdmi-output

Parameter	Description
method	get-hdmi-output

Response Body

{	
	"status": 0,
	"enabled": true,
}	

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
enabled	True indicates output after decoding is enabled, otherwise it is false.

set-hdmi-output

Use the interface to set whether to output after decoding.

HTTP Request

GET http://ip/mwapi?method=set-hdmi-output&enabled=false

Parameter	Description	
method	set-hdmi-output	
enabled	True indicates output after decoding is enabled, otherwise it is false.	

Response Body

{
 "status": 0
}

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-audio-config

Use the interface to retrieve the audio settings.

HTTP Request

GET http://ip/mwapi?method=get-audio-config

Parameter	Description
method	get-audio-config

Response Body

{	
{	
"status": 0,	
"gain": -44.00,	
"sample-rate": 0,	
"channels": 0,	
"bit-count": 0,	
"ch0": 0,	
"ch1": 1,	
"ch2": 2,	
"ch3": 3,	
"ch4": 4,	
"ch5": 5,	
"ch6": 6,	
"ch7": 7,	
"ch8": 8,	
"ch9": 9,	
"ch10": 10, "ch11": 11,	
"ch12": 12,	
"ch13": 13,	
"ch14": 14,	
"ch15": 15,	
"check-pts": true	
}	
}	

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
gain	Shows the gain which ranges from -100.00dB to 20.00dB.	
sample- rate	Shows the sample rate, including 32000, 44100, 48000, 88200, 96000.	
channels	Shows the number of output audio channels, including 0, 2, 4, 8.	
bit-count	Reserved.	
ch0 ~ ch15	Shows the mapping relationship between the output and source channels. For example, ch0=4&ch1=5 indicates that the output channel1 maps source channel5, and output channel2 maps source channel6.	
check-pts	True indicates check the audio PTS is enabled, otherwise it is false.	

set-audio-config

Use the interface to modify audio settings.

HTTP Request

GET http://ip/mwapi?method=set-audio-config¶m1=value1¶m2=value2...

Response Body

```
{
    "status": 0
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

Example

http://ip/mwapi?method=set-audio-config&gain=-60&sample-rate=44100&channels=2&ch0=4&ch1=5&check-pts=true

Parameter	Description
method	set-video-config
gain	Adjust the gain from -100.00dB to 20.00dB as needed.
sample- rate	Set the sample rate for your work, including 32000, 44100, 48000, 88200, 96000.
channels	Choose the proper audio channels for your work, including Follow input, 2 Channels, 4 Channels, 8 Channels. Then you can set the mapping relationship between the output and source channels. 0 indicates to follow input. When the channels is set to 2, the selected audio channels map for output channel 1/2. When the channels is set to 4, the selected audio channels map for output channel 1/2 & 3/4. When the channels is set to 8, the selected audio channels map for output channel 1/2, 3/4, 5/6, 7/8.
ch0 ~ ch15	Map the audio channels between the output and source channels when channels is not 0. For example, channels=2&ch0=4&ch1=5 indicates 2 channels are selected. Output channel1 maps the source channel5, and output channel2 maps the source channel6.
check-pts	True indicates check the audio PTS is enabled, otherwise it is false.

get-output-edid

Use the interface to retrieve the EDID of output port.

HTTP Request

GET http://ip/mwapi?method=get-output-edid

Parameter	Description
method	get-output-edid

Response Body

{ "ctotur

"status": 0,

}

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
data	Shows the EDID data which is encoded in base64 and displayed in hex.	

export-edid

Use the interface to export EDID configuration in a .bin file.

HTTP Request

GET http://ip/mwapi?method=export-edid&port=out&file-name=xxx.bin

Parameter	Description
method	export-edid
port	Shows the port type, only out is available now.
file-name	Shows the name of the exported BIN file.

Response Body

```
{
   "status": 0
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

Example

http://ip/mwapi?method=export-edid&port=out&file-name=Output_Port_EDID_2019_03_20_17_36_42.bin

list-channels

Use the interface to obtain the source list ready to be decoded. The following 2 types are contained.

- 1. The preset sources which are obtained using the list-channels interface.
- 2. The auto-detected NDI sources which are obtained using get-ndi-sources.

HTTP Request

GET http://ip/mwapi?method=list-channels

Parameter	Description
method	list-channels

Response Body

```
{
  "status": 0,
  "channels": [
    {
      "name": "RTP",
      "url": "rtp://224.1.2.3:4000?mw-buffer-duration=60"
   },
    {
      "name": "RTP1",
      "url": "rtp://224.2.4.6:6688?mw-buffer-duration=50"
    },
    {
      "name": "UDP",
      "url": "udp://224.1.2.3:4000?mw-buffer-duration=200"
    }
 ]
}
```

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
channels	Shows the preset source arrays.	

get-channel

Use the interface to obtain selected source name.

HTTP Request

GET http://ip/mwapi?method=get-channel

Parameter	Description
method	get-channel

Response Body

<pre>{ "status": 0, "name": "5004", "ndi-name": false }</pre>	
Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
name	Shows source name.
ndi-name	Shows whether the selected source is an NDI source, options are true and false.

set-channel

Use the interface to select current source to decode.

HTTP Request

GET http://ip/mwapi?method=set-channel&ndi-name=true&name=xxx

Parameter	Description	
method	set-channel	
ndi-name	Indicates whether the selected source is an NDI source. Options are true and false.	
name	Indicates the selected source name.	

Example

```
{
    "status": 0,
}
```

Parameter	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

add-channel

Use the interface to add sources to preset list. Supported protocols are ntkndi, rtsp, http, rtmp, udp, srt, and rtp.

HTTP Request

GET http://ip/mwapi?method=add-channel&name=xxx&url=xxx

Parameter	Description
method	add-channel
name	Indicates the source name which should be identical. The source name ranges from 1 to 120 english characters.
url	Indicates the source URL.

Parameters of **URL** vary for different protocols. For details, refer to the following description.

1. NTKNDI

ntkndi://ndi?name=test&url=192.168.1.90%3A5963&mw-buffer-duration=60

URL components	Description
ntkndi	Indicates the NDI protocol developed by NewTek.
ndi	Indicates the default host name and it cannot be modified.
name	Indicates the NDI stream name.
url	Indicates the NDI URL.
mw-buffer-duration	Indicates the NDI buffer duration in ms. You can get the value range using get-buffer-limit.

2. RTSP

rtsp://192.168.1.58:899?mw-buffer-duration=60

URL components	Description
rtsp://192.168.1.58:899	Indicates a valid RTSP URL.
mw-buffer-duration	Indicates the RTSP buffer duration in ms. You can get the value range using get-buffer-limit.

3. HTTP

http://192.168.1.88:8585?mw-buffer-duration=60

URL components	Description
http://192.168.1.88:8585	Indicates a valid HTTP URL.
mw-buffer-duration	Indicates the HTTP buffer duration in ms. You can get the value range using get-buffer-limit.

// RTMP Pull rtmp://url/stream-key?mw-buffer-duration=60

// RTMP Push rtmp://127.0.0.1/live/stream-key?mw-buffer-duration=80

URL components	Description
url	RTMP Pull: Indicates a RTMP URL. RTMP Push: rtmp://127.0.0.1/live/.
stream-key	Indicates the stream key which follows URL. Slashes (/) is not supported.
mw-buffer-duration	Indicates the RTMP buffer duration in ms. You can get the value range using get-buffer-limit.

5. MPEG-TS over UDP

// Multicast

udp://ip:port?mw-audio-track=1&mw-buffer-duration=80

// Unicast

udp://0.0.0.0:port?mw-audio-track=1&mw-buffer-duration=80

URL components	Description
ір	Unicast IP address: 0.0.0.0 The range of multicast IP address is from 224.0.0.0 to 239.255.255.255.
port	Indicates the port number which ranges from 1 to 65535.
mw-audio-track	Audio track, ranges from 1 to 8
mw-buffer-duration	Indicates the UDP buffer duration in ms. You can get the value range using get-buffer-limit.

6. MPEG-TS over SRT

// Caller

srt://ip:port?mode=caller&latency=125&passphrase=1234567890&streamid=test&mw-audio-track=1&mw-buffer-duration=80

// Listener

srt://0.0.0.0:port?mode=listener&latency=125&streamid=test&mw-audio-track=1&mw-buffer-duration=80

URL components	Description
ір	Listener: 0.0.0.0 caller: a valid IP address. 0.0.0.0 is excluded.
port	Indicates the port number which ranges from 1 to 65535.
mode	Indicates the SRT modes including Caller and Listener.
latency	Indicates the latency time ranges from 20 to 8000 in ms.
passphrase	Indicates the encrypted password. It is optional unless the encryption is required.
streamid	Stream ID
mw-audio-track	Audio track, ranges from 1 to 8
mw-buffer-duration	Indicates the SRT buffer duration in ms. You can get the value range using get-buffer-limit.

7. MPEG-TS over RTP

// Multicast

rtp://ip:port?mw-ts-progid=100&mw-audio-track=1&mw-buffer-duration=80

// Unicast

rtp://0.0.0.0:port?mw-ts-progid=100&mw-audio-track=1&mw-buffer-duration=80

URL components	Description
ір	Unicast IP address: 0.0.0.0 Multicast IP address: the IP address ranges from 224.0.0.0 to 239.255.255.255.
port	Indicates the port number which ranges from 1 to 65535.
mw-ts-progid	TS ProgID, ranges from 1 to 10000000
mw-audio-track	Audio track, ranges from 1 to 8
mw-buffer-duration	Indicates the RTP buffer duration in ms. You can get the value range using get-buffer-limit.

8. TVU ISSP

issp://192.168.1.88?mw-buffer-duration=60

URL components	Description
issp://192.168.1.88	Indicates a valid HTTP URL.
mw-buffer-duration	Indicates the HTTP buffer duration in ms. You can get the value range using get-buffer-limit.

Response Body

{ st }	atus": 0
Namo	Description

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

modify-channel

Use the interface to modify the preset source information.

HTTP Request

GET http://ip/mwapi?method=modify-channel&name=xxx&new-name=xxx&url=xxx

Parameter	Description
method	modify-channel
name	Indicates the source name which should be identical. The name ranges from 1 to 120 english characters.
new-name	Indicates the user customized source name, which should be identical. The name ranges from 1 to 120 english characters.
url	Indicates the source URL.

Example

```
{
    "status": 0
}
```

Parameter	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

del-channel

Use the interface to delete preset source.

HTTP Request

GET http://ip/mwapi?method=del-channel&name=xxx

Parameter	Description
method	del-channel
name	Indicates the source name to be deleted.

Response Body

{
 "status": 0
}

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

clear-channels

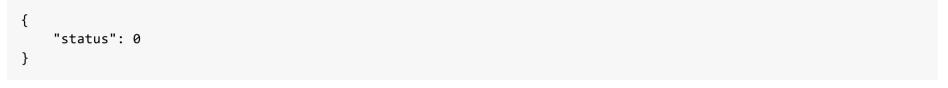
Use the interface to clear all list preset sources.

HTTP Request

GET http://ip/mwapi?method=clear-channels

Parameter	Description
method	clear-channels

Response Body



Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-buffer-limit

Use the interface to parse configured buffer duration of each source according to its protocol type, including the default value and the value rang in ms.

HTTP Request

GET http://ip/mwapi?method=get-buffer-limit&proto=ntkndi

Parameter	Description
method	get-buffer-limit
proto	Indicates the protocol type, options are ntkndi, rtsp, http, rtmp, udp, srt and rtp.

Response Body

```
{
   "status": 0,
   "buffer-duration-def": 60,
   "buffer-duration-min": 20,
   "buffer-duration-max": 120
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
buffer-duration- def	Shows the default buffer time in ms.
buffer-duration- min	Shows the minimum value in ms.
buffer-duration- max	Shows the maximum value in ms.

get-ndi-config

Use the interface to retrieve the NDI settings.

HTTP Request

GET http://ip/mwapi?method=get-ndi-config

Parameter	Description
method	get-ndi-config

Response Body

```
{
   "status": 0,
   "enable-discovery": false,
   "discovery-server": "",
   "source-name": "PRO CONVERT (#15 (B410190104001))",
   "group-name": "public",
   "low-bandwidth": false,
   "enable-mcast": true,
   "enable-mcast": true,
   "enable-rudp": false,
   "enable-tcp": false,
   "enable-udp": false,
   "ignore-ndi-hx-video-pts": true
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
enable-discovery	Shows the enable status of discovery server. Options are true and false.
discovery-server	Shows server IP address.
source-name	Shows the source name within the NDI group detected by your decoder.
group-name	Shows the group that the video source joined in.
low-bandwidth	True indicates the low bandwidth mode is switched on, otherwise it is false.
enable-mcast	True indicates the UDP (Multicast) is enabled, otherwise it is false.
enable-rudp	True indicates the RUDP (Unicast) is enabled, otherwise it is false.
enable-tcp	True indicates the TCP (Multi-connection) is enabled, otherwise it is false.
enable-udp	True indicates the UDP (Unicast) is enabled, otherwise it is false.
ignore-ndi-hx-video- pts	True indicates ignore NDI video PTS is enabled, otherwise it is false.

set-ndi-config

Use the interface to set NDI.

HTTP Request

GET http://ip/mwapi?method=set-ndi-config¶m1=value1¶m2=value2...

Parameter	Description
method	set-ndi-config
enable-discovery	Indicates the enable status of discovery server. Options are true and false.
discovery-server	Indicates server IP address. Multiple IP addresses should be separated with commas. It is mandatory when the value of enable-discovery is true.
source-name	Indicates the NDI source name which is retrieved using get-ndi-sources.
group-name	Indicates the group that the video source belongs to. By default it is public.
low-bandwidth	True indicates the low bandwidth function is turned on, otherwise it is false.
enable-mcast	True indicates the UDP (Multicast) is enabled, otherwise it is false.
enable-rudp	True indicates the RUDP (Unicast) is enabled, otherwise it is false.
enable-tcp	True indicates the TCP (Multi-connection) is enabled, otherwise it is false.
enable-udp	True indicates the UDP (Unicast) is enabled, otherwise it is false.
ignore-ndi-hx- video-pts	True indicates ignore NDI video PTS is enabled, otherwise it is false.

Response Body

```
{
    "status": 0
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-ndi-sources

Use the interface to retrieve available NDI sources.

HTTP Request

GET http://ip/mwapi?method=get-ndi-sources

Parameter	Description
method	get-ndi-sources

Response Body

```
{
   "status": 0,
   "sources": [
    {
        "ndi-name": "MAGEWELL (USB Capture HDMI (D206191017871))",
        "ip-addr": "192.168.1.192:5963" // Containing 'amc_id' indicates it is a multicast address.
    },
    {
        "ndi-name": "MAGEWELL (USB Capture HDMI (D206191017889))",
        "ip-addr": "192.168.1.192:5961"
    }
]
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
sources	Arrays of currently available alternate channels.

get-playback-config

Use the interface to retrieve the playback settings.

HTTP Request

GET http://ip/mwapi?method=get-playback-config

Parameter	Description
method	get-playback-config

Response Body

```
{
   "status": 0,
   "buffer-duration": 60
}
```

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
buffer- duration	Shows the buffer time which ranges from 20 to 120 in ms.	

set-playback-config

Use the interface to modify the playback settings.

HTTP Request

GET http://ip/mwapi?method=set-playback-config&buffer-duration=70

Parameter	Description
method	set-playback-config
buffer-duration	Set buffer time from 20 to 120 in milliseconds.

Response Body

{
 "status": 0
}

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-users

Use the interface to list all users with administrative rights.

HTTP Request

GET http://ip/mwapi?method=get-users

Parameter	Description
method	get-users

Response Body

```
{
    "status": 0,
    "users": [
    {
        "id": "Admin",
        "group": "Admin"
    },
    {
        "id": "Test",
        "group": "User"
    }
]
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
users	Shows the user group arrays. id indicates user name, and group indicates whether the user is an administrator or a general user.

add-user

Use the interface to add general users with administrative rights.

HTTP Request

GET http://ip/mwapi?method=add-user&id=xxx&pass=x

Parameter	Description
method	add-user
id	Shows the user name.
pass	Shows MD5 encrypted password.

Response Body

```
{
"status": 0
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

del-user

Use the interface to delete general users with administrative rights.

HTTP Request

GET http://ip/mwapi?method=del-user&id=xxx

Parameter	Description
method	del-user
id	Shows the user name.

Response Body

{ "status": 0 }

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

ch-password

Use the interface to modify password after logging in with old password.

HTTP Request

GET http://ip/mwapi?method=ch-password&pass=xxx&new-pass=xxx

Parameter	Description
method	ch-password
pass	Shows MD5 encrypted old password.
new-pass	Shows MD5 encrypted new password.

Response Body

{
 "status": 0
}

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

set-password

Use the interface to reset user password with administrative rights.

HTTP Request

GET http://ip/mwapi?method=set-password&id=xxx&pass=xxx

Parameter	Description
method	set-password
id	Indicates the user name.
pass	Indicates MD5 encrypted new password.

Response Body

{ "status": 0 }

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-eth-status

Use the interface to retrieve the ethernet configurations with administrative rights.

HTTP Request

GET http://ip/mwapi?method=get-eth-status

Parameter	Description
method	get-eth-status

Response Body

```
{
    "status": 0,
    "use-dhcp": true,
    "device-name": "Pro Convert",
    "state": "1000m",
    "mac-addr": "70:B3:D5:75:D2:41",
    "ip-addr": "192.168.1.90",
    "ip-mask": "255.255.255.0",
    "gw-addr": "192.168.1.1",
    "dns-addr": "10.0.0.3",
    "tx-speed-kbps": 0,
    "rx-speed-kbps": 5
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
use-dhcp	Shows whether to use DHCP to retrieve IP address. If yes, it shows true; otherwise, it is false.
device- name	Shows the device name.
state	Shows Ethernet network connection status and the bandwidth speed, including down, disconnected, 10m, 100m, 1000m, 2500m, 5000m, 10000m.
mac-addr	Shows the MAC address.
ip-addr	Shows the IP address.
ip-mask	Shows the subnet mask address.
gw-addr	Shows the gateway address.
dns-addr	Shows the DNS server address.
tx-speed- kbps	Shows the Ethernet send speed in Kbps.
rx-speed- kbps	Shows the Ethernet receive speed in Kbps.

set-eth-config

Use the interface to set Ethernet configurations.

HTTP Request

GET http://ip/mwapi?method=set-eth-config¶m1=value1¶m2=value2...

Parameter	Description
method	set-eth-config
name	Shows the device name.
dhcp	True indicates that the decoder uses DHCP to retrieve IP address, otherwise it is false.
addr	Indicates the IP address.
mask	Indicates the subnet mask address.
gw-addr	Indicates the gateway address.
dns-addr	Indicates the DNS server address.

Response Body

```
{
  "status": 0,
  "reconnect": true
}
```

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
reconnect	True indicates to reconnect and log in the device after network changes, otherwise it is false.	

get-rndis-status

Use the interface to retrieve the Ethernet over USB status with administrative rights.

HTTP Request

GET http://ip/mwapi?method=get-rndis-status

Parameter	Description
method	get-rndis-status

Response Body

{	
"status": 0,	
"state": "high-speed",	
"ip-addr": "192.168.66.1",	
"device-name": "Pro Convert",	
"tx-speed-kbps": 0,	
"rx-speed-kbps": 0	
}	

Name	Description	
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.	
state	Shows connection status of Ethernet over USB , including disconnected, full-speed, high-speed, super-speed-5g, super- speed-10g.	
ip-addr	Shows IP address of Ethernet over USB .	
device-name	Shows the device name.	
tx-speed- kbps	Shows send speed of Ethernet over USB, in Kbps.	
rx-speed- kbps	Shows receive speed of Ethernet over USB, in Kbps.	

set-rndis-config

Use the interface to set the RNDIS address.

HTTP Request

GET http://ip/mwapi?method=set-rndis-config&addr=xxx&name=xxx

Parameter	Description
method	set-rndis-config
addr	Incicates the IP address as 192.168.xxx.1.
name	Shows the device name.

Response Body

```
{
  "status": 0,
  "reconnect": true
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
reconnect	True indicates to reconnect and log in after modifications, otherwise it is false.

get-net-access

Use the interface to get the configuration information of network service, and only the Administrator has the right.

HTTP Request

GET http://ip/mwapi?method=get-net-access

Parameter	Description
method	get-net-access

Response Body

```
{
   "status": 0,
   "use-ssdp": true,
   "use-https": false,
   "ssl-cert-present": true,
   "ssl-cert-key-present": true
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
use-ssdp	True indicates the SSDP service is enabled, otherwise it is false.
use-https	True indicates the HTTPS is enabled, otherwise it is false.
ssl-cert-present	True indicates the CA certificate is uploaded, otherwise it is false.
ssl-cert-key- present	True indicates the CA private key is uploaded, otherwise it is false.

set-net-access

Use the interface to configure network service, and only the Administrator has the right.

HTTP Request

GET http://ip/mwapi?method=set-net-access&use-ssdp=true&use-https=false

Parameter	Description
method	set-net-access
use-ssdp	True indicates the SSDP service is enabled, otherwise it is false.
use-https	Tre indicates the HTTPS is enabled, otherwise it is false.

Response Body

```
{
    "status": 0,
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

upload-ssl-cert

Use the interface to upload the CA certificate.

HTTP Request

POST http://ip/mwapi?method=upload-ssl-cert

Parameter	Description
method	upload-ssl-cert

Response Body

{ "status": 0 }

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

upload-ssl-cert-key

Use the interface to upload the CA private key.

HTTP Request

POST http://ip/mwapi?method=upload-ssl-cert-key

Parameter	Description
method	upload-ssl-cert-key

Response Body

{		
"status": 0		
}		

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-update-state

Use the interface to retrieve the current firmware information and update status with administrative rights.

HTTP Request

GET http://ip/mwapi?method=get-update-state

Parameter	Description
method	get-update-state

Response Body

ldle

```
{
    "status": 0,
    "state": "idle",
    "cur-ver": "1.1.72",
    "fw-valid": true
}
```

Updating

```
{
  "status": 0,
  "state": "updating",
  "cur-ver": "1.1.72",
  "update-to-ver": "1.1.72",
  "num-steps": 4,
  "step-id": 2,
  "step-name": "Erasing image",
  "step-percent": 28,
  "fw-valid": true
}
```

Failed

```
{
  "status": 0,
  "state": "failed",
  "cur-ver": "1.1.72",
  "error-status": 16,
  "fw-valid": true
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
state	Shows the current update state, including idle, updating, completed, failed.
cur-ver	Shows the current firmware version.
update-to-ver	Shows the target firmware version to update to.
num-steps	Shows the total number of steps for update, only available in the updating state.
step-id	Shows the current step number, only available in the updating state.
step-name	Shows the current step name, only available in the updating state.
step-percent	Shows the current update process, only available in the updating state.
error-status	Shows the error code, only available in the failed state.
fw-valid	Shows whether the firmware is damaged. Options are true indicates the device is normal. false indicates the device is damaged.

upload-update-file

Use the interface to upload the .mwf file.

HTTP Request

```
POST http://ip/mwapi?method=upload-update-file
```

Parameter	Description
method	upload-update-file

Response Body

```
{
    "status": 0,
    "up-to-date": true,
    "version": "1.1.72",
    "size": 11890776
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
up-to-date	True indicates the current firmware is up to date, otherwise it is false.
version	Shows the uploaded firmware version.
size	Shows the uploaded file size in bytes.

update

Use the interface to update firmware. During the update process you can use the get-update-state interface to retrieve the current status.

HTTP Request

GET http://ip/mwapi?method=update&mode=xxx

Parameter	Description
method	update
mode	Shows the update mode, such as manual indicates to update the device to a specified version manually.

Response Body

{ "status": 0 }

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.

get-report

Use the interface to get current conditions of the device with administrative rights.

HTTP Request

GET http://ip/mwapi?method=get-report

Response Body

Plain text HTML segment is as follows.

export-report

Use the interface to get an html file of all current conditions of the device with administrative rights.

HTTP Request

GET http://ip/mwapi?method=export-report&file-name=xxx.html

Parameter	Description
method	export-report
file-name	Shows the file name.

Respond

The report file is downloaded and saved to a local folder.

cloud-reg-ex

Use the interface to register your device with Magewell Clouds. You can host your device to 2 cloud platforms simultaneously.

GET http://ip:8070/cloud-api?method=cloud-reg-ex&id=1&cloud-enable-https=0&...

Parameter	Description
method	cloud-reg-ex
id	Cloud ID. Options are 0 and 1.
cloud-code	4-digit string invitation code given by the Cloud.
cloud-ip-addr	IP address or domain of the Cloud.
cloud-http-port	HTTP port of the Cloud server.
cloud-enable-https	0: disable https 1: enable https
cloud-https-port	HTTPS port of the Cloud server.

Response Body



ltem	Description
result	0 indicates that the request was accepted successfully. Refer to Cloud API Status Codes to find specific description for other values.

cloud-unreg-ex

Use the interface to release your device from a Magewell Cloud.

HTTP Request

GET http://ip:8070/cloud-api?method=cloud-unreg-ex&id=1

Parameter	Description
method	cloud-reg-ex
id	Cloud ID. Options are 0 and 1.

Response Body

{
 "result": 0
}

ltem	Description
result	0 indicates that the request was accepted successfully. Refer to Cloud API Status Codes to find specific description for other values.

cloud-status

Use the interface to obtain status of the Cloud platforms that your device has registered with.

HTTP Request

GET http://ip:8070/cloud-api?method=cloud-status&version=1

Parameter	Description
method	cloud-status
version	Cloud version, should be 1.

Response Body

```
{
  "device_id": "B313221201001", // serial number of your device
  "number": 2,
                                // count of Cloud platforms your device can register with
  "version" : 1,
  "result": 0,
  "status": [
   {
      "cloud-code": "",
      "cloud-date": 0,
      "cloud-enable-https": 0,
      "cloud-http-port": 80,
      "cloud-https-port": 443,
      "cloud-ip-addr": "10.0.1.32",
      "cloud-reg-status": 101,
      "cloud-status": 35,
      "id": 0,
      "is-cloud-set": 1
   },
    {
      "cloud-code": "",
      "cloud-date": 0,
      "cloud-enable-https": 0,
      "cloud-http-port": 80,
      "cloud-https-port": 443,
      "cloud-ip-addr": "10.10.8.233",
      "cloud-reg-status": 103,
      "cloud-status": 35,
      "id": 1,
      "is-cloud-set": 1
    }
 ]
}
```

ltem	Description
result	0 indicates that the request was accepted successfully. Refer to Cloud API Status Codes to find specific description for other values.

get-logs

Use the interface to retrieve the logs as an administrator. The device can store up to 1000 local log entries.

HTTP Request

GET http://ip/mwapi?method=get-logs&types=xxx,xxx,xxx

Parameter	Description
method	get-logs
types	Indicates the log types including all, info, warn, error, which can be separated by commas if multiple types are requested.

Response Body

```
{
 "status": 0,
 "logs": [
  {
   "type": "warn",
   "time": "2019-03-19 09:53:03.047",
   "message": "USB state: disconnected"
  },
  {
   "type": "warn",
   "time": "2019-03-19 09:14:09.292",
   "message": "User 'Admin' (192.168.66.2) session 4 timeout"
  },
  {
   "type": "warn",
  "time": "1970-01-01 00:00:11.872",
   "message": "USB state: disconnected"
 },
  • • •
 ]
}
```

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.
logs	Shows the log arrays, including log "type", generated "time" and "message" data.

Example

Retrieve all logs

http://192.168.66.1/mwapi?method=get-ptz-configmethod=get-logs&types=all

http://192.168.66.1/mwapi?method=get-ptz-configmethod=get-logs&types=warn,error

export-logs

Use the interface to export logs from the device as a .html file with administrative rights.

HTTP Request

GET http://ip/mwapi?method=export-logs&file-name=xxx.html

Parameter	Description
method	export-logs
file-name	Indicates the exported file name.

Respond

The log file is downloaded and saved to a local folder.

clear-logs

Use the interface to clear all logs with administrative rights.

HTTP Request

Get http://ip/mwapi?method=clear-logs

Response Body

Name	Description
status	0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values.