# Ultra Encode Plus

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# Introduction

A rich set of APIs are provided for developers to interact with Ultra Encode devices, such as obtaining basic device information including device name, firmware version and etc., modifying device configurations and upgrading firmware. These APIs are HTTP-based, lightweight, and connectionless services that return JSON data. With this document, you can get a thorough understanding of each API's functions and request method.

APIs in this document apply to:

- Ultra Encode AIO
- Ultra Encode HDMI Plus
- Ultra Encode SDI Plus
- Ultra Encode SDI Plus Module

# API Agreement

## Overview

- Request protocol: HTTP
- Request method: by default, GET is used to request and commit data, and POST is used to upload a file.
- Request URL: http://IP/usapi?method=xxx&param1=value1&param2=value2...
- Return data format: when the status code is 200, it returns JSON data, otherwise it returns HTTP status codes.
- Login authentication: carry sid=xxxxxxxxx in cookies

## Example Response

The JSON formatted data is as follows. HTTP response status codes indicate whether a specific HTTP request has been successfully completed. The status 0 indicates a successful request, otherwise the request is failed.

```
{
 "result": 0,
  "cur-status": 65552,
  "last-rec-status": 0,
  "cur-time": 0,
  "box-name": "Ultra Encode B313221201001",
  ...
}
```

# API Status Code

```
{
  retSendWaiting          = 31,          // Reserved
  retLivingAuthErr        = 30,          // Live stream status: authentication error
  retLivingNotset         = 29,          // Live stream address not set
  retLivingDNS            = 28,          // Live stream status: Resolving DNS
  retInit                 = 27,          // Initialization
  retLivingAuthing        = 25,          // Live stream status: authorizing
  retLivingWaiting        = 24,          // Live stream status: waiting for connection
  retLivingConnecting     = 23,          // Live stream status: connecting to the streaming destination
  retLivingConnected      = 22,          // Live stream status: stream server connected
  retPushReboot           = 21,
  retAudioSignalChange    = 20,
  retBlueWrite            = 19,
  retBlueRead             = 18,
  retBlueShutDown         = 17,
  retDiskOn               = 16,
  retDiskOff              = 15,
  retDiskChange           = 14,
  retSnapshotOver         = 13,
  retPushReset            = 12,
  retPushLiving           = 11,
  retPushRecord           = 10,
  retSignalChange         = 9,
  retRouteChange          = 8,
  retIPChange             = 7,
  retNetChange            = 6,
  retCancel               = 5,           // Request canceled
  retLowSpace             = 4,           // Reserved
  retLowSpeed             = 3,           // Reserved
  retRunning              = 2,           // Request is being processed
  retRepeat               = 1,           // Repeated requests
  retSucceed              = 0,           // The request has succeeded.
  errPasswd               = -1,          // Wrong password
  errOccupied             = -2,          // Device occupied
  errDisconnect           = -3,          // Reserved
  errDevice               = -4,
  errDisk                 = -5,
  errUnconnect            = -6,
  errKey                  = -7,
  errVersion              = -8,
  errBusy                 = -9,          // System busy
  errParam                = -10,         // Incorrect request parameters
  errUsage                = -11,         // Reserved
  errTimeout              = -12,
  errIP                   = -13,         // Reserved
  errNotFound             = -14,         // Data not found
  errFile                 = -15,         // File error
  errNoSpace              = -16,         // Reserved
  errNeedAuth             = -17,         // Unauthorized access
  errSystem               = -18,         // System error
  errDiskSpeed            = -19,
  errEmpty                = -20,
  errNetwork              = -21,
  errEvent                = -22,
  errCodec                = -23,
  errBlue                 = -24,
  errNoUser               = -25,          // User not exist
  errNoPermissin          = -26,
  errSameName             = -27,          // Name already in use
```

```
  errString               = -28,          // Invalid input characters
  errChannelsLimited      = -29,          // Streaming 6 sessions simultaneously at most.
  err8MLimited            = -30,          // Reserved
  errFacebookLimited      = -31,          // Reserved
  errCodecLimited         = -32,          // Reserved
  err4GLimited            = -33,          // Reserved
  errMWFUnsupported       = -34,          // Update package does not match current model or hardware version
  errNoSignal             = -35,          // No signal
  errSDCard               = -36,
  errXinYueServer         = -37,          // Reserved
  errAliYunOSS            = -38,          // Reserved
  errSDNoSpace            = -39,          // Reserved
  errSDNoPermission       = -40,          // Reserved
  errRTSPLimited          = -41,          // Only one RTSP session is supported at a time
  errRTSP8MLimited        = -42,          // Reserved
  errBandwidthLimited     = -43,          // Reserved
  errPortLimited          = -44,          // Stream port occupied
  errNDILimited           = -45,          // Streaming one NDI|HX session is supported
  errSRTLimited           = -46,          // Streaming one SRT Listener session is supported
  errNDISettings          = -47,          // The substream can be up to 640x480@60 for a NDI|HX session
  errSubStreamSettings    = -48,          // The substream can be up to 1280x720@30 for a non-NDI|HX session
  errHLSLimited           = -49,          // Streaming one HLS session is supported
  errProtocolLimited      = -50,          // Allow 1 simultaneous session over the same streaming protocol
  errInit                 = -51,          // Failed to initialize channels for live streaming
  errDeinterlaceSettings  = -52,          // Deinterlace settings error
  errTVULimitted          = -53,          // Streaming one TVU ISSP task is supported
  errProtocolOneChannel   = -54,          //
Unified error codes including errRTSPLimited/errNDILimited/errSRTLimited/errHLSLimited/errTVULimitted
  errUHDSettings         = -55,           // The frame rate of the main stream should be no greater than 30 FPS when
the encode resolution is greater than 2048x1080.
  errInputSignal         = -56,           // The frame rate of the main stream should be no greater than 30 FPS when
the input resolution is greater than 2048x1080.
  errScheduler           = -57,           // Reserved
  errMountPoint          = -58,           // Error NAS mount point

}
```

# Control Hub API Status Code

```
{
  errLogin        = -200,      // The device has not been logged-in when being called by the Control Hub.
  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,        // parameters of Control Hub is in initialization state.
  retOnline       = 35,        // Control Hub platform is online
  retOffline      = 36,        // Control Hub platform is offline
  retDeleted      = 104,
  retWaiting      = 103,
  retRefused      = 102,
  retAccepted     = 101,
}
```

# Device Status Mask

```
{
  statusFirst        = 0x01,      // First booting
  statusRecord       = 0x02,      // Reserved
  statusLiving       = 0x04,      // Reserved
  statusStream       = 0x08,      // Reserved
  statusDiskReady    = 0x10,      // Reserved
  statusRTMPReady    = 0x20,      // Reserved
  statusSoftAP       = 0x40,      // AP mode enabled
  statusMIC          = 0x100,     // Reserved
  statusPHONE        = 0x200,     // Reserved
  statusOutput       = 0x400,     // Reserved
  statusDiskTest     = 0x1000,    // Storage medium is testing performance.
  statusBlue         = 0x2000,    // Reserved
  statusUpgrade      = 0x4000,    // Updating firmware
  statusNetTest      = 0x8000,    // Streaming test is ongoing
  statusPasswd       = 0x10000,   // Device password has been set
  statusOccupied     = 0x20000,   // Device has been locked by app(s), at most 2 apps simultaneously
  statusFormatDisk   = 0x100000,  // USB is formatting
  statusFormatSD     = 0x200000,  // SD card is formatting
  statusSearchWifi   = 0x400000,  // The device is searching for available Wi-Fi networks
  statusConnectWifi  = 0x800000,  // The device is connecting to a Wi-Fi hotspot
  statusLoading      = 0x1000000, // The device is loading configuration profile
  statusCheckUpgrade = 0x2000000, // The device is checking for new firmware versions
  statusReset        = 0x4000000,   // The device is resetting all parameters to default
  stausIPv6          = 0x8000000,   // Reserved
  statusTestLock     = 0x10000000,  // Reserved
  statusReboot       = 0x20000000,  // The device is rebooting
  statusSendTest     = 0x40000000,  // The device is testing the server for file uploading
}
```

# Device Discovery Protocol

You can discover an encode using **multicast protocol** or **SSDP**.

## Multicast

Obtain the basic configurations and status of the device, including device name, serial number, running status, and network status.

- Multicast address: 239.255.255.250
- Port: 2538

Response Body

```
{
  "version":"1.0",
  "flag":"ssip",
  "product":"Ultra Encode",
  "boxname":"Ultra Encode B313221201001",
  "serialnumber":"B313221201001",
  "wifiip":"192.168.48.1",
  "ethip":"192.168.1.217",
  "status":65600
}
```

| Item | Description |
| --- | --- |
| version | Indicates the protocol version. |
| flag | Indicates flag of the device discovery protocol. |
| product | Indicates product type. |
| boxname | Indicates device name. |
| serialnumber | Indicates device serial number. |
| wifiip | Indicates IP address for Wi-Fi. |
| ethip | Indicates IP address for Ethernet. |
| status | Indicates Device Status Mask. |

# DEMO: Node.js

This chapter introduces how to call the Ultra Encode APIs in Node.js.

Download DEMO: ultra-encode-api-demo-nodejs.zip

DEMO Structure

```
ultra-encode-api-demo-nodejs
|
|-- httpUtils.js    // provides the HTTP get and HTTP upload in Node.js
|-- xxxx.mwf        // file uploaded by upload.js through invoking the upload-update-file interface.
|-- get.js          // requests data
|-- upload.js       // uploads file
```

## Requirements

- Operating System: macOS, Linux, or Windows
- Node.js Runtime: LTS releases (8.x and later)

## Running Mode

1. Navigate into the DEMO directory in the terminal.

   ```
   cd ultra-encode-demo-nodejs
   ```

2. Replace deviceIP with the IP address of the test device in get.js and upload.js.
3. Run get.js.

   ```
   node get
   ```

4. Run upload.js.

   ```
   node upload
   ```

# DEMO: C

## Requirements

- Operating System: Windows, macOS, or Linux

## Compilation

- Prepare the curl sdk for your Windows/macOS/Linux OS
- Download DEMO: ultra-encode-api-demo-c.zip
- Compile "ultra_encode_curl.c", and link it to "libcurl"
- Build the ultra_encode_curl file

## Example

- Navigate into the bin directory and copy the firmware file here, and run ultra_encode_curl.

```
cd ultra-encode-api/demo/c/bin
cp ultra_encode_aio_rev_b_2_0_318.mwf linux
cd linux
./ultra_encode_curl <hostip:port>
```

- Sample response

```
***** 1. login *****
login response data:
{
        "result": 0
}

***** 2. get info *****
get info response data:
{
        "result": 0,
        "mac-addr": {
                "eth": "d0:c8:57:81:02:2d",
                "wifi": "d0:c8:57:81:02:2e",
                "softap": "d0:c8:57:81:02:2f"
        },
        "snapshot": "/tmp/sbox-snapshot/sbox-quarter.jpg",
        "main-snapshot": "/tmp/sbox-snapshot/mainstream.jpg",
        "sub-snapshot": "/tmp/sbox-snapshot/substream.jpg",
        "product": {
                "sn": "B313220727002",
                "product-id": 787,
                "hardware-ver": "B",
                "firmware-id": 1,
                "firmware-ver-s": "2.0.312",
                "factory-firmware-ver-s": "2.0.283",
                "product-name": "Ultra Encode",
                "module-name": "Ultra Encode AIO",
                "manu-name": "MAGEWELL",
                "features": 1,
                "max-lock-count": 2,
                "live-support": 4095,
                "cloud-support": 1,
                "record-support": 1,
                "scheduler-support": 1,
                "nas-support": 1,
                "multi-audio-support": 1
        },
        "nosignal": {},
        "input-source": {},
        "audio-range": {},
        "codec-cap": {},
        "rec": {},
        "nas": {},
        "color-range": {},
        "video-format": {},
        "living": {},
        "surface": {}
}

***** 3. upload firmware *****
upload firmware response data:
{
        "result": 0,
        "up-to-date": true,
        "version": "2.0.123",
        "size": 12494463
}
```

# get-info

Use this interface to obtain device information, including product and manufacture information, MAC address of the network card, and video and audio parameters ranges.

## HTTP Request

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

| Parameter | Description |
| --- | --- |
| method | get-info |

## Response Body

JSON structure is as follows:

```
{
  "result": 0,                // returned status
  "mac-addr": {},             // MAC address
  "snapshot": "",             // snapshot location of the input
  "main-snapshot": "",   // snapshot location of the main stream
  "main-crop-snapshot": "",    //crop thumbnails location of the main stream cropped
  "sub-snapshot": "",       // snapshot location of the sub stream
  "sub-crop-snapshot": "",     // crop thumbnails location of the sub stream
  "product": {},              // product information
  "nosignal": {},             // resolutions and size of no-signal image
  "input-source": {},          // parameter values of input and video mixer
  "audio-range": {            // range of audio parameters
    "hdmi": {},
    "linein": {},
    "lineout": {}
  },
  "codec-cap": {              // encoding parameters
    "main-stream": {},        // encoding parameters of the main stream
    "sub-stream": {},         // encoding parameters of the sub stream
    "ndi-sub-stream": {},      // reserved
    "ndi-hx3-main-stream": {}, // parameter ranges of main stream of NDI|HX3 protocol
    "ndi-hx3-duration": {},    // frame rate range of main stream of NDI|HX3 protocol
    "resolutions": [],
    "durations": [],
    "profile": [],
    "hevc-profile": [],
    "video-kbps": [],
    "audio-streams": [],        // range of audio streams
    "audio-channels": [],        // range of audio channels
    "audio-chmap": [],           // range of audio channel mapping relationships
    "audio-kbps": [],
    "gop-sec": [],
    "video-range": [],
    "stat-sec": [],
    "video-codec": [],
    "video-ar-convert-mode": [],
    "video-rotation": [],
    "rc": {}
  },
  "rec": {
    "mode": [],                   //values of record mode
    "file-prefix": [],           // values of file prefix
    "file-suffix": [],            // values of fils suffix
    "time-unit": [],
    "trigger-mode": []         // values of auto-upload mode
  },
  "nas": {
    "proto": []                    // values of NAS protocol
  },
  "color-range": {            //values of color adjustment and correction
    "contrast": {},
    "brightness": {},
    "saturation": {},
    "hue": {}
  }
"video-format": {             // values of video input and output
    "input-color-fmt": [],
    "output-color-fmt": [],
    "quant-range": [],
    "sat-range": []
  }
```

```
  "living": {               // values of live stream
    "max-bandwidth": 16384,
    "ttl": {},
    "conn-timeout": {},
    "retry-duration": {},
    "srt": {
      "latency": [],
      "bandwidth": [],
      "aes": [],
      "mtu": {}
    },
    "ndi": {},
    "udp": {},
    "hls-push": {}
  },
  "surface": {
    "image": {},
    "type":[],
    "image-type": [],
    "condition": [],
    "position": [],
    "font-family":[],
    "font-style": [],
    "font-weight": [],
    "time-format": []
  },
  "web": {
    "theme": []             // light/dark mode
  },
  "send-file": {            // file upload parameters
    "server": [],           // server parameters for file upload
    "ftp-proto": {},
    "ftp-encryption": {},
    "ftp-transfer-mode": {}
  },
  "lcd": {
    "page": []              // LCD display
  }
}
```

Example

```
{
  "result": 0,
  "mac-addr": {
    "eth": "d0:c8:57:81:02:2d",
    "wifi": "d0:c8:57:81:02:2e",
    "softap": "d0:c8:57:81:02:2f"
  },
  "snapshot": "/tmp/sbox-snapshot/sbox-quarter.jpg",
  "main-snapshot": "/tmp/sbox-snapshot/mainstream.jpg",
  "main-crop-snapshot": "/tmp/sbox-snapshot/crop-mainstream.jpg",
  "sub-snapshot": "/tmp/sbox-snapshot/substream.jpg",
  "sub-crop-snapshot": "/tmp/sbox-snapshot/crop-substream.jpg",
  "product": {
    "sn": "B313220727002",
    "product-id": 787,
    "hardware-ver": "B",
    "firmware-id": 1,
    "firmware-ver-s": "2.0.312",
    "factory-firmware-ver-s": "2.0.283",
    "product-name": "Ultra Encode",
    "module-name": "Ultra Encode AIO",
    "manu-name": "MAGEWELL",
    "features": 1,
    "max-lock-count": 2,
    "live-support": 4095,
    "cloud-support": 1,
    "record-support": 1,
    "scheduler-support": 1,
    "nas-support": 1,
    "multi-audio-support": 1
  },
  "nosignal": {
    "max-count": 4,
    "max-width": 1920,
    "max-height": 1080,
    "max-size-kb": 1024
  },
  "input-source": {
    "sources": [
      {
        "name": "Auto Scan",
        "value": 3
      },
      {
        "name": "SDI Input",
        "value": 1
      },
      {
        "name": "HDMI Input",
        "value": 2
      },
      {
        "name": "Mixer",
        "value": 4
      }
    ],
    "video-mixer": {
      "types": [
        {
          "name": "Picture in Picture",
          "value": 0
```

```
        },
        {
          "name": "Side by Side",
          "value": 1
        }
      ],
      "pip": [
        {
          "name": "Left Top Corner",
          "value": 1
        },
        {
          "name": "Top Right Corner",
          "value": 2
        },
        {
          "name": "Left Bottom Corner",
          "value": 3
        },
        {
          "name": "Bottom Right Corner",
          "value": 4
        }
      ],
      "sbs": [
        {
          "name": "Half",
          "value": 1
        },
        {
          "name": "One Third",
          "value": 2
        },
        {
          "name": "Two Thirds",
          "value": 3
        },
        {
          "name": "One Fourth",
          "value": 4
        },
        {
          "name": "Three Fourths",
          "value": 5
        }
      ]
    }
  },
  "audio-range": {
    "spi": {
    "max": 600,
    "min": -10000,
    "def": 0
    },
    "linein": {
      "max": 5525,
      "min": -13900,
      "def": 0
    },
    "lineout": {
      "max": 600,
      "min": -5700,
```

```
      "def": 0
    }
  },
  "codec-cap": {
    "main-stream": {
      "max-video-kbps": 32768,
      "min-video-kbps-ratio": 5,
      "max-video-kbps-ratio": 100,
      "def-video-kbps-ratio": 20,
      "min-duration": 166667,
      "max-duration": 2000000,
      "min-gop-size": 15,
      "max-gop-size": 300
    },
    "sub-stream": {
      "max-width": 1920,
      "max-height": 1200,
      "max-duration": 2000000,
      "min-duration": 166667,
      "max-video-kbps": 32768,
      "reserved": [
        {
        "w": 1920,
        "h": 1200
        }
      ]
    },
    "ndi-sub-stream": {
      "max-width": 1920,
      "max-height": 1200,
      "max-duration": 2000000,
      "min-duration": 166667,
      "max-video-kbps": 32768
    },
    "ndi-hx3-main-stream": {
      "max-width": 1920,
      "max-height": 1200,
      "max-duration": 2000000,
      "min-duration": 166667,
      "max-video-kbps": 63488,
      "min-video-kbps-ratio": 10,
      "max-video-kbps-ratio": 156,
      "def-video-kbps-ratio": 155,
      "hevc-min-video-kbps-ratio": 10,
      "hevc-max-video-kbps-ratio": 126,
      "hevc-def-video-kbps-ratio": 125,
      "min-gop-size": 2,
      "max-gop-size": 120,
      "reserved": [
        {
        "w": 1920,
        "h": 1200
        }
      ]
    },
    "ndi-hx3-durations": [
      {
        "name": "25 FPS",
        "value": 400000
      },
      {
        "name": "30 FPS",
```

```
        "value": 333333
      },
      {
        "name": "50 FPS",
        "value": 200000
      },
      {
        "name": "60 FPS",
        "value": 166667
      },
      {
        "name": "Follow Input",
        "value": 0
      }
    ],
    "resolutions": [
      {
        "w": 480,
        "h": 270
      },
      {
        "w": 480,
        "h": 360
      },
      {
        "w": 640,
        "h": 360
      },
      {
        "w": 640,
        "h": 480
      },
      {
        "w": 720,
        "h": 480
      },
      {
        "w": 720,
        "h": 540
      },
      {
        "w": 720,
        "h": 576
      },
      {
        "w": 768,
        "h": 576
      },
      {
        "w": 800,
        "h": 600
      },
      {
        "w": 960,
        "h": 540
      },
      {
        "w": 1024,
        "h": 768
      },
      {
        "w": 1280,
```

```
        "h": 720
      },
      {
        "w": 1280,
        "h": 800
      },
      {
        "w": 1280,
        "h": 960
      },
      {
        "w": 1280,
        "h": 1024
      },
      {
        "w": 1440,
        "h": 900
      },
      {
        "w": 1440,
        "h": 1080
      },
      {
        "w": 1600,
        "h": 900
      },
      {
        "w": 1600,
        "h": 1200
      },
      {
        "w": 1664,
        "h": 936
      },
      {
        "w": 1920,
        "h": 1080
      },
      {
        "w": 1920,
        "h": 1200
      },
      {
        "w": 2048,
        "h": 1080
      },
      {
        "w": 3840,
        "h": 2160
      },
      {
        "w": 4096,
        "h": 2160
      }
    ],
    "durations": [
      {
        "name": "5 FPS",
        "value": 2000000
      },
      {
        "name": "10 FPS",
```

```
        "value": 1000000
      },
      {
        "name": "15 FPS",
        "value": 666667
      },
      {
        "name": "24 FPS",
        "value": 416667
      },
      {
        "name": "25 FPS",
        "value": 400000
      },
      {
        "name": "29.97 FPS",
        "value": 333667
      },
      {
        "name": "30 FPS",
        "value": 333333
      },
      {
        "name": "50 FPS",
        "value": 200000
      },
      {
        "name": "59.94 FPS",
        "value": 166833
      },
      {
        "name": "60 FPS",
        "value": 166667
      },
      {
        "name": "Follow Input",
        "value": 0
      }
    ],
    "profile": [
      {
        "name": "Baseline",
        "value": 0
      },
      {
        "name": "Main profile",
        "value": 1
      },
      {
        "name": "High profile",
        "value": 2
      }
      ],
    "hevc-profile": [
      {
        "name": "Main profile",
        "value": 0
      }
      ],
    "video-kbps": [
      {
        "name": "256 Kbps",
```

```
      "value": 256
    },
    {
      "name": "512 Kbps",
      "value": 512
    },
    {
      "name": "768 Kbps",
      "value": 768
    },
    {
      "name": "1 Mbps",
      "value": 1024
    },
    {
      "name": "1.5 Mbps",
      "value": 1536
    },
    {
      "name": "2 Mbps",
      "value": 2048
    },
    {
      "name": "3 Mbps",
      "value": 3072
    },
    {
      "name": "4 Mbps",
      "value": 4096
    },
    {
      "name": "5 Mbps",
      "value": 5120
    },
    {
      "name": "6 Mbps",
      "value": 6144
    },
    {
      "name": "8 Mbps",
      "value": 8192
    },
    {
      "name": "10 Mbps",
      "value": 10240
    },
    {
      "name": "12 Mbps",
      "value": 12288
    },
    {
      "name": "16 Mbps",
      "value": 16384
    },
    {
      "name": "20 Mbps",
      "value": 20480
    },
    {
      "name": "24 Mbps",
      "value": 24576
    },
```

```
      {
        "name": "25 Mbps",
        "value": 25600
      },
      {
        "name": "26 Mbps",
        "value": 26624
      },
      {
        "name": "31 Mbps",
        "value": 31744
      },
      {
        "name": "32 Mbps",
        "value": 32768
      },
      {
        "name": "41 Mbps",
        "value": 41984
      },
      {
        "name": "50 Mbps",
        "value": 51200
      },
      {
        "name": "52 Mbps",
        "value": 53248
      },
      {
        "name": "62 Mbps",
        "value": 63488
      }
    ],
    "audio-streams": [
      {
        "name": "Audio stream 1",
        "value": 0
      },
      {
        "name": "Audio stream 2",
        "value": 1
      },
      {
        "name": "Audio stream 3",
        "value": 2
      },
      {
        "name": "Audio stream 4",
        "value": 3
      }
    ],
    "audio-channels": [
      {
        "name": "Follow Input",
        "value": 0
      },
      {
        "name": "2 Channels",
        "value": 2
      },
      {
        "name": "4 Channels",
```

```
        "value": 4
      },
      {
        "name": "6 Channels",
        "value": 6
      },
      {
        "name": "8 Channels",
        "value": 8
      }
    ],
    "audio-chmap": [
      {
        "name": "Source channels 1/2",
        "value": 0
      },
      {
        "name": "Source channels 3/4",
        "value": 1
      },
      {
        "name": "Source channels 5/6",
        "value": 2
      },
      {
        "name": "Source channels 7/8",
        "value": 3
      }
    ],
    "audio-kbps": [
      {
        "name": " 16 Kbps",
        "value": 16
      },
      {
        "name": " 32 Kbps",
        "value": 32
      },
      {
        "name": " 48 Kbps",
        "value": 48
      },
      {
        "name": " 64 Kbps",
        "value": 64
      },
      {
        "name": " 96 Kbps",
        "value": 96
      },
      {
        "name": "128 Kbps",
        "value": 128
      },
      {
        "name": "192 Kbps",
        "value": 192
      },
      {
        "name": "256 Kbps",
        "value": 256
      }
```

```
    ],
    "gop-sec": [
      {
        "name": " 1 sec",
        "value": 1
      },
      {
        "name": " 2 sec",
        "value": 2
      },
      {
        "name": " 5 sec",
        "value": 5
      },
      {
        "name": "10 sec",
        "value": 10
      },
      {
        "name": "30 sec",
        "value": 30
      },
      {
        "name": "60 sec",
        "value": 60
      }
    ],
    "video-range": [
      {
        "name": "Full range (0-255)",
        "value": 1
      },
      {
        "name": "Limited range (16-235)",
        "value": 0
      }
    ],
    "stat-sec": [
      {
        "name": " 1 sec",
        "value": 1
      },
      {
        "name": " 5 sec",
        "value": 5
      },
      {
        "name": "10 sec",
        "value": 10
      },
      {
        "name": "30 sec",
        "value": 30
      },
      {
        "name": "60 sec",
        "value": 60
      }
    ],
    "video-codec": [
      {
        "name": "H.264",
```

```
        "value": 0
      },
      {
        "name": "H.265 (HEVC)",
        "value": 1
      }
    ],
    "video-ar-convert-mode": [
      {
        "name": "Ignore",
        "value": 0
      },
      {
        "name": "Cropping",
        "value": 1
      },
      {
        "name": "Padding",
        "value": 2
      }
    ],
    "video-rotation": [
      {
        "name": "Off",
        "value": 0
      },
      {
        "name": "90",
        "value": 1
      },
      {
        "name": "180",
        "value": 2
      },
      {
        "name": "270",
        "value": 3
      }
    ],
    "rc": {
      "mim-qp": 0,
      "max-qp": 51,
      "def-h264-min-qp": 10,
      "def-h264-max-qp": 48,
      "def-hevc-min-qp": 12,
      "def-hevc-max-qp": 51
    }
  },
  "rec": {
    "mode": [
      {
        "name": "Ordinary recording",
        "value": 0
      },
      {
        "name": "Loop recording",
        "value": 1
      }
    ],
    "file-prefix": [
      {
        "name": "Custom prefix",
```

```
        "value": 0
      },
      {
        "name": "Creation time",
        "value": 1
      }
    ],
    "file-suffix": [
      {
        "name": "mp4",
        "value": 0
      },
      {
        "name": "mov",
        "value": 1
      }
    ],
    "time-unit": [
      {
        "name": "5 minutes",
        "value": 5
      },
      {
        "name": "10 minutes",
        "value": 10
      },
      {
        "name": "30 minutes",
        "value": 30
      },
      {
        "name": "40 minutes",
        "value": 40
      },
      {
        "name": "50 minutes",
        "value": 50
      },
      {
        "name": "60 minutes",
        "value": 60
      },
      {
        "name": "90 minutes",
        "value": 90
      },
      {
        "name": "120 minutes",
        "value": 120
      }
    ],
    "trigger-mode": [
      {
        "name": "Signal locked",
        "value": 0
      },
      {
        "name": "USB drive detected",
        "value": 1
      }
    ]
  },
```

```
  "nas": {
    "proto": [
      {
        "name": "NFS - Network File System",
        "value": 0
      },
      {
        "name": "CIFS - Common Internet File System",
        "value": 1
      }
    ]
  },
  "color-range": {
    "contrast": {
      "max": 200,
      "min": 50,
      "def": 100
    },
    "brightness": {
      "max": 100,
      "min": -100,
      "def": 0
    },
    "saturation": {
      "max": 200,
      "min": 0,
      "def": 100
    },
    "hue": {
      "max": 90,
      "min": -90,
      "def": 0
    }
  },
  "video-format": {
    "input-color-fmt": [
      {
        "name": "RGB",
        "value": 1
        },
      {
        "name": "YUV BT.601",
        "value": 2
        },
      {
        "name": "YUV BT.709",
        "value": 3
      },
      {
        "name": "YUV BT.2020",
        "value": 4
      }
    ],
    "output-color-fmt": [
      {
        "name": "YUV BT.601",
        "value": 2
      },
      {
        "name": "YUV BT.709",
        "value": 3
      }
```

```
      ],
    "quant-range": [
      {
        "name": "Full range (0-255)",
        "value": 1
      },
      {
        "name": "Limited range (16-235)",
        "value": 2
      }
    ],
    "sat-range": [
      {
        "name": "Full range (0-255)",
        "value": 1
      },
      {
        "name": "Limited range (16-235)",
        "value": 2
      },
      {
        "name": "Extended GAMUT range (1-254)",
        "value": 3
      }
    ]
  },
  "living": {
    "max-bandwidth": 16384,
    "ttl": {
      "max": 255,
      "min": 0,
      "def": 0
    },
    "conn-timeout": {
      "max": 30000,
      "min": 1000
    },
    "retry-duration": {
      "max": 10000,
      "min": 0
    },
    "rtmp": {
      "def-conn-timeout": 10000,
      "def-retry-duration": 10000
    },
    "srt": {
      "def-conn-timeout": 3000,
      "def-retry-duration": 10000,
      "latency": {
        "max": 8000,
        "min": 30,
        "def": 120
      },
      "bandwidth": {
        "max": 100,
        "min": 5,
        "def": 25
      },
      "aes": [
        {
          "name": "Not Used",
          "value": 0
```

```
      },
      {
        "name": "AES-128",
        "value": 16
      },
      {
        "name": "AES-192",
        "value": 24
      },
      {
        "name": "AES-256",
        "value": 32
      }
    ],
    "mtu": {
      "max": 1500,
      "min": 232,
      "def": 1496
    }
  },
  "ndi": {
    "transport-mode": [
      {
        "name": "UDP (Unicast)",
        "value": 0
      },
      {
        "name": "UDP (Multicast)",
        "value": 1
      },
      {
        "name": "RUDP (Unicast)",
        "value": 2
      },
      {
        "name": "TCP (Uni-Connection)",
        "value": 3
      },
      {
        "name": "TCP (Multi-Connection)",
        "value": 4
      }
    ]
  },
  "udp": {
    "mtu": {
      "max": 1500,
      "min": 228,
      "def": 1496
    }
  },
  "hls-push": {
    "seg-count": {
      "max": 5,
      "min": 1,
      "def": 3
    },
    "seg-duration": {
      "max": 4,
      "min": 1,
      "def": 3
    }
```

```
    }
  },
  "surface": {
    "image": {
    "max-count": 8,
    "max-width": 1920,
    "max-height": 1080,
    "max-size-kb": 512
    },
    "type": [
      {
        "name": "Text",
        "value": 0
      },
      {
        "name": "System Time",
        "value": 1
      },
      {
        "name": "Image",
        "value": 2
      }
    ],
    "image-type": [
      {
        "name": "JPEG",
        "value": 0
      },
      {
        "name": "PNG",
        "value": 1
      }
    ],
    "condition": [
      {
        "name": "Always",
        "value": 0
      }
    ],
    "position": [
      {
        "name": "Custom",
        "value": 0
      },
      {
        "name": "Left Top Corner",
        "value": 1
      },
      {
        "name": "Top Right Corner",
        "value": 2
      },
      {
        "name": "Top Center",
        "value": 5
      },
      {
        "name": "Left Bottom Corner",
        "value": 3
      },
      {
        "name": "Bottom Right Corner",
```

```
        "value": 4
      },
      {
        "name": "Bottom Center",
        "value": 6
      },
      {
        "name": "Center",
        "value": 7
      }
    ],
    "font-family": [
      {
        "name": "Source Han Sans",
        "value": 0
      },
      {
        "name": "Lato",
        "value": 1
      }
    ],
    "font-style": [
      {
        "name": "Normal",
        "value": 0
      },
      {
        "name": "Italic",
        "value": 1
      },
      {
        "name": "Oblique",
        "value": 2
      }
    ],
    "font-weight": [
      {
        "name": "Normal",
        "value": 0
      },
      {
        "name": "Bold",
        "value": 1
      }
    ],
    "time-format": [
      {
        "name": "YYYY-MM-DD hh:mm:ss",
        "value": 0
      },
      {
        "name": "MM/DD/YYYY hh:mm:ss",
        "value": 1
      },
      {
        "name": "DD/MM/YYYY hh:mm:ss",
        "value": 2
      },
      {
        "name": "YYYY-MM-DD",
        "value": 3
      },
```

```
      {
        "name": "MM/DD/YYYY",
        "value": 4
      },
      {
        "name": "DD/MM/YYYY",
        "value": 5
      },
      {
        "name": "hh:mm:ss",
        "value": 6
      },
      {
        "name": "hh:mm",
        "value": 7
      }
    ]
  },
  "web": {
    "theme": [
      {
        "name": "Light",
        "value": 0
      },
      {
        "name": "Dark",
        "value": 1
      }
    ]
  },
  "send-file": {
    "server": [
      {
        "name": "FTP Server",
        "value": 0
      },
      {
        "name": "Google Drive",
        "value": 1
      },
      {
        "name": "Dropbox",
        "value": 2
      }
    ],
    "ftp-proto": [
      {
        "name": "FTP - File Transfer Protocol",
        "value": 0
      },
      {
        "name": "SFTP - SSH File Transfer Protocol",
        "value": 1
      }
    ],
    "ftp-encryption": [
      {
        "name": "Only use plain FTP (insecure)",
        "value": 0
      },
      {
        "name": "Require explicit FTP over TLS",
```

```
        "value": 1
      },
      {
        "name": "Require implicit FTP over TLS",
        "value": 2
      }
    ],
    "ftp-transfer-mode": [
      {
        "name": "Active",
        "value": 0
      },
      {
        "name": "Passive",
        "value": 1
      }
    ]
  },
  "lcd": {
    "page": [
      {
        "name": "Preview",
        "value": 0
      },
      {
        "name": "Live",
        "value": 1
      },
      {
        "name": "Record",
        "value": 2
      },
      {
        "name": "QR Code",
        "value": 3
      }
    ]
  }
}
```

# get-status

Use this interface to obtain the real-time running status of the device, including status of live stream, firmware update, etc.

## HTTP Request

```
GET http://ip/usapi?method=get-status
```

| Parameter | Description |
| --- | --- |
| method | get-status |

## Response Body

JSON structure is as follows:

```
{
  "result": 0,                    // returned status
  "cur-status": 64,               // device running status mask
  "cur-time": "2021-01-11 ...",   // device current time
  "box-name": "",                 // device name
  "input-source": 1,              // input source
  "input-device": 1,              // input device
  "cpu-temperature": 61100,
  "enable-ndi-hx3": 0,
  "codec": {                      // codec status
    "main-stream": {},
    "sub-stream": {},
    "audio": {}
  },
  "sysstat": {},                  // device running status
  "live-status": {                // live status
    "live": []
    },
  "upgrade-status": {},           // update status
  "rec-status": {                 // recording status
    "rec": []
  },
  "format-status": {},            // disk format status
  "disk-test": {},                // disk performance test status
  "nas": {},                      // nas connection status
  "living-test": {},              // live test status
  "check-upgrade": {},            // online update check status
  "conn-wifi": {},                // wifi connection status
  "input-signal": {},             // input signal
  "disk-info": {},                // disk information
  "wifi": {},                     // wifi network
  "softap": {},                   // AP network
  "eth": {},                      // ethernet network
  "mobile": {},                   // mobile broadband network
  "rndis": {},                    // USB net
  "upgrade": {},                  // new firmware information
  "channel-count": 2,
  "vumeters": [
    33,
    32
    ]
}
```

**Response Body**

```
"result": 0
```

**Device Running Status Mask**

```
"cur-status": 65552
```

Masks represent the device running status. Specific description for each mask refers to Device Status Masks. The following conditions are used to get the device running status.

1. Referring to the Device Status Masks, when a device is updating firmware, the mask is: statusUpgrade = 0x4000.
2. If `cur-status & statusUpgrade = statusUpgrade` , it indicates firmware is updating.

**Input Signal Status**

```
"input-signal": {
  "status": 0,
  "cx": 0,
  "cy": 0,
  "interlaced": 0,
  "frame-rate": 0.00,
  "channel-valid": 0,
  "is-lpcm": 0,
  "bits-per-sample": 0,
  "sample-rate": 0,
  "hdmi": {
    "status": 0,
    "cx": 0,
    "cy": 0,
    "interlaced": 0,
    "interlaced-scale": 1,
    "frame-rate": 0.00,
    "channel-valid": 0,
    "is-lpcm": 0,
    "bits-per-sample": 0,
    "sample-rate": 0
  },
  "sdi": {
    "status": 0,
    "cx": 0,
    "cy": 0,
    "interlaced": 0,
    "interlaced-scale": 1,
    "frame-rate": 0.00,
    "channel-valid": 0,
    "is-lpcm": 0,
    "bits-per-sample": 0,
    "sample-rate": 0
  }
}
```

**Streaming Status**

```
"live-status": {
  [
    {
      "id": 0,
      "type": 130,
      "is-use": 1,
      "is-skd-runnung": 0,
      "name": "NDI HX",
      "run-ms": 231465213,
      "result": 22,
      "main-inst-bps": 993141,
      "sub-inst-bps": 103444,
    }
  ]
}
```

**Streaming Test Status**

```
"living-test": {
  "upload-bps": 0,
  "percent": 0,
  "result": 27,
  "net": 0,
  "client-id": ""
}
```

**Record Status**

```
"rec-status": {
  "rec": [
    {
      "id": 1,
      "type": 1,
      "is-use": 1,
      "is-skd-runnung": 0,
      "result": 2,
      "run-ms": 1700,
      "parted-num": 1,
      "video-frame-count": 70,
      "audio-frame-count": 54
    }
  ]
}
```

**Disk Formatting Status**

```
"format-status": {
  "type": 0,
  "percent": 0,
  "result": 27,
  "client-id": ""
}
```

**Disk Testing Status**

```
"disk-test": {
  "type": 0,
  "read-bps": 0,
  "write-bps": 0,
  "percent": 0,
  "result": 27,
  "client-id": ""
}
```

**NAS Connection Status**

```
"nas": [
  {
    "id": 0,
    "type": 2,
    "result": 22
  }
]
```

**Online Check Status**

```
"check-upgrade": {
  "result": 0,
  "client-id": ""
}
```

**New Firmware Information**

```
"upgrade": {
  "ver": "",
  "date": "",
  "size-byte": 0,
  "info": []
}
```

**Firmware Update Status**

```
"upgrade-status": {
  "step": 0,
  "percent": 0,
  "result": 27,
  "client-id": "",
  "mode": "none"
}
```

**Wi-Fi Connection**

```
"wifi": {
  "name": "MWL1",
  "level": 0,
  "ip": "192.168.8.249",
  "mask": "255.255.255.0",
  "router": "192.168.8.1",
  "dns": "192.168.8.1"
}
```

**Ethernet Connection**

```
"eth": {
  "ip": "10.10.107.212",
  "mask": "255.255.0.0",
  "router": "10.10.0.1",
  "dns": "10.0.0.3"
}
```

**Mobile Broadband Connection**

```
"mobile": {
  "ip": "",
  "mask": "",
  "router": "",
  "dns": ""
}
```

# get-settings

Use this interface to obtain the device settings.

## HTTP Request

```
GET http://ip/usapi?method=get-settings
```

| Parameter | Description |
| --- | --- |
| method | get-settings |

## Response Body

JSON structure is as follows:

```
{
  "result": 0,                      // returned status
  "name": "Ultra...",               // device name
  "is-check-update": 1,             // enable status of auto-check online update
  "audio-sync-offset": 0,           // audio offset in ms
  "udp-mtu": 1496,                  // UDP MTU
  "enable-ndi-hx3": 0,              // NDI|HX3 enable status
  "softap": {},                     // AP settings
  "date-time": {},                  // value of date and time
  "input-source": {},               // input source value
  "video-color": {},                // video information
  "volume": {},                     // audio information
  "enable-deinterlace": 1,          // deinterlace enable status
  "3d-output": {},                  // 3D output settings
  "main-stream": {},                // main stream settings
  "sub-stream": {},                 // sub stream settings
  "audio": {},                      // audio settings
  "audio-streams": [...],           // ÒôÆµÂëÁ÷ÁÐ±í
  "eth": {},                        // Ethernet information
  "wifi": {},                       // Wi-Fi information
  "rndis": {},                      // USB NET information
  "stream-server": [...],           // streaming server list
  "video-input-format": {},         // input video format
  "video-output-format": {},        // output video format
  "use-nosignal-file": 1,           // whether to show an image when there is no input signal
  "nosignal-files": [...]           // no signal images list
  "nas": [...]                      // NAS list
  "send-file-cloud": [...],         // Upload server list
  "web": {},                        // Web security management and theme configuration information
  "rec": {},                        // record settings
  "living": {},                     // live settings
  "lcd-control": {}                 // LCD screen settings
}
```

Example

```
{
  "result": 0,
  "name": "Ultra Encode B313220727002",
  "is-check-update": 1,
  "living-kbps": 32768,
  "audio-sync-offset": 0,
  "enable-advanced-pcr": 0,
  "udp-mtu": 1496,
  "enable-ndi-hx3": 0,
  "softap": {
    "is-softap": 1,
    "is-visible": 1,
    "softap-ssid": "B313220727002",
    "softap-passwd": "20727002"
  },
  "date-time": {
    "timezone": "Asia/Shanghai",
    "is-auto": 1,
    "ntp-server": "0.pool.ntp.org",
    "ntp-server-backup": "1.pool.ntp.org"
  },
  "input-source": {
    "source": 1,
    "mixer": {
    "input-device": 2,
    "is-hdmi-top": 0,
    "type": 0,
    "location": 2
  }
  },
  "video-color": {
    "hdmi": {
    "contrast": 100,
    "brightness": 0,
    "saturation": 100,
    "hue": 0
  },
  "sdi": {
    "contrast": 100,
    "brightness": 0,
    "saturation": 100,
    "hue": 0
  }
  },
  "volume": {
    "is-spi": 1,
    "spi-gain": 0,
    "is-linein": 1,
    "linein-gain": 127,
    "is-lineout": 1,
    "lineout-gain": 0,
    "enable-mic-bias": 0
  },
  "enable-deinterlace": 1,
  "3d-output": {
    "enable": 0,
    "mode": 1
  },
  "main-stream": {
    "is-auto": 0,
    "codec": 1,
```

```
    "cx": 1920,
    "cy": 1080,
    "duration": 0,
    "kbps": 8192,
    "gop": 60,
    "fourcc": 0,
    "profile": 0,
    "cbrstat": 60,
    "fullrange": 0,
    "is-vbr": 0,
    "min-vbr-qp": 0,
    "max-vbr-qp": 0,
    "is-time-code-sei": 1,
    "is-closed-caption-sei": 0,
    "ar-convert-mode": 2,
    "rotation": 0,
    "mirroring": 0
  },
  "sub-stream": {
    "enable": 1,
    "codec": 1,
    "cx": 1920,
    "cy": 1080,
    "duration": 333333,
    "kbps": 4096,
    "gop": 60,
    "fourcc": 0,
    "profile": 0,
    "cbrstat": 60,
    "fullrange": 0,
    "is-vbr": 0,
    "min-vbr-qp": 0,
    "max-vbr-qp": 0,
    "is-time-code-sei": 1,
    "is-closed-caption-sei": 0,
    "ar-convert-mode": 2,
    "rotation": 0,
    "mirroring": 0
  },
  "audio": {
  "sample-rate": 48000,
    "channels": 0,
    "kbps": 256,
    "ch0": 0,
    "ch1": 1,
    "ch2": 1,
    "ch3": 3
  },
  "audio-streams": [
    {
     "sample-rate": 48000,
      "channels": 0,
      "kbps": 256,
      "ch0": 0,
      "ch1": 1,
      "ch2": 1,
      "ch3": 3
    },
    {
      "sample-rate": 48000,
      "channels": 2,
      "kbps": 32,
```

```
      "ch0": 2,
      "ch1": 1,
      "ch2": 2,
      "ch3": 3
    },
    {
      "sample-rate": 48000,
      "channels": 2,
      "kbps": 128,
      "ch0": 3,
      "ch1": 1,
      "ch2": 2,
      "ch3": 3
    },
    {
      "sample-rate": 48000,
      "channels": 2,
      "kbps": 192,
      "ch0": 3,
      "ch1": 1,
      "ch2": 2,
      "ch3": 3
    }
  ],
  "eth": {
    "is-dhcp": 1,
    "ip": "",
    "mask": "",
    "router": "",
    "dns": ""
  },
  "wifi": {
    "is-dhcp": 1,
    "ip": "",
    "mask": "",
    "router": "",
    "dns": ""
  },
  "rndis": {
    "ip": "192.168.66.1",
    "mask": "255.255.255.0"
  },
  "stream-server": [
    {
      "id": 0,
      "type": 130,
      "name": "NDI HX",
      "is-use": 0,
      "source-name": "#serial-no#",
      "group-name": "public",
      "enable-discovery": 0,
      "discovery-server": "",
      "transport-mode": 3,
      "mcast-addr": "",
      "mcast-mask": "",
      "mcast-ttl": 0,
      "enable-fail-over": 0,
      "fail-over-ndi-name": "",
      "fail-over-ip-addr": "",
      "enable-web-control": 0,
      "enable-ptz-control": 0,
      "main-stream": 0,
```

```
      "prvw-stream": 1,
      "audio": 2,
      "opt": 0,
      "is-media-hub": 0
    }
  ],
  "video-input-format": {
    "hdmi": {
    "is-color-fmt": 0,
    "color-fmt": 1,
    "is-quant-range": 0,
    "quant-range": 1
  },
  "sdi": {
    "is-color-fmt": 0,
    "color-fmt": 1,
    "is-quant-range": 0,
    "quant-range": 1
  }
  },
  "video-output-format": {
    "hdmi": {
    "is-color-fmt": 0,
    "color-fmt": 3,
    "is-quant-range": 0,
    "quant-range": 2,
    "is-sat-range": 0,
    "sat-range": 2
    },
    "sdi": {
      "is-color-fmt": 0,
      "color-fmt": 3,
      "is-quant-range": 0,
      "quant-range": 2,
      "is-sat-range": 0,
      "sat-range": 2
    }
  },
  "use-nosignal-file": 1,
  "nosignal-files": [
    {
      "id": 0,
      "is-use": 0,
      "is-edit": 0,
      "file-path": "/no-signal/default0.jpg",
      "time": 0
    },
    {
      "id": 1,
      "is-use": 1,
      "is-edit": 0,
      "file-path": "/no-signal/default1.jpg",
      "time": 0
    },
    {
      "id": 2,
      "is-use": 0,
      "is-edit": 1,
      "file-path": "/no-signal/default2.jpg",
      "time": 16687566986732126
    }
  ],
```

```
  "nas": [
    {
      "id": 0,
      "type": 2,
      "proto": 0,
      "is-use": 1,
      "addr": "10.10.14.193",
      "mount": "/home/magewell/nfs"
    }
  ],
  "send-file-cloud": [
  ],
  "web": {
    "is-http": 1,
    "http-port": 80,
    "is-https": 0,
    "https-port": 443,
    "is-cert-valid": 0,
    "is-cert-key-valid": 0,
    "theme": 0
  },
  "rec": {
    "is-auto": 0,
    "trigger-mode": 0
  },
  "living": {
    "ts": {
      "mtu": 1497
    },
    "hls-push": {
      "seg-count": 3,
      "seg-duration": 3
    }
  },
  "lcd-control": {
    "no-touch": 0,
    "page-idx": 3,
    "no-flip": 0
  }
}
```

# ping

Use this interface to check whether the device is accessible without log-in.

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

## HTTP Request

```
GET http://ip/usapi?method=ping
```

| Parameter | Description |
| --- | --- |
| method | ping |

## Response Body

```
{
  "result": 0,
  "micro-sec": 149564858458,
  "cur-status": 65552
}
```

| Item | Description |
| --- | --- |
| result | 0 indicates the device is able to access. Refer to API Status Codes to find specific description for other values. |
| cur-status | Indicates the mask of current running status. Refer to Device Status Mask to find specific description for each value. |

# get-report

Use this interface to check device information, status and configurations.

## HTTP Request

```
GET http://ip/usapi?method=get-report
```

| Parameter | Description |
| --- | --- |
| method | get-report |

## Response Body

```
{
  <div class="report-summary">
  ...
  <h2>DEVICE</h2>
  ...
  <h2>STATUS</h2>
  ...
  <h2>SETTINGS</h2>
  ...
  </div>
}
```

# export-report

Use this interface to export a .html file including device information, status and configurations.

## HTTP Request

```
GET http://ip/usapi?method=export-report&file-name=...
```

| Parameter | Description |
| --- | --- |
| method | export-report |
| file-name | Specifies where to store the exported files. |

## Response Body

```
{
  "result": 0
}
```

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

# get-logs

Use this interface to obtain system logs list which can include up to 1000 records with administrator rights.

## HTTP Request

```
GET http://ip/usapi?method=get-logs&types=all
```

| Parameter | Description |
| --- | --- |
| method | get-logs |
| types | Log types including all, info, warn and error, separated by comma when there are multiple values. |

## Response Body

```
{
  "result": 0
  "logs:[
    {
      "type": "warn",
      "time": "2022-03-19 09:53:03.047",
      "message": "USB state: disconnected"
    },
    ...
  ]"
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# export-logs

Use this interface to export current system logs as html files with administrator rights.

## HTTP Request

```
GET http://ip/usapi?method=export-logs&file-name=...
```

| Parameter | Description |
| --- | --- |
| method | export-logs |
| file-name | File saved directory. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# clear-logs

Use this interface to clear all system logs with administrator rights.

## HTTP Request

```
GET http://ip/usapi?method=clear-logs
```

| Parameter | Description |
| --- | --- |
| method | clear-logs |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# start-live

> Added at V2.1

Use this interface to start live. You can call stop-live to stop it.

## HTTP Request

```
GET http://ip/usapi?method=start-live
```

| Parameter | Description |
| --- | --- |
| method | start-live |

## Response Body

```
{
  "result": 0
}
```

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

# stop-live

> Added at V2.1

Use this interface to stop streaming.

## HTTP Request

```
GET http://ip/usapi?method=stop-live
```

| Parameter | Description |
| --- | --- |
| method | stop-live |

## Response Body

```
{
  "result": 0
}
```

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

# clear-live

> Added at V2.1

Use this interface to reset the device to the initial state (retInit=27) when live streaming fails or succeeds.

## HTTP Request

```
GET http://ip/usapi?method=clear-live
```

| Parameter | Description |
| --- | --- |
| method | clear-live |

## Response Body

```
{
  "result": 0
}
```

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

# start-rec

> Added at V2.1

Use this interface to start recording.

You can call stop-rec to stop it.

## HTTP Request

```
GET http://ip/usapi?method=start-rec
```

| Parameter | Description |
| --- | --- |
| method | start-rec |

## Response Body

```
{
  "result": 0
}
```

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

# stop-rec

> Added at V2.1

Use this interface to stop recording.

## HTTP Request

```
GET http://ip/usapi?method=stop-rec
```

| Parameter | Description |
| --- | --- |
| method | stop-rec |

## Response Body

```
{
  "result": 0
}
```

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

# clear-rec

> Added at V2.1

Use this interface to reset the device to the initial state (retInit=27) when recording fails or succeeds.

## HTTP Request

```
GET http://ip/usapi?method=clear-rec
```

| Parameter | Description |
| --- | --- |
| method | clear-clear-rec |

## Response Body

```
{
  "result": 0
}
```

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

# set-name

Use this interface to set device name.

## HTTP Request

```
GET http://ip/usapi?method=set-name&name=xxx
```

| Parameter | Description |
| --- | --- |
| method | set-name |
| name | The string of device name ranges from 1 to 32 characters, which contains A to Z, a to z, 0 to 9, spaces ._-+'[](), and cannot start or end with space. |

## Response Body

```
{
  "result": 0
}
```

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

# set-first-over

Use this interface to initialize the encoder when accessing it for the first time, mainly to set the **device name**.

Obtain current device running status mask using get-status.

```
{
  "cur-status": 65552                    // device running status mask
  ...
}
```

statusFirst(0x01) indicates the device's first booting. If **cur-status** & **statusFirst** = statusFirst, it means the encoder is on the first run.

## HTTP Request

```
GET http://ip/usapi?method=set-first-over&name=xxx
```

| Parameter | Description |
| --- | --- |
| method | set-first-over |
| name | The string of device name which contains<br>1. 1 to 32 characters<br>2. A to Z, a to z, 0 to 9, spaces and special characters ._-+'[](), and can not start or end with spaces. |

## Response Body

```
{
  "result": 0
}
```

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

# set-softap

Use this interface to modify AP configurations.

## HTTP Request

```
GET http://ip/usapi?method=set-softap&is-softap=0&is-visible=1&softap-ssid=xxx&softap-passwd=xxx
```

| Parameter | Description |
| --- | --- |
| method | set-softap |
| is-softap | Reserved. The default value is 1. |
| is-visible | Reserved. The default value is 1. |
| softap-ssid | Reserved. The default value is the same as the product serial number. |
| softap-passwd | Indicates the SSID password in plain text. The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). The password can not start or end with spaces. |

## Response Body

```
{
  "result": 0
}
```

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

# set-ssdp

Use this interface to set UPNP enable status.

## HTTP Request

```
GET http://ip/usapi?method=set-ssdp&is-ssdp=1
```

| Parameter | Description |
| --- | --- |
| method | set-ssdp |
| is-ssdp | 0: disable UPNP<br>1: enable UPNP |

## Response Body

```
{
  "result": 0
}
```

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

# set-volume

Use this interface to adjust the gain of input signal, line in, and line out.

You can obtain the range of recording parameters using get-info.

```
"audio-range": {
    "spi": [],       // range of input audio gain
    "linein": [],        // range of line in audio gain
    "lineout": [],      // range of line out audio gain
  }
```

## Response Body

```
GET http://ip/usapi?method=set-volume&is-linein=1&linein-gain=0&is-spi=1&spi-gain=0&is-lineout=1&lineout-gain=0
```

| Parameter | Description |
| --- | --- |
| method | set-volume |
| is-linein | 0: mute the linein gain.<br>1: enable the line in gain. |
| linein-gain | Indicates the line in gain in dB. The default value is 0. |
| is-spi | 0: mute the input gain.<br>1: enable the input gain. |
| spi-gain | Indicates the input gain in dB. The default value is 0. |
| is-lineout | 0: mute the line out gain.<br>1: enable the line out gain. |
| lineout-gain | Indicates the line out gain in dB. The default value is 0. |

## Response Body

```
{
  "result": 0
}
```

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

# set-sync-offset

Use this interface to set audio offset in milliseconds. Set a positive value to delay the start of the audio track, or set a negative value to reduce the delay.

## HTTP Request

```
GET http://ip/usapi?method=set-sync-offset&audio-sync-offset=100
```

| Parameter | Description |
| --- | --- |
| method | set-sync-offset |
| audio-sync-offset | Specifies audio offset which ranges from -200 to 200ms. |

## Response Body

```
{
  "result": 0
}
```

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

# add-nosignal-file

Use this interface to import JPEGs for display when there is no input signal available. The resolution of the pictures must be less than 1920x1080, and size less than 1MB. 2 pictures are supported.

## HTTP Request

```
POST http://ip/usapi?method=add-nosignal-file
```

| Parameter | Description |
| --- | --- |
| method | add-nosignal-file |

## Response Body

```
{
  "result": 0
}
```

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

# del-nosignal-file

Use this interface to delete custom pictures for no signal display. The default picture can not be deleted.

## HTTP Request

```
GET http://ip/usapi?method=del-nosignal-file&id=0
```

| Parameter | Description |
| --- | --- |
| method | del-nosignal-file |
| id | Picture ID |

## Response Body

```
{
  "result": 0
}
```

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

# set-nosignal-file

Use this interface to specify the picture displayed when there is no input signal.

## HTTP Request

```
GET http://ip/usapi?method=set-nosignal-file&id=0
```

| Parameter | Description |
| --- | --- |
| method | set-nosignal-file |
| id | Picture ID |

## Response Body

```
{
  "result": 0
}
```

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

# use-nosignal-file

Use this interface to turn on/off the no signal image function.

## HTTP Request

```
GET http://ip/usapi?method=use-nosignal-file&use-nosignal-file=0
```

| Parameter | Description |
| --- | --- |
| method | use-nosignal-file |
| use-nosignal-file | 0: turn off<br>1: turn on |

## Response Body

```
{
  "result": 0
}
```

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

# set-time-zone

Use this interface to set time zone.

## HTTP Request

```
GET http://ip/usapi?method=set-time-zone&timezone=Asia/Shanghai
```

| Parameter | Description |
| --- | --- |
| method | set-time-zone |
| timezone | Specifies time zone like Asia/Shanghai. Options list as blow. |

## Response Body

```
{
  "result": 0
}
```

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

## Time Zone

```
[
  'Africa/Abidjan',
  'Africa/Accra',
  'Africa/Addis_Ababa',
  'Africa/Algiers',
  'Africa/Asmara',
  'Africa/Bamako',
  'Africa/Bangui',
  'Africa/Banjul',
  'Africa/Bissau',
  'Africa/Blantyre',
  'Africa/Brazzaville',
  'Africa/Bujumbura',
  'Africa/Cairo',
  'Africa/Casablanca',
  'Africa/Ceuta',
  'Africa/Conakry',
  'Africa/Dakar',
  'Africa/Dar_es_Salaam',
  'Africa/Djibouti',
  'Africa/Douala',
  'Africa/El_Aaiun',
  'Africa/Freetown',
  'Africa/Gaborone',
  'Africa/Harare',
  'Africa/Johannesburg',
  'Africa/Juba',
  'Africa/Kampala',
  'Africa/Khartoum',
  'Africa/Kigali',
  'Africa/Kinshasa',
  'Africa/Lagos',
  'Africa/Libreville',
  'Africa/Lome',
  'Africa/Luanda',
  'Africa/Lubumbashi',
  'Africa/Lusaka',
  'Africa/Malabo',
  'Africa/Maputo',
  'Africa/Maseru',
  'Africa/Mbabane',
  'Africa/Mogadishu',
  'Africa/Monrovia',
  'Africa/Nairobi',
  'Africa/Ndjamena',
  'Africa/Niamey',
  'Africa/Nouakchott',
  'Africa/Ouagadougou',
  'Africa/Porto-Novo',
  'Africa/Sao_Tome',
  'Africa/Timbuktu',
  'Africa/Tripoli',
  'Africa/Tunis',
  'Africa/Windhoek',
  'America/Adak',
  'America/Anchorage',
  'America/Anguilla',
  'America/Antigua',
  'America/Araguaina',
```

```
    'America/Argentina/Buenos_Aires',
    'America/Argentina/Catamarca',
    'America/Argentina/ComodRivadavia',
    'America/Argentina/Cordoba',
    'America/Argentina/Jujuy',
    'America/Argentina/La_Rioja',
    'America/Argentina/Mendoza',
    'America/Argentina/Rio_Gallegos',
    'America/Argentina/Salta',
    'America/Argentina/San_Juan',
    'America/Argentina/San_Luis',
    'America/Argentina/Tucuman',
    'America/Argentina/Ushuaia',
    'America/Aruba',
    'America/Asuncion',
    'America/Atikokan',
    'America/Atka',
    'America/Bahia',
    'America/Bahia_Banderas',
    'America/Barbados',
    'America/Belem',
    'America/Belize',
    'America/Blanc-Sablon',
    'America/Boa_Vista',
    'America/Bogota',
    'America/Boise',
    'America/Buenos_Aires',
    'America/Cambridge_Bay',
    'America/Campo_Grande',
    'America/Cancun',
    'America/Caracas',
    'America/Cayenne',
    'America/Cayman',
    'America/Chicago',
    'America/Chihuahua',
    'America/Costa_Rica',
    'America/Creston',
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    'America/Curacao',
    'America/Danmarkshavn',
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    'America/Eirunepe',
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    'America/Fort_Wayne',
    'America/Fortaleza',
    'America/Glace_Bay',
    'America/Godthab',
    'America/Goose_Bay',
    'America/Grand_Turk',
    'America/Grenada',
    'America/Guadeloupe',
    'America/Guatemala',
    'America/Guayaquil',
    'America/Guyana',
    'America/Halifax',
```

```
    'America/Havana',
    'America/Hermosillo',
    'America/Indiana/Indianapolis',
    'America/Indiana/Knox',
    'America/Indiana/Marengo',
    'America/Indiana/Petersburg',
    'America/Indiana/Tell_City',
    'America/Indiana/Vevay',
    'America/Indiana/Vincennes',
    'America/Indiana/Winamac',
    'America/Indianapolis',
    'America/Inuvik',
    'America/Iqaluit',
    'America/Jamaica',
    'America/Juneau',
    'America/Kentucky/Louisville',
    'America/Kentucky/Monticello',
    'America/Kralendijk',
    'America/La_Paz',
    'America/Lima',
    'America/Los_Angeles',
    'America/Louisville',
    'America/Lower_Princes',
    'America/Maceio',
    'America/Managua',
    'America/Manaus',
    'America/Marigot',
    'America/Martinique',
    'America/Matamoros',
    'America/Mazatlan',
    'America/Mendoza',
    'America/Menominee',
    'America/Merida',
    'America/Metlakatla',
    'America/Mexico_City',
    'America/Miquelon',
    'America/Moncton',
    'America/Monterrey',
    'America/Montevideo',
    'America/Montreal',
    'America/Montserrat',
    'America/Nassau',
    'America/New_York',
    'America/Nipigon',
    'America/Nome',
    'America/Noronha        Atlantic islands',
    'America/North_Dakota/Beulah',
    'America/North_Dakota/Center',
    'America/North_Dakota/New_Salem',
    'America/Ojinaga',
    'America/Panama',
    'America/Pangnirtung',
    'America/Paramaribo',
    'America/Phoenix',
    'America/Port-au-Prince',
    'America/Port_of_Spain',
    'America/Porto_Acre',
    'America/Porto_Velho',
    'America/Puerto_Rico',
    'America/Punta_Arenas',
    'America/Rainy_River',
    'America/Rankin_Inlet',
```

```
    'America/Recife',
    'America/Regina',
    'America/Resolute',
    'America/Rio_Branco',
    'America/Rosario',
    'America/Santa_Isabel',
    'America/Santarem',
    'America/Santiago',
    'America/Santo_Domingo',
    'America/Sao_Paulo',
    'America/Scoresbysund',
    'America/Shiprock',
    'America/Sitka',
    'America/St_Barthelemy',
    'America/St_Johns',
    'America/St_Kitts',
    'America/St_Lucia',
    'America/St_Thomas',
    'America/St_Vincent',
    'America/Swift_Current',
    'America/Tegucigalpa',
    'America/Thule',
    'America/Thunder_Bay',
    'America/Tijuana',
    'America/Toronto',
    'America/Tortola',
    'America/Vancouver',
    'America/Virgin',
    'America/Whitehorse',
    'America/Winnipeg',
    'America/Yakutat',
    'America/Yellowknife',
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    'Asia/Amman',
    'Asia/Anadyr',
    'Asia/Aqtau',
    'Asia/Aqtobe',
    'Asia/Ashgabat',
    'Asia/Ashkhabad',
    'Asia/Atyrau',
    'Asia/Baghdad',
    'Asia/Bahrain',
    'Asia/Baku',
    'Asia/Bangkok',
    'Asia/Barnaul',
    'Asia/Beirut',
    'Asia/Bishkek',
    'Asia/Brunei',
    'Asia/Calcutta',
    'Asia/Chita',
    'Asia/Choibalsan',
    'Asia/Chongqing',
    'Asia/Chungking',
    'Asia/Colombo',
    'Asia/Dacca',
    'Asia/Damascus',
    'Asia/Dhaka',
    'Asia/Dili',
    'Asia/Dubai',
    'Asia/Dushanbe',
    'Asia/Famagusta',
```

```
    'Asia/Gaza',
    'Asia/Harbin',
    'Asia/Hebron    West',
    'Asia/Ho_Chi_Minh',
    'Asia/Hong_Kong',
    'Asia/Hovd',
    'Asia/Irkutsk',
    'Asia/Istanbul',
    'Asia/Jakarta',
    'Asia/Jayapura',
    'Asia/Jerusalem',
    'Asia/Kabul',
    'Asia/Kamchatka',
    'Asia/Karachi',
    'Asia/Kashgar',
    'Asia/Kathmandu',
    'Asia/Katmandu',
    'Asia/Khandyga',
    'Asia/Kolkata',
    'Asia/Krasnoyarsk',
    'Asia/Kuala_Lumpur',
    'Asia/Kuching',
    'Asia/Kuwait',
    'Asia/Macao',
    'Asia/Macau',
    'Asia/Magadan',
    'Asia/Makassar',
    'Asia/Manila',
    'Asia/Muscat',
    'Asia/Nicosia',
    'Asia/Novokuznetsk',
    'Asia/Novosibirsk',
    'Asia/Omsk',
    'Asia/Oral',
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    'Asia/Pontianak',
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    'Asia/Rangoon',
    'Asia/Riyadh',
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    'Asia/Sakhalin',
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    'Asia/Srednekolymsk',
    'Asia/Taipei',
    'Asia/Tashkent',
    'Asia/Tbilisi',
    'Asia/Tehran',
    'Asia/Thimbu',
    'Asia/Thimphu',
    'Asia/Tokyo',
    'Asia/Tomsk',
    'Asia/Ujung_Pandang',
    'Asia/Ulaanbaatar',
    'Asia/Ulan_Bator',
    'Asia/Urumqi',
    'Asia/Ust-Nera',
    'Asia/Vientiane',
```

```
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    'Asia/Yangon',
    'Asia/Yakutsk',
    'Asia/Yekaterinburg',
    'Asia/Yerevan',
    'Atlantic/Azores',
    'Atlantic/Bermuda',
    'Atlantic/Canary',
    'Atlantic/Cape_Verde',
    'Atlantic/Faeroe',
    'Atlantic/Faroe',
    'Atlantic/Jan_Mayen',
    'Atlantic/Madeira',
    'Atlantic/Reykjavik',
    'Atlantic/South_Georgia',
    'Atlantic/St_Helena',
    'Atlantic/Stanley',
    'Australia/ACT',
    'Australia/Adelaide',
    'Australia/Brisbane',
    'Australia/Broken_Hill',
    'Australia/Canberra',
    'Australia/Currie',
    'Australia/Darwin',
    'Australia/Eucla',
    'Australia/Hobart',
    'Australia/LHI',
    'Australia/Lindeman',
    'Australia/Lord_Howe',
    'Australia/Melbourne',
    'Australia/NSW',
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    'Australia/Perth',
    'Australia/Queensland',
    'Australia/South',
    'Australia/Sydney',
    'Australia/Tasmania',
    'Australia/Victoria',
    'Australia/West',
    'Australia/Yancowinna',
    'Europe/Amsterdam',
    'Europe/Andorra',
    'Europe/Astrakhan',
    'Europe/Athens',
    'Europe/Belfast',
    'Europe/Belgrade',
    'Europe/Berlin',
    'Europe/Bratislava',
    'Europe/Brussels',
    'Europe/Bucharest',
    'Europe/Budapest',
    'Europe/Busingen',
    'Europe/Chisinau',
    'Europe/Copenhagen',
    'Europe/Dublin',
    'Europe/Gibraltar',
    'Europe/Guernsey',
    'Europe/Helsinki',
    'Europe/Isle_of_Man',
    'Europe/Istanbul',
    'Europe/Jersey',
    'Europe/Kaliningrad',
```

```
    'Europe/Kiev',
    'Europe/Kirov',
    'Europe/Lisbon',
    'Europe/Ljubljana',
    'Europe/London',
    'Europe/Luxembourg',
    'Europe/Madrid',
    'Europe/Malta',
    'Europe/Mariehamn',
    'Europe/Minsk',
    'Europe/Monaco',
    'Europe/Moscow',
    'Europe/Nicosia',
    'Europe/Oslo',
    'Europe/Paris',
    'Europe/Podgorica',
    'Europe/Prague',
    'Europe/Riga',
    'Europe/Rome',
    'Europe/Samara',
    'Europe/San_Marino',
    'Europe/Sarajevo',
    'Europe/Saratov',
    'Europe/Simferopol',
    'Europe/Skopje',
    'Europe/Sofia',
    'Europe/Stockholm',
    'Europe/Tallinn',
    'Europe/Tirane',
    'Europe/Tiraspol',
    'Europe/Ulyanovsk',
    'Europe/Uzhgorod',
    'Europe/Vaduz',
    'Europe/Vatican',
    'Europe/Vienna',
    'Europe/Vilnius',
    'Europe/Volgograd',
    'Europe/Warsaw',
    'Europe/Zagreb',
    'Europe/Zaporozhye',
    'Europe/Zurich',
    'Indian/Antananarivo',
    'Indian/Chagos',
    'Indian/Christmas',
    'Indian/Cocos',
    'Indian/Comoro',
    'Indian/Kerguelen',
    'Indian/Mahe',
    'Indian/Maldives',
    'Indian/Mauritius',
    'Indian/Mayotte',
    'Indian/Reunion',
    'Pacific/Apia',
    'Pacific/Auckland',
    'Pacific/Bougainville',
    'Pacific/Chatham',
    'Pacific/Chuuk',
    'Pacific/Easter',
    'Pacific/Efate',
    'Pacific/Enderbury',
    'Pacific/Fakaofo',
    'Pacific/Fiji',
```

```
    'Pacific/Funafuti',
    'Pacific/Galapagos',
    'Pacific/Gambier',
    'Pacific/Guadalcanal',
    'Pacific/Guam',
    'Pacific/Honolulu',
    'Pacific/Johnston',
    'Pacific/Kiritimati',
    'Pacific/Kosrae',
    'Pacific/Kwajalein',
    'Pacific/Majuro',
    'Pacific/Marquesas',
    'Pacific/Midway',
    'Pacific/Nauru',
    'Pacific/Niue',
    'Pacific/Norfolk',
    'Pacific/Noumea',
    'Pacific/Pago_Pago',
    'Pacific/Palau',
    'Pacific/Pitcairn',
    'Pacific/Pohnpei',
    'Pacific/Ponape',
    'Pacific/Port_Moresby',
    'Pacific/Rarotonga',
    'Pacific/Saipan',
    'Pacific/Samoa',
    'Pacific/Tahiti',
    'Pacific/Tarawa',
    'Pacific/Tongatapu',
    'Pacific/Truk',
    'Pacific/Wake',
    'Pacific/Wallis',
    'Pacific/Yap',
    'UTC'
]
```

# set-date-time

Use this interface to set date & time server.

## HTTP Request

```
GET http://ip/usapi?method=set-date-time&is-auto=1&time=2019-09-10+15:00:00&...
```

| Parameter | Description |
| --- | --- |
| method | set-date-time |
| is-auto | 0: manual setup; 1: to obtain time automatically based on time zone. |
| time | Set time manually in string like 2019-09-10 15:10:00.<br>Specify the time="", when is-auto=1. |
| ntp-server | NTP server |
| ntp-server-backup | Backup NTP server |

## Response Body

```
{
  "result": 0
}
```

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

# set-udp-mtu

Use this interface to specify UDP MTU for TS over UDP and TS over RTP sessions.

## HTTP Request

```
GET http://ip/usapi?method=set-udp-mtu&udp-mtu=1496
```

| Parameter | Description |
| --- | --- |
| method | set-udp-mtu |
| udp-mtu | MTU range is from 228 to 1500. |

## Response Body

```
{
  "result": 0
}
```

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

# set-analog-mic-bias

Use the interface to set mic bias for Line In interface.

## HTTP Request

```
GET http://ip/usapi?method=set-analog-mic-bias&enable-mic-bias=1
```

| Parameter | Description |
| --- | --- |
| method | set-analog-mic-bias |
| enable-mic-bias | 0: disable mic bias<br>1: enable mic bias |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-web

> Added at V2.2

Use this interface to set security management.

## HTTP Request

```
GET http://ip/usapi?method=set-web&http-port=80&is-https=1&https-port=443
```

| Parameter | Description |
| --- | --- |
| method | set-web |
| http-port | http service port |
| is-https | 0: disable https<br>1: enable https |
| https-port | https port |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# upload-cert

> Added at V2.2

Use this interface to upload a CA certificate when enabling HTTPS.

## HTTP Request

```
POST http://ip/usapi?method=upload-cert
```

| Parameter | Description |
| --- | --- |
| method | upload-cert |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# upload-cert-key

> Added at V2.2

Use this interface to upload a CA private key when enabling HTTPS.

## HTTP Request

```
POST http://ip/usapi?method=upload-cert-key
```

| Parameter | Description |
| --- | --- |
| method | upload-cert-key |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-theme

> Added at V2.2

Use this interface to set light/dark mode.

## HTTP Request

```
GET http://ip/usapi?method=set-theme&theme=xxx
```

| Parameter | Description |
| --- | --- |
| method | set-theme |
| theme | 0: light theme<br>1: dark theme |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-hls-push-segment

> Added at V2.3

Use this interface to set number and duration of file segment for HLS (push).

Use the interface get-info to get the parameters as below.

```
{
  "living": {
    "hls-push": {
      seg-count: {},    // rang of number for file segment
      seg-duration: {}  // rang of file segment duration
    },
  }
}
```

## HTTP Request

```
GET http://ip/usapi?method=set-hls-push-segment&seg-count=3&seg-duration=3
```

| Parameter | Description |
| --- | --- |
| method | set-hls-push-segment |
| seg-count | file segment count. |
| seg-duration | file segment duration |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-lcd-control

> Added at V2.3, supported by Ultra Encode AIO only

Set LCD touch screen and display.

Use the interface get-info to get the range of the LCD display.

```
{
  "lcd": {
    "page": []   // range of LCD display
  }
}
```

## HTTP Request

```
GET http://ip/usapi?method=set-lcd-control&no-touch=0&no-flip=0&page-idx=1
```

| Parameter | Description |
| --- | --- |
| method | set-lcd-control |
| no-touch | 0: disable LCD touch screen<br>1: enable LCD touch screen |
| no-flip | 0: disable page flip<br>1: enable page flip |
| page-idx | LCD display<br>0: preview<br>1: live<br>2: record<br>3: Web UI QR code |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-video-mixer-config

> Supported by Ultra Encode AIO only

Use this interface to specify parameters to combine input SDI and HDMI video.

You can obtain the ranges of mixer parameters using get-info.

```
"input-source": {
  "video-mixer": {
    "types": [],          // range of locations
    "pip": [],            // range of picture in picture locations
    "sbs": [],            // range of side by side locations
  },
}
```

## HTTP Request

```
GET http://ip/usapi?method=set-video-mixer-config&input-device=1...
```

| Parameter | Description |
| --- | --- |
| method | set-video-mixer-config |
| input-device | Input mixer format.<br>1: same as SDI input<br>2: same as HDMI input |
| is-hdmi-top | The z-order for video mixer.<br>0: HDMI input as the bottom layer and SDI as top.<br>1: HDMI input as the top layer and SDI as bottom. |
| type | Video mixer mode.<br>0: picture in picture<br>1: side by side |
| location | Location of video mixer which can be obtained by calling get-info. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# select-input-source

> Supported by Ultra Encode AIO only

Use this interface to set A/V input source.

Obtain range of record parameters via get-info.

```
"input-source": {
  "sources": [],          // range of input sources
}
```

## HTTP Request

```
GET http://ip/usapi?method=select-input-source&input-source
```

| Parameter | Description |
| --- | --- |
| method | select-input-source |
| input-source | Input source.<br>1: SDI only<br>2: HDMI only<br>3: SDI or HDMI<br>4: mix SDI and HDMI input |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-signal-info

Use this interface to obtain information of video and audio input signal.

## HTTP Request

```
GET http://ip/usapi?method=get-signal-info&input-device
```

| Parameter | Description |
| --- | --- |
| method | get-signal-info |
| input-device | Input source.<br>1: SDI<br>2: HDMI |

## Response Body


```
{
  "result": 0
  "signal-info-types": [
    "video-info",
    "audio-info",
    "hdmi-info"
  ],
  "hdmi-info": {
    "mode": "hdmi",
    "vic": 0,
    "hdcp": false,
    "it-content": false,
    "3d-format": false,
    "timing-h-total": 1650,
    "timing-h-active": 1280,
    "timing-h-frontporch": 110,
    "timing-h-syncwidth": 40,
    "timing-h-backporch": 220,
    "timing-f0v-syncwidth": 5,
    "timing-f0v-frontporch": 5,
    "timing-f0v-backproch": 20,
    "timing-f0v-active": 720,
    "timing-f0v-totalheight": 750
  },
    "audio-info": {
    "codec": "lpcm",
    "num-channels": 2,
    "sample-rate": 48000,
    "bit-count": 16
  },
    "video-info": {
    "codec": "uncompressed",
    "width": 1280,
    "height": 720,
    "scan": "progressive",
    "field-rate": 60.00,
    "color-depth": 8,
    "color-format": "bt.709",
    "aspect-ratio": "16:9",
    "sampling": "4:4:4",
    "quant-range": "limited",
    "sat-range": "limited",
    "frame-struct": "2d"
  }
}
```


| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-video-color

Use this interface to adjust the brightness, contrast, hue and saturation of the image.

You can obtain the range of recording parameters using get-info.

```
"color-range": {
    "contrast": [],       // range of contrast
    "brightness": [],     // range of brightness
    "saturation": [],     // range of saturation
    "hue": []             // range of hue
  }
```

## HTTP Request

```
GET http://ip/usapi?method=set-video-color&contrast=100&brightness=0&saturation=100&hue=0
```

| Parameter | Description |
| --- | --- |
| method | set-video-color |
| contrast | The contrast value. The default value is 100. |
| brightness | The brightness value. The default value is 0. |
| saturation | The saturation value. The default value is 100. |
| hue | The hue value. The default value is 0. |

## Response Body

```
{
  "result": 0
}
```

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

# set-video-input-format

Use this interface to set color space and quantization for input video.

Obtain range of video format parameters by calling get-info.

```
"video-format": {
    "input-color-fmt": [],       // range of color space
    "quant-range": [],           // range of quantization
  }
```

## HTTP Request

```
GET http://ip/usapi?method=set-video-input-format&is-color-fmt=0&color-fmt=1&is-quant-range=0&quant-range=1
```

| Parameter | Description |
| --- | --- |
| method | set-video-input-format |
| input-device | Input sources.<br>1: SDI in<br>2: HDMI in |
| is-color-fmt | Whether to customize color space. The default value is 0, which indicates to auto-set color space, while 1 indicates a custom setting. |
| color-fmt | Indicates the color format parameter value. The range is obtained by calling get-info. |
| is-quant-range | Whether to customize quantization. The default value is 0, which indicates to auto-set quantization, while 1 indicates a custom setting. |
| quant-range | Indicates the quantization parameter value. The range is obtained by calling get-info. |

## Response Body

```
{
  "result": 0
}
```

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

# set-video-output-format

Use this interface to set color space and quantization for output video.

Obtain range of video format parameters by calling get-info.

```
"video-format": {
    "output-color-fmt": [],       // range of color space
    "quant-range": [],           // range of quantization range
    "sat-range": [],             // range of saturation range
  }
```

## HTTP Request

```
GET http://ip/usapi?method=set-video-output-format&is-color-fmt=0&color-fmt=1&is-quant-range=0&quant-range=1&is-sat-range=0&sat-range=1
```

| Parameter | Description |
|---|---|
| method | set-video-output-format |
| input-device | Input sources.<br>1: SDI in<br>2: HDMI in |
| is-color-fmt | The default value is 0, which indicates to auto-set color space, while 1 indicates a custom setting. |
| color-fmt | The color format parameter value. The default value is 3. |
| is-quant-range | The default value is 0, which indicates to auto-set quantization, while 1 indicates a custom setting. |
| quant-range | The quantization parameter value. The default value is 2. |
| is-sat-range | The default value is 0, which indicates to auto-set saturation, while 1 indicates a custom setting. |
| sat-range | The saturation range. The default value is 2. |

## Response Body

```
{
  "result": 0
}
```

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

# set-video

> Added at V2.2 Use this interface to configure parameters of the main and sub streams, including:

- resolution
- frame interval
- video codec: choose H264 or HEVC for the main stream. The sub stream uses H264.
- H264/HEVC profile
- video bit rate
- keyframe interval
- quantization range
- aspect ratio
- rotation

Obtain parameters range using get-info.

```
{
  "codec-cap": {
    "resolutions": [],          // range of resolution
    "durations": [],            // range of frame interval
    "video-codec": [],          // range of video codec
    "profile": [],              // H264 profile
    "hevc-profile": [],         // HEVC profile
    "video-kbps": [],           // range of video bit rate
    "gop-sec": [],              // range of keyframe interval
    "video-range": [],          // range of quantization
    "video-ar-convert-mode": []£¬// range of aspect ratio conversion
    "video-rotation: []         // range of video rotation angle
  }
}
```

## HTTP Request

```
GET http://ip/usapi?method=set-video&stream=0&is-auto=0&cx=1280&cy=720&duration=333333&kbps=1024&gop=1&fourcc=0&profi
le=2&cbrstat=60&fullrange=1&codec=0
```

| Parameter | Description |
| --- | --- |
| method | set-video |
| stream | Indicates the stream type.<br>0: the main stream<br>1: the sub stream |
| is-auto | Indicates whether the stream format follows that of input signal. For a sub stream, this parameter can only be set to 0.<br>0: custom the format for your session.<br>1: follow input. |
| cx | Indicates width of resolution dimensions in pixels. |
| cy | Indicates height of resolution dimensions in pixels. |
| duration | Indicates frame interval. |
| kbps | Indicates bit rate. |
| gop | Indicates keyframe interval. |
| fourcc | Reserved. The default value is 0. |
| codec | Indicates video codec. |
| profile | Indicates encoding profile. |
| cbrstat | Reserved. |
| fullrange | Indicates quantization range. |
| is-vbr | 0: CBR<br>1: VBR, the maximum and minimum steps are required |
| min-vbr-qp | min-step ranges from 0 to 51 |
| max-vbr-qp | max-step ranges from minimum to 51 |
| is-time-code-sei | 0: not to set time code SEI messages<br>1: use system time<br>2: use input source time code |
| is-closed-caption-sei | 0: not to set CC SEI messages<br>1: set CC SEI messages |
| ar-convert-mode | 0: Ignore<br>1: Cropping<br>2: Padding |
| rotation | 0: 0°<br>90: rotate 90°<br>180: rotate 180°<br>270: rotate 270° |

## Response Body

```
{
  "result": 0
}
```

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

# set-audio

Use this interface to set audio encoding parameters.

Obtain ranges of audio encoding parameters using get-info.

```
{
  "codec-cap": {
    "audio-streams": [],         // range of audio streams
    "audio-channels": [],        // range of audio channels
    "audio-chmap": [],           // range of audio channel mapping
    "audio-kbps": [],            // range of audio bit rate
  }
}
```

## HTTP Request

```
GET http://ip/usapi?method=set-audio&stream=1&kbps=48...
```

| Parameter | Description |
| --- | --- |
| method | set-audio |
| stream | The output channel 0: stream 1<br>The output channel 1: stream 2<br>The output channel 2: stream 3<br>The output channel 3: stream 4 |
| channels | The output channel count. |
| kbps | Indicates audio bit rate. |
| ch0 | Source channel number which is mapped by audio encoding channel 1. |
| ch1 | Source channel number which is mapped by audio encoding channel 2. |
| ch2 | Source channel number which is mapped by audio encoding channel 3. |
| ch3 | Source channel number which is mapped by audio encoding channel 4. |
| ch4 | Source channel number which is mapped by audio encoding channel 5. |
| ch5 | Source channel number which is mapped by audio encoding channel 6. |
| ch6 | Source channel number which is mapped by audio encoding channel 7. |
| ch7 | Source channel number which is mapped by audio encoding channel 8. |
| use-lfe | Whether to enable LFE, the number of audio encoding channels greater than 2 is valid.<br>0: disabled<br>1: enabled |

## Response Body

```
{
  "result": 0
}
```

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

# enable-deinterlace

Use this interface to deinterlace videos.

## HTTP Request

```
GET http://ip/usapi?method=enable-deinterlace&enable-deinterlace=1
```

| Parameter | Description |
| --- | --- |
| method | enable-deinterlace |
| enable-deinterlace | 0: not to deinterlace<br>1: deinterlace |

## Response Body

```
{
  "result": 0
}
```

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

# select-audio-channels

> Added at V2.3

Use this interface to select the audio channels to be encoded from the audio input channels, valid only when the input source is SDI and the number of input audio channels is greater than 8, and the selection is limited to a maximum of 8.

## HTTP Request

```
GET http://ip/usapi?method=select-audio-channels&channel-mask=1
```

| Parameter | Description |
| --- | --- |
| method | select-audio-channels |
| channel-mask | mask for input audio channel. If the chosen number is n, (from 0 to 15), then channel-mask \|= (1 << n) |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-enable-stream1

> Added at V2.2

Use this interface to turn on/off the sub stream encoding.

## HTTP Request

```
GET http://ip/usapi?method=set-enable-stream1&enable=1
```

| Parameter | Description |
| --- | --- |
| method | set-enable-stream1 |
| enable | 0: disable the sub stream<br>1: enable the sub stream. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-in-cropping

> Added at V2.3 Use this interface to generate a thumbnail image for cropping.

Use the interface get-info to get the thumbnails path:

```
{
  "main-crop-snapshot": "",         // thumbnail image path for the main stream video cropping
  "sub-crop-snapshot": "",         // thumbnail image path for the sub stream video cropping
}
```

## HTTP Request

```
GET http://ip/usapi?method=set-in-cropping&stream-idx=1
```

| Parameter | Description |
| --- | --- |
| method | set-in-cropping |
| stream-idx | 0: main stream<br>1: sub stream |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-crop

> Added at V2.3

Use this interface to set crop parameters for the main and sub stream.

## HTTP Request

```
GET http://ip/usapi?method=set-crop&stream-idx=1&is-use=0...
```

| Parameter | Description |
| --- | --- |
| method | set-crop |
| stream-idx | 0: the main stream<br>1: the sub stream |
| is-use | 0: disable cropping the video stream<br>1: enable cropping the video stream |
| x-offset | Horizontal offset |
| y-offset | Vertical offset |
| act-w | Width. |
| act-h | Height. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-3d-output-config

> Added at V2.3, supported by Ultra Encode Plus only

Use this interface to set Set whether to enable video 3D output configuration information.

## HTTP Request

```
GET http://ip/usapi?method=set-3d-output-config&enable=1&mode=0
```

| Parameter | Description |
| --- | --- |
| method | set-3d-output-config |
| enabe | 0: to disable 3D output<br>1: to enable 3D output |
| mode | Reservered. It is 0 by default. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# add-server

Use this interface to add streaming sessions, up to 16 tasks are supported to be added.

Different sessions with same configurations are not allowed, such as:

- Custom RTMP servers with the same URL and StreamKey
- Other RTMP servers(such as Twitch/YouTube/Facebook) with the same StreamKey
- RTSP sessions with the same port number
- SRT Caller sessions with the same IP address, port and stream ID
- SRT Listener sessions with the same port
- HLS sessions with the same main stream name or sub stream name
- TS over UDP/RTP sessions with the same IP address and port
- specify the same IP address and port number for TS over UDP and TS over RTP
- NDI HX sessions with the same source

## HTTP Request

```
GET http://ip/usapi?method=add-server&type=xxx&url=xxx&key=xxx&...
```

| Parameter | Description |
| --- | --- |
| method | add-server |
| type | Indicates a stream type.<br>0: RTMP<br>1: Twitch<br>2: YouTube<br>3: Facebook<br>100: RTSP<br>120: SRT Caller<br>121: SRT Listener<br>130: NDI HX<br>131: HLS<br>132: TS over UDP<br>133: TS over RTP<br>140: TVU ISSP |
| name | Indicates a session name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces ._-+'[](), and cannot start or end with space. |
| RTMP streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| url | Indicates streaming destination address. |
| key | Indicates stream key. |
| is-auth | Indicates authentication status.<br>0: authentication is not required<br>1: authentication is required. Both username and password are mandatory. |
| user | Indicates user name. |
| passwd | Indicates password. |
| token | Indicates Token. |
| event-data | Indicates streaming event. |
| net-mode | Indicates the network priority.<br>0: Mobile broadband first<br>1: Ethernet first<br>2: Wi-Fi first |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| RTSP streaming settings | |
| port | Indicates port number, the default port is 554. |
| max-connection | Indicates number of clients for each RTSP stream. |
| is-auth | Indicates authentication status.<br>0: authentication is not required<br>1: authentication is required. Both username and password are mandatory. |
| user | Indicates user name. |
| passwd | Indicates password. |

| Parameter | Description |
| --- | --- |
| is-main | Indicates whether to enable the main stream.<br>0: disable the main stream.<br>1: enable the main stream. |
| main-stream-name | Indicates the main stream name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces, and special characters ._-+'[](). The name should not start or end with spaces. |
| is-sub | Indicates whether to enable the sub stream.<br>0: disable the sub stream.<br>1: enable the sub stream. |
| sub-stream-name | Indicates the sub stream name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces, and special characters ._-+'[](). The name should not start or end withe spaces. |
| is-audio | Indicates whether to enable audio.<br>0: disable audio.<br>1: enable audio. |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| SRT Caller streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| url | Indicates destination address. |
| port | Indicates port number. |
| latency | Indicates delay time. You can obtain its range by using get-info. |
| bandwidth | Indicates the portion of the total bandwidth of a stream required for the exchange of SRT control and recovered packets. You can obtain its range by using get-info. |
| aes | Indicates the stream encryption algorithm to ensure the data security.<br>0: no encryption<br>16: AES-128<br>24: AES-192<br>32: AES-256 |
| ase-word | Indicates passphrase. |
| stream-id | Optional |
| mtu | Maximum transport unit ranges from 232 to 1500. |
| conn-timeout | Connect timeout in milliseconds. |
| retry-duration | Waiting time for reconnection in milliseconds. |
| net-mode | Indicates network priority.<br>0: mobile broadband first<br>1: Ethernet first<br>2: Wi-Fi first |
| audio-streams | Audio stream mask. If the selected audio stream is n (n ranges from 0 to 3), then audio-streams \|= (1 << n) |
| token | Token, valid only for Wowza over SRT |
| event-data | Live events, only valid for Wowza over SRT |
| SRT Listener streaming settings | |

| Parameter | Description |
| --- | --- |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| port | Indicates service port number. The default port is 8000. |
| max-connection | Indicates max client number. |
| latency | Indicates delay time. You can obtain its range by using get-info. |
| bandwidth | the portion of the total bandwidth of a stream required for the exchange of SRT control and recovered packets. You can obtain its range by using get-info. |
| aes | Indicates the stream encryption algorithm to ensure the data security.<br>0: no encryption<br>16: AES-128<br>24: AES-192<br>32: AES-256 |
| ase-word | Indicates passphrase. |
| mtu | Maximum transmission unit ranges from 232 to 1500. |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| NDI HX streaming settings | |
| source-name | By default, it is the same as serial number. |
| group-name | Indicates the Group name which the source belongs to. By default, it is public. |
| enable-discovery | Whether to enable discovery server. |
| discovery-server | Indicates the IP address of discovery server. |
| transport-mode | The parameter is required when transporting via multicast. Obtain transport mode related parameters using get-info. |
| mcast-addr | Multicast address |
| mcast-mask | Multicast mask |
| mcast-ttl | Time to live for multicast ranges from 1 to 255. |
| enable-fail-over | Whether to enable fail over. |
| fail-over-ndi-name | Indicates the backup NDI channel name. |
| fail-over-ip-addr | Indicates the backup NDI channel IP address. |
| enable-web-control | Whether to allow to open the Web UI by clicking the gear icon in the NDI Studio Monitor application. |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| HLS streaming settings | |
| stream-index | Streams.<br>0: main stream<br>1: sub stream |

| Parameter | Description |
| --- | --- |
| stream-name | Indicates the main stream name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces, and special characters ._-+'[](). The name should not start or end with spaces. |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| TS over UDP/RTP streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| url | Indicates the destination address. |
| port | Indicates the stream port |
| net-mode | Indicates the network priority.<br>0: Mobile broadband first<br>1: Ethernet first<br>2: Wi-Fi first |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| is-custom-pid | 0: default PID<br>1: custom PID |
| pmt-pid | Program mapping PID, value range is from 0x10 to 0x1FFE. |
| pcr-pid | Program clock reference PID, value range is from 0x10 to 0x1FFE. |
| video-pid | Video PID, value range is from 0x10 to 0x1FFE. |
| audio-pid | Audio PID, value range is from 0x10 to 0x1FFE. |
| TVU ISSP streaming settings | |
| port | Indicates the stream port. 6539 by default. |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| YouTube HLS streaming settings | |
| stream-index | 0: main stream<br>1: sub stream |
| url | Server URL |
| key | Stream key |

| Parameter | Description |
| --- | --- |
| is-auth | 0: No authentication required<br>1: authentication required with username and password |
| user | Username |
| passwd | Password |
| token | Token |
| event-data | Live event |
| net-mode | Network priority.<br>0: mobile broadband first<br>1: wired network first<br>2: wireless network first |
| audio | Audio stream.<br>0: Audio stream 1<br>1: Audio stream 2<br>2: Audio stream 3<br>3: Audio stream 4 |

## Response Body

```
{
  "result": 0
}
```

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

# enable-server

Use this interface to turn on the stream session. By default, the newly added session is disabled.

## HTTP Request

```
GET http://ip/usapi?method=enable-server&id=1&is-use=1
```

| Parameter | Description |
| --- | --- |
| method | enable-server |
| id | Indicates the server ID, obtaining using get-settings. |
| is-use | 0: disable the server.<br>1: enable the server. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-server

Use this interface to modify stream servers.

## HTTP Request

```
GET http://ip/usapi?method=set-server&id=xxx&type=xxx&url=xxx&key=xxx&...
```

| Parameter | Description |
| --- | --- |
| method | add-server |
| type | Indicates a stream type.<br>0: RTMP<br>1: Twitch<br>2: YouTube<br>3: Facebook<br>100: RTSP<br>120: SRT Caller<br>121: SRT Listener<br>130: NDI HX<br>131: HLS<br>132: TS over UDP<br>133: TS over RTP<br>140: TVU ISSP |
| name | Indicates a session name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces ._-+'[](), and cannot start or end with space. |
| RTMP streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| url | Indicates streaming destination address. |
| key | Indicates stream key. |
| is-auth | Indicates authentication status.<br>0: authentication is not required<br>1: authentication is required. Both username and password are mandatory. |
| user | Indicates user name. |
| passwd | Indicates password. |
| token | Indicates Token. |
| event-data | Indicates streaming event. |
| net-mode | Indicates the network priority.<br>0: Mobile broadband first<br>1: Ethernet first<br>2: Wi-Fi first |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| RTSP streaming settings | |
| port | Indicates port number, the default port is 554. |
| max-connection | Indicates number of clients for each RTSP stream. |
| is-auth | 0: no authentication<br>1: authentication required with username and password |
| user | Username |
| passwd | password |
| is-main | Indicates whether to enable the main stream.<br>0: disable the main stream.<br>1: enable the main stream. |

| Parameter | Description |
| --- | --- |
| main-stream-name | Indicates the main stream name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces, and special characters ._-+'[](). The name should not start or end with spaces. |
| is-sub | Indicates whether to enable the sub stream.<br>0: disable the sub stream.<br>1: enable the sub stream. |
| sub-stream-name | Indicates the sub stream name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces, and special characters ._-+'[](). The name should not start or end withe spaces. |
| is-audio | Indicates whether to enable audio.<br>0: disable audio.<br>1: enable audio. |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| SRT Caller streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| url | Indicates destination address. |
| port | Indicates port number. |
| latency | Indicates delay time. You can obtain its range by using get-info. |
| bandwidth | Indicates the portion of the total bandwidth of a stream required for the exchange of SRT control and recovered packets. You can obtain its range by using get-info. |
| aes | Indicates the stream encryption algorithm to ensure the data security.<br>0: no encryption<br>16: AES-128<br>24: AES-192<br>32: AES-256 |
| ase-word | Indicates passphrase. |
| stream-id | Optional |
| mtu | Maximum transport unit ranges from 232 to 1500. |
| conn-timeout | Connect timeout in milliseconds. |
| retry-duration | Waiting time for reconnection in milliseconds. |
| net-mode | Indicates network priority.<br>0: mobile broadband first<br>1: Ethernet first<br>2: Wi-Fi first |
| audio-streams | Audio stream mask. If the selected audio stream is n (n ranges from 0 to 3), then audio-streams \|= (1 << n) |
| token | Token, valid only for Wowza over SRT |
| event-data | Live events, only valid for Wowza over SRT |
| SRT Listener streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |

| Parameter | Description |
| --- | --- |
| port | Indicates service port number. The default port is 8000. |
| max-connection | Indicates max client number. |
| latency | Indicates delay time. You can obtain its range by using get-info. |
| bandwidth | the portion of the total bandwidth of a stream required for the exchange of SRT control and recovered packets. You can obtain its range by using get-info. |
| aes | Indicates the stream encryption algorithm to ensure the data security.<br>0: no encryption<br>16: AES-128<br>24: AES-192<br>32: AES-256 |
| ase-word | Indicates passphrase. |
| mtu | Maximum transport unit ranges from 232 to 1500. |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| NDI HX streaming settings | |
| source-name | By default, it is serial number. |
| group-name | Indicates the Group name which the source belongs to. By default, it is public. |
| enable-discovery | Whether to enable discovery server. |
| discovery-server | Indicates the IP address of discovery server. |
| transport-mode | transport mode. You can obtain parameters related using get-info. The parameter is required for multicast mode. |
| mcast-addr | Multicast address |
| mcast-mask | Multicast mask |
| mcast-ttl | Multicast time to live ranges from 1 to 255. |
| enable-fail-over | Whether to enable fail over. |
| fail-over-ndi-name | Indicates the backup NDI channel name. |
| fail-over-ip-addr | Indicates the backup NDI channel IP address. |
| enable-web-control | Whether to allow to open the Web UI by clicking the gear icon in the NDI Studio Monitor application. |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| HLS streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| stream-name | Indicates the stream name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces, and special characters ._-+'[](). The name should not start or end with spaces. |

| Parameter | Description |
| --- | --- |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| TS over UDP/RTP streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| url | Indicates the destination address. |
| port | Indicates the stream port |
| net-mode | Indicates the network priority.<br>0: Mobile broadband first<br>1: Ethernet first<br>2: Wi-Fi first |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| is-custom-pid | 0: default PID<br>1: custom PID |
| pmt-pid | Program mapping PID, value range is from 0x10 to 0x1FFE. |
| pcr-pid | Program clock reference PID, value range is from 0x10 to 0x1FFE. |
| video-pid | Video PID, value range is from 0x10 to 0x1FFE. |
| audio-pid | Audio PID, value range is from 0x10 to 0x1FFE. |
| TVU ISSP streaming settings | |
| port | Indicates the stream port. 6539 by default. |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| YouTube HLS streaming settings | |
| stream-index | 0: main stream<br>1: sub stream |
| url | Server URL |
| key | Stream key |
| is-auth | 0: No authentication required<br>1: authentication required with username and password |
| user | Username |

| Parameter | Description |
| --- | --- |
| passwd | Password |
| token | Token |
| event-data | Live event |
| net-mode | Network priority.<br>0: mobile broadband first<br>1: wired network first<br>2: wireless network first |
| audio | Audio stream.<br>0: Audio stream 1<br>1: Audio stream 2<br>2: Audio stream 3<br>3: Audio stream 4 |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# del-server

Use this interface to delete stream sessions.

## HTTP Request

```
GET http://ip/usapi?method=del-server&id=1
```

| Parameter | Description |
| --- | --- |
| method | del-server |
| id | Indicates the server ID, obtaining using get-settings. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# start-test-server

Use this interface to start a stream test. Only one stream can be tested each time.

Call the stop-test-server to cancel the stream test manually if needed. The test will stop automatically at 20s.

## HTTP Request

```
GET http://ip/usapi?method=start-test-server&type=xxx&url=xxx&key=xxx&...
```

| Parameter | Description |
| --- | --- |
| method | start-test-server |
| type | Indicates the session type.<br>0: RTMP<br>1: Twitch<br>2: YouTube<br>3: Facebook<br>120: SRT Caller |
| name | Indicates server name, ranging from 1 to 32 characters, consisting of A to Z, a to z, 0 to 9, spaces, and special characters ._-+'[](). The name should not start or end with spaces. |
| RTMP streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| url | Indicates destination address. |
| key | Indicates the stream key. |
| is-auth | Indicates whether an authentication is required.<br>0: authentication is not required<br>1: authentication is required, and both username and password are mandatory. |
| user | Indicates username. |
| passwd | Indicates password. |
| token | Indicates token. |
| event-data | Indicates a stream session. |
| net-mode | Indicates the network priority.<br>0: Mobile broadband first<br>1: Ethernet first<br>2: Wi-Fi first |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |
| SRT Caller streaming settings | |
| stream-index | Indicates the stream type.<br>0: main stream<br>1: sub stream |
| url | Indicates destination address. |
| port | Indicates stream port. |
| latency | Indicates delay time. You can obtain its range by using get-info. |
| bandwidth | Indicates the portion of the total bandwidth of a stream required for the exchange of SRT control and recovered packets. You can obtain its range by using get-info. |
| aes | Indicates the stream encryption algorithm to ensure the data security.<br>0: no encryption<br>16: AES-128<br>24: AES-192<br>32: AES-256 |

| Parameter | Description |
| --- | --- |
| ase-word | Indicates passphrase. |
| stream-id | Optional |
| net-mode | Indicates the prime network for streaming.<br>0: Mobile Broadband first<br>1: Ethernet first<br>2: Wi-Fi first |
| audio-streams | Audio stream mask. If the selected audio stream is n (n ranges from 0 to 3), then audio-streams \|= (1 << n) |
| token | Token, valid only for Wowza over SRT |
| event-data | Live events, only valid for Wowza over SRT |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0: stream test is started.<br>1: repeated request.<br>-9: system is busy.<br>Refer to API Status Codes to find specific description for other values. |

## Test Status

Obtain **living-test** by calling get-status.

```
"living-test": {
  "result": 27,
  "upload-bps": 0,
  "percent": 0,
  "net": 0,
  "client-id": ""
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>27: the device is in initial status.<br>5 indicates that request is canceled.<br>2: stream test is in progress.<br>0: the request was accepted successfully.<br>Refer to API Status Codes to find specific description for other values. |
| percent | Indicates the percentage of stream test. |
| upload-bps | Indicates the upload speed. |
| net | Indicates the network type. |
| client-id | Reserved |

Call the clear-test-server to set the device to the initial status (retInit=27) after the test.

# stop-test-server

Use this interface to cancel stream test after starting a test by calling start-test-server.

## HTTP Request

```
GET http://ip/usapi?method=stop-test-server
```

| Parameter | Description |
| --- | --- |
| method | stop-test-server |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# clear-test-server

Use this interface to reset the device to the initial state (retInit=27) after the device conducts stream test using start-test-server.

## HTTP Request

```
GET http://ip/usapi?method=clear-test-server
```

| Parameter | Description |
| --- | --- |
| method | clear-test-server |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-ndi-sources

Use this interface to obtain NDI sources within the same LAN when starting NDI|HX services.

## HTTP Request

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

| Parameter | Description |
| --- | --- |
| method | get-ndi-sources |

## Response Body

```
{
  "result": 0
  "ndi-sources": [
    {
      "ndi-name": "ULTRA ENCODE (A304220101001)",
      "ip-addr": "10.10.13.247:5962"
      }
  ]
}
```

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

# set-ndi-find-config

Use this interface to set NDI|HX discovery service.

## HTTP Request

```
GET http://ip/usapi?method=set-ndi-find-config&group-name=public&xxx
```

| Parameter | Description |
| --- | --- |
| method | set-ndi-find-config |
| group-name | Group name, public by default. |
| enable-discovery | 0 indicates to disable discovery service, 1 indicates to enable discovery service. |
| discovery-server | IP address of discovery server. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# enable-ndi-hx3

Use this interface to set NDI|HX3 enable status.

## HTTP Request

```
GET http://ip/usapi?method=enable-ndi-hx3&enable-ndi-hx3=1
```

| Parameter | Description | | |
|---|---|---|---|
| method | enable-ndi-hx3 | | |
| enable-ndi-hx3 | 0: disable NDI | HX3.<br>1: enable NDI | HX3. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
|---|---|
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# add-rec-channel

Use this interface to add a record channel. 3 channels are supported, one for each storage medium. By default, record channels of USB flash drive, SD card and NAS are reserved.

## HTTP Request

```
GET http://ip/usapi?method=add-rec-channel&type=xxx&stream-index=1...
```

| Parameter | Description |
| --- | --- |
| method | add-rec-channel |
| type | Storage medium type.<br>0: USB flash drive<br>1: SD card<br>2: NAS |
| stream-index | 0: the main stream<br>1: sub stream |
| mode | Record mode.<br>1: normal<br>2: loop |
| dir-name | Recorded files directory. `REC_Folder` by default. 2-level directory is supported. Use slash(/) to separate different directories, such as a/b.<br>The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). It can not start or end with spaces. |
| file-prefix | The file prefix.<br>0: custom<br>1: the creation date and time of the specified file |
| prefix-name | The file name starts with `VID` by default.<br>The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). It can not start or end with spaces. |
| file-suffix | File suffix.<br>0: mp4<br>1: mov |
| time-unit | Recoding intervals in minutes. Note that a vfat files should be no greater than 4G, that is, time-unit * recording code rate <= 4G |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# enable-rec-channel

Use this interface to enable a record channel and start a recording task. 2 channels are supported.

## HTTP Request

```
GET http://ip/usapi?method=enable-rec-channel&id=1&is-use=1
```

| Parameter | Description |
| --- | --- |
| method | enable-rec-channel |
| id | Record channel ID which can be obtained via get-rec-channels. |
| is-use | 0: disable a record channel.<br>1: enable a record channel. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-rec-channel

Use this interface to modify a recording channel.

## HTTP Request

```
GET http://ip/usapi?method=set-rec-channel&id=xxx&type=xxx&stream-index=xxx&...
```

| Parameter | Description |
| --- | --- |
| method | set-rec-channel |
| id | Recording channel ID which can be obtained via get-rec-channels. |
| type | Storage mediums.<br>0: USB flash drive<br>1: SD card<br>2: NAS |
| stream-index | 0: the main stream<br>1: sub stream |
| mode | Record mode.<br>1: normal<br>2: loop |
| dir-name | Recorded files directory. `REC_Folder` by default. 2-level directory are supported. Use slash(/) to separate different directories, such as a/b.<br>The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). It can not start or end with spaces. |
| file-prefix | File name prefix generator.<br>0: custom<br>1: the creation date and time of the specified file |
| prefix-name | File name prefix is `VID` by default.<br>The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). It can not start or end with spaces. |
| file-suffix | File name suffix.<br>0: mp4<br>1: mov |
| time-unit | Recode time unit in minutes. The vfat files should be no greater than 4G, that is<br>time-unit * recording code rate <= 4G |
| audio | Audio streams.<br>0: Stream 1<br>1: Stream 2<br>2: Stream 3<br>3: Stream 4 |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# del-rec-channel

Use this interface to delete a record channel.

## HTTP Request

```
GET http://ip/usapi?method=del-rec-channel&id=1
```

| Parameter | Description |
| --- | --- |
| method | del-rec-channel |
| id | Record channel ID which can be obtained via get-rec-channels. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-rec-channels

Use this interface to obtain configurations of all record channels.

## HTTP Request

```
GET http://ip/usapi?method=get-rec-channels
```

| Parameter | Description |
| --- | --- |
| method | get-rec-channels |

## Response Body

```
{
  "result": 0,
  "rec-channels": [],
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# clear-rec-status

Use this interface to reset the interface to the initial status (27) after starting recording.

## HTTP Request

```
GET http://ip/usapi?method=clear-rec-status&id=1
```

| Parameter | Description |
| --- | --- |
| method | clear-clear-rec-status |
| id | Record channel ID which can be obtained via get-rec-channels. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# add-nas

Use this interface to add a NAS. 4 NAS servers are supported.

NAS protocols supported can be obtained via get-info.

```
{
  "nas": {
    "proto": [],         // range of NAS protocols
  }
}
```

## HTTP Request

```
GET http://ip/usapi?method=add-nas&proto=xxx&addr=xxx&mount=xxx&...
```

| Parameter | Description |
| --- | --- |
| method | add-nas |
| proto | NAS protocol.<br>0: NFS<br>1: CIFS |
| addr | NAS address. |
| mount | NAS mount point. |
| CIFS parameters | |
| user | Username |
| passwd | Password |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# enable-nas

Use this interface to enable a NAS server and the NAS record channel will be auto-bound with. 1 NAS server is supported.

## HTTP Request

```
GET http://ip/usapi?method=enable-nas&id=1&is-use=1
```

| Parameter | Description |
| --- | --- |
| method | enable-nas |
| id | Server ID which can be obtained via get-settings. |
| is-use | 0: disable a NAS.<br>1: enable a NAS. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-nas

Use this interface to modify the NAS server.

## HTTP Request

```
GET http://ip/usapi?method=set-nas&id=xxx&proto=xxx&addr=xxx&mount=xxx&...
```

| Parameter | Description |
| --- | --- |
| method | set-nas |
| id | Server ID which can be obtained via get-settings. |
| proto | NAS protocol.<br>0: NFS<br>1: CIFS |
| addr | Server address. |
| mount | Server mount point. |
| CIFS parameters | |
| user | Username |
| passwd | Password |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# del-nas

Use this interface to delete the nas server.

## HTTP Request

```
GET http://ip/usapi?method=del-nas&id=1
```

| Parameter | Description |
| --- | --- |
| method | del-nas |
| id | Server ID which can be obtained via get-settings. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-auto-rec

> Added at V2.1

Use this interface to set automatic recording.

## HTTP Request

```
GET http://ip/usapi?method=set-auto-rec&is-auto=1&trigger-mode=0
```

| Parameter | Description |
| --- | --- |
| method | set-auto-rec |
| is-auto | 0: disable automatic recording<br>1: enable automatic recording |
| trigger-mode | Set trigger for automatic recording. Refer to API Status Codes to find specific parameter values. |

## Response Body

```
{
  "result": 0
}
```

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

# start-format-usb

> Deprecated at V2.2, use start-disk-format instead.

Use the interface to format the USB flash drive. The stored data cannot be recovered after formatting and the process can not be canceled.

In order to format the USB flash drive, the following conditions must be met.

- firmware update is not in progress
- neither reset nor reboot is in progress
- recording is not in progress
- USB performance test is not in progress
- USB flash drive is valid to work

Obtain mask of device status and USB status using get-status.

```
"cur-status": 65552                   // device running status mask
"disk-info" [
  {

  "disk-status": 1,                   // USB status mask
  "disk-type": 0,                     // 0: USB flash drive, 1: SD card
  "total-size": 61638148096,
  "used-size": 97058816,
    ...
  }
]
```

The output of `cur-status` & Device Status Mask are as follows.

| Device status | Condition |
| --- | --- |
| Firmware update is not in progress | cur-status & statusUpgrade != statusUpgrade |
| Reset all settings is not in progress | cur-status & statusReset != statusReset |
| Reboot is not in progress | cur-status & statusReboot != statusReboot |
| record is not in progress | cur-status & statusRecord != statusRecord |
| USB performance test is not in progress | cur-status & statusDiskTest != statusDiskTest |

The output of `disk-status` & USB Status is as follows.

| Device status | Condition |
| --- | --- |
| USB is valid to work | disk-status & DiskValid = DiskValid |

## HTTP Request

```
GET http://ip/usapi?method=start-format-usb
```

| Parameter | Description |
| --- | --- |
| method | start-format-usb |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the USB starts to format.<br>1 indicates repeat request.<br>-5 indicates USB disk is error.<br>-9 indicates that system is busy.<br>Refer to API Status Codes to find specific description for other values. |

## Format Status

Obtain **format-status** using the get-status.

```
"format-status": {
  "result": 27,
  "percent": 20,
  "client-id": ""
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>27 indicates that USB is in initial state.<br>2 indicates that USB is formatting.<br>0 indicates that the request was accepted successfully.<br>Refer to API Status Codes to find specific description for other values. |
| percent | Indicates the percentage of usb format. |
| client-id | Reserved |

Call clear-format-usb to reset the device to the initial status (retInit=27) after the USB format is completed.

# start-format-sd

> Deprecated at V2.2, use start-disk-format instead.

Use the interface to format SD card. The data cannot be recovered after formatting and the operation can not be canceled.

The prerequisites for formatting SD card are as follows.

- firmware updating is not in progress
- resetting or rebooting the device is not in progress
- recording is not in progress
- SD card is valid to work

Obtain the following information using get-status.

```
"cur-status": 65552                   // device running status mask
"disk-info": [
  {
  "disk-status": 1,                   // SD card status mask
  "disk-type": 1,                     // 0: USB flash drive, 1: SD card
  "total-size": 61638148096,
  "used-size": 97058816,
  ...
}
```

The outputs of `cur-status` & Device Status Mask are as follows.

| Device status | Condition |
| --- | --- |
| Firmware updating is not in progress | cur-status & statusUpgrade != statusUpgrade |
| Resetting device is not in progress | cur-status & statusReset != statusReset |
| Rebooting device is not in progress | cur-status & statusReboot != statusReboot |
| Recording is not in progress | cur-status & statusRecord != statusRecord |

The output of `disk-status` & Storage device status is as follows.

| Device status | Condition |
| --- | --- |
| SD card is valid to work | disk-status & DiskValid = DiskValid |

## HTTP Request

```
GET http://ip/usapi?method=start-format-sd
```

| Parameter | Description |
| --- | --- |
| method | start-format-sd |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the SD card starts to format.<br>1 indicates repeat request.<br>-5 indicates SD card is error.<br>-9 indicates system is busy.<br>Refer to API Status Codes to find specific description for other values. |

## Format Process Status

Obtain the **format-status** information using get-status .

```
"format-status": {
  "result": 27,
  "percent": 20,
  "client-id": ""
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>27 indicates that the device is in initial status.<br>2 indicates the SD format is in progress.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |
| percent | Indicates the process of SD format. |
| client-id | Reserved |

Call the clear-format-sd to reset the device to the initial status (retInit=27) after the SD format is completed successfully or not.

# clear-format-usb

> Deprecated at V2.2, use clear-disk-format instead.

Use the interface to set the device state to the initial status (retInit=27) after formatting usb successfully or not.

## HTTP Request

```
GET http://ip/usapi?method=clear-format-usb
```

| Parameter | Description |
| --- | --- |
| method | clear-format-usb |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# clear-format-sd

> Deprecated at V2.2, use clear-disk-format clear-disk-format instead.

Use the interface to set the device state to the initial status (retInit=27) after formatting SD card successfully or not.

## HTTP Request

```
GET http://ip/usapi?method=clear-format-sd
```

| Parameter | Description |
| --- | --- |
| method | clear-format-sd |

## Response Body

```
{
  "result": 0
}
```

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

# start-test-usb

> Deprecated at V2.2, use start-disk-test instead.

Use the interface to test whether the write speed of USB flash drive meets the requirements before recording. You can call the stop-test-usb to cancel the request during testing.

In order to test the performance of USB flash drive, the following conditions must be met.

- firmware update is not in progress
- reset and reboot is not in progress
- recording is not in progress
- USB format is not in progress
- USB performance test is not in progress
- USB is valid to work
- USB has more than 200M free space
- USB is writable

Obtain the mask of device status and USB status using get-status.

```
"cur-status": 65552          // device running status mask
"usb": {
 "disk-status": 1,          // USB status mask
 "total-size": 61638148096,
 "used-size": 97058816,
 ...
}
```

The output of `cur-status` & Device Status Mask are as follows.

| Device status | Condition |
| --- | --- |
| Firmware update is not in progress | cur-status & statusUpgrade != statusUpgrade |
| Reset all settings is not in progress | cur-status & statusReset != statusReset |
| Reboot is not in progress | cur-status & statusReboot != statusReboot |
| Recording is not in progress | cur-status & statusRecord != statusRecord |
| USB format is not in progress | cur-status & statusFormatDisk != statusFormatDisk |
| USB performance test is not in progress | cur-status & statusDiskTest != statusDiskTest |

The output of `disk-status` & USB Status are as follows.

| Device status | Condition |
| --- | --- |
| USB is valid to work | disk-status & DiskValid = DiskValid |
| USB has more then 200 M free space | disk-status & LowSpace != LowSpace |
| USB is writable | disk-status & NotWrite != NotWrite |

## HTTP Request

```
GET http://ip/usapi?method=start-test-usb
```

| Parameter | Description |
| --- | --- |
| method | start-test-usb |

## Response Body

```
{
 "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the USB starts to format.<br>1 indicates repeat request<br>-5 indicates USB disk is error.<br>-9 indicates system is busy.<br>-16 indicates there is not enough free space on USB flash drive.<br>Refer to API Status Codes to find specific description for other values. |

## The Lowest Required Write Speed

Obtain the recording configurations using get-settings.

```
"rec-stream": 0,
"main-stream": {
 "kbps": 4096,
 ...
},
"sub-stream": {
 "kbps": 1024,
 ...
}
"audio": {
 "kbps": 128
 ...
}
```

**rec-stream** indicates the recording stream type. 0 indicates **main-stream**, 1 indicates **sub-stream**.

The current recording requirSpeed can be calculated with the above information.

```
requirSpeed = main-stream.kbps + audio.kbps
            = (4096 Kbps + 128 Kbps)
            = 4224 Kbps / 1024 * 8
            ≈ 0.52 MB/S
```

## Performance Test Status

Obtain the **disk-test** information using get-status.

```
"disk-test": {
 "read-bps": 0,
 "write-bps": 14833071,  // 14833071 bps / 1024 * 1024 ≈ 14.15 MB/S
 "percent": 3,
 "result": 2,
 "client-id": "web-session-32435088"
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>27 indicates that the device is in initial status.<br>5 indicates the request is canceled.<br>2 indicates the USB performance test is in progress.<br>Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |
| percent | Indicates the percentage of USB format. |
| read-bps | Indicates current read speed. |
| write-bps | Indicates current write speed. The USB disk performance is up to standard if it is above the requirSpeed. |
| client-id | Reserved |

Call the clear-test-usb to reset the device to the initial status (retInit=27) after the performance test is completed.

# stop-test-usb

> Deprecated at V2.2, use start-disk-test instead.

Use the interface to cancel the ongoing USB performance test which is started by calling start-test-usb.

## HTTP Request

```
GET http://ip/usapi?method=stop-test-usb
```

| Parameter | Description |
| --- | --- |
| method | stop-test-usb |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# clear-test-usb

> Deprecated at V2.2, use clear-disk-test instead.

Use the interface to reset the device to the initial status (retInit=27) after the USB performance test.

## HTTP Request

```
GET http://ip/usapi?method=clear-test-usb
```

| Parameter | Description |
| --- | --- |
| method | clear-test-usb |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-media-files

Use the interface to get recorded files saved in USB flash drive or SD card.

Call del-media-files to delete the obtained files.

## HTTP Request

```
GET http://ip/usapi?method=get-media-files&disk-type=1&start=0&count=3
```

| Parameter | Description |
| --- | --- |
| method | get-media-files |
| disk-type | Indicates the storage device type. 0 indicates USB flash drive. 1 indicates SD card. 2 indicates NAS. |
| start | Indicates the start of index from 0. |
| count | Indicates the count of recorded files. |

## Response Body

```
{
  "result": 0,
  "path": "/media/disk1/REC_Folder",
  "thumbnail": "thumbnail",
  "media-files": [
    {
      "name": "VID_9.mp4",                          // video file name
      "thumbnail-name": "VID_9.mp4_1569393321",     // Thumbnail name, the default file extension is .jpg.
      "status": 1,                                  // video file status, 0 indicates the file is recording. 1 indic
ates the file is normal; 2 indicates the file is error; 3 indicates the file is lost.
      "create-time": "2019-09-25 06:35:21",         // the creation date and time of the specified file
      "size-bytes": 4025670,                        // file size in bytes
      "duration": 14480,                            // Video duration in seconds
      "width": 1280,                                // video width in pixels
      "height": 720,                                // video height in pixels
      "interval": 200000,                           // frame rate in FPS = 10000000 / interval
      "codec": 0                                    // code type. 0 indicates H264; 1 indicates HEVC.
    },
    ...
  ]
}
```

| Item | Description |
| --- | --- |
| result | 0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |
| path | Indicates the path for recorded video clips. |
| thumbnail | Indicates subdirectory which saves video thumbnails, the absolute path consists: path + thumbnail. |
| media-files | Indicates the recorded files list. |

## Common Paths

| Item | Format | Example |
| --- | --- | --- |
| Video file path | path/name | /media/disk1/REC_Folder/VID_9.mp4 |
| Download path | http://ip:8080/download/path/name | http://ip:8080/download/media/disk1/REC_Folder/VID_9.mp4 |
| Thumbnail path | path/thumbnail/thumbnail-name | /media/disk1/REC_Folder/thumbnail/thumbnail-name.jpg |

# del-media-files

Use the interface to batch delete the recorded files saved in USB flash drive, SD card (device internal storage) or NAS.

## HTTP Request

```
POST http://ip/usapi?method=del-media-files
```

| Parameter | Description |
| --- | --- |
| method | del-media-files |

## Request Header

```
Content-Type: application/json;charset=UTF-8
```

## Request Payload

```
{
  disk-type: 1,                       // storage device type. 0 indicates USB flash drive. 1 indicates SD card. 2 in
dicates NAS.
  media-files: ["VID_6_14.mp4"]       // array of file name to be deleted
}
```

## Response Body

```
{
  "result": 0
}
```

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

# start-disk-format

> Added at V2.2

Use the interface to format the USB flash drive or SD card. The stored data cannot be recovered after formatting and the process can not be canceled.

Prerequisites are as follows.

- firmware update is not in progress
- neither reset nor reboot is in progress
- recording is not enabled
- USB flash drive or SD card is valid to work

Obtain the following information using get-status.

```
"cur-status": 65552                   // device running status mask
"disk-info": [
  {
    "disk-status": 1,                   // SD status mask
    "disk-type": 1,                     // 0: USB flash drive, 1: SD card
    "total-size": 61638148096,
    "used-size": 97058816,
    ...
  }
]
```

The output of `cur-status` & Device Status Mask are as follows.

| Device status | Condition |
| --- | --- |
| Firmware update is not in progress | cur-status & statusUpgrade != statusUpgrade |
| Reset all settings is not in progress | cur-status & statusReset != statusReset |
| Reboot is not enabled | cur-status & statusReboot != statusReboot |
| record is not in progress | cur-status & statusRecord != statusRecord |

The output of `disk-status` & Device Status code is as follows.

| Device status | Condition |
| --- | --- |
| USB flash drive or SD card is valid to work | disk-status & DiskValid = DiskValid |

## HTTP Request

```
GET http://ip/usapi?method=start-disk-format&disk-type=0
```

| Parameter | Description |
| --- | --- |
| method | start-disk-format |
| disk-type | 0: USB flash drive, 1: SD card |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the USB starts to format.<br>1 indicates repeat request.<br>-5 indicates USB disk is error.<br>-9 indicates that system is busy.<br>Refer to API Status Codes to find specific description for other values. |

## Format Status

Obtain **format-status** using the get-status.

```
"format-status": {
  "result": 27,
  "percent": 20,
  "client-id": ""
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>27 indicates that formatting is in initial state.<br>2 indicates that formatting is ongoing.<br>0 indicates that the request was accepted successfully.<br>Refer to API Status Codes to find specific description for other values. |
| percent | Indicates the percentage of formatting. |
| client-id | Reserved |

Call clear-disk-format to reset the device to the initial status (retInit=27) after the formatting is completed.

# clear-disk-format

> Added at V2.2

Use this interface to reset the device to the initial state (retInit=27) when disk formatting fails or succeeds.

## HTTP Request

```
GET http://ip/usapi?method=clear-disk-format
```

| Parameter | Description |
| --- | --- |
| method | clear-disk-format |

## Response Body

```
{
  "result": 0
}
```

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

# start-disk-test

> Added at V2.2 Use the interface to test whether the write speed meets the requirements for recording. You can call the stop-disk-test to cancel the request during testing.

Prerequisites are as follows.

- firmware update is not in progress
- reset and reboot is not in progress
- recording is not in progress
- disk format is not in progress
- disk performance test is not in progress
- disk is valid to work
- disk has more than 200M free space
- disk is writable

Obtain the mask of device status and disk status using get-status.

```
"cur-status": 65552                  // device running status mask
"usb": {
  "disk-status": 1,                  // disk status mask
  "total-size": 61638148096,
  "used-size": 97058816,
  ...
}
```

The output of `cur-status` & Device Status Mask are as follows.

| Device status | Condition |
| --- | --- |
| Firmware update is not in progress | cur-status & statusUpgrade != statusUpgrade |
| Reset all settings is not in progress | cur-status & statusReset != statusReset |
| Reboot is not in progress | cur-status & statusReboot != statusReboot |
| Recording is not in progress | cur-status & statusRecord != statusRecord |
| Disk format is not in progress | cur-status & statusFormatDisk != statusFormatDisk |
| Disk performance test is not in progress | cur-status & statusDiskTest != statusDiskTest |

The output of `disk-status` & disk Status are as follows.

| Device status | Condition |
| --- | --- |
| Disk is valid to work | disk-status & DiskValid = DiskValid |
| Disk has more then 200 M free space | disk-status & LowSpace != LowSpace |
| Disk is writable | disk-status & NotWrite != NotWrite |

## HTTP Request

```
GET http://ip/usapi?method=start-disk-test&disk-type
```

| Parameter | Description |
| --- | --- |
| method | start-disk-test |
| disk-type | 0: USB flash drive, 1: SD card |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the formatting begins.<br>1 indicates repeat request<br>-5 indicates disk error.<br>-9 indicates system busy.<br>-16 indicates there is not enough free space.<br>Refer to API Status Codes to find specific description for other values. |

## The Lowest Required Write Speed (requirSpeed)

Obtain the recording configurations using get-settings.

```
"rec-stream": 0,
"main-stream": {
  "kbps": 4096,
  ...
},
"sub-stream": {
  "kbps": 1024,
  ...
}
"audio": {
  "kbps": 128
  ...
}
```

**rec-stream** indicates the recording stream type. 0 indicates **main-stream**, 1 indicates **sub-stream**.

The current recording requirSpeed can be calculated with the above information.

```
requirSpeed = main-stream.kbps + audio.kbps
            = (4096 Kbps + 128 Kbps)
            = 4224 Kbps / 1024 * 8
            ≈ 0.52 MB/S
```

## Performance Test Status

Obtain the **disk-test** information using get-status.

```
"disk-test": {
  "read-bps": 0,
  "write-bps": 14833071,    // 14833071 bps / 1024 * 1024 ≈ 14.15 MB/S
  "percent": 3,
  "result": 2,
  "client-id": "web-session-32435088"
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>27 indicates that the device is in initial status.<br>5 indicates the request is canceled.<br>2 indicates the test is in progress.<br>Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |
| percent | Indicates the percentage of test. |
| read-bps | Indicates current read speed. |
| write-bps | Indicates current write speed, if it is greater than requirSpeed, then the performance of the USB flash drive is up to standard. |
| client-id | Reserved |

Call the clear-disk-test to reset the device to the initial status (retInit=27) after the performance test is completed.

# stop-disk-test

> Added at V2.2

Use the interface to cancel the ongoing disk performance test which is started by calling start-disk-test.

## HTTP Request

```
GET http://ip/usapi?method=stop-disk-test
```

| Parameter | Description |
| --- | --- |
| method | stop-disk-test |

## Response Body

```
{
  "result": 0
}
```

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

# clear-disk-test

> Added at V2.2

Use this interface to reset the device to the initial state (retInit=27) when USB formatting fails or succeeds.

## HTTP Request

```
GET http://ip/usapi?method=clear-disk-test
```

| Parameter | Description |
| --- | --- |
| method | clear-disk-test |

## Response Body

```
{
  "result": 0
}
```

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

# send-file-add-server

> Added at V2.3

Use this interface to add a server for file uploading, up to 8 servers are supported.

## HTTP Request

```
GET http://ip/usapi?method=send-file-add-server&type=xxx&net-mode=1&...
```

| Parameter | Description |
| --- | --- |
| method | send-file-add-server |
| type | Server type.<br>0: FTP/SFTP<br>1: Google Drive<br>2: Dropbox<br>3: YouTube |
| net-mode | Network priority.<br>0: mobile broadband first<br>1: wired network first<br>2: wireless network first |
| FTP/SFTP upload parameters | |
| proto | Protocol type.<br>0: FTP<br>1: SFTP |
| url | Server URL |
| port | Server port. |
| dir-name | File directory name. |
| encryption | FTP encryption types.<br>0: use plaintext FTP only<br>1: require explicit FTP over TLS<br>2: require implicit FTP over TLS |
| login-type | Login types.<br>0: anonymous<br>1: normal |
| user-name | Username |
| passwd | Password |
| mode | Transport mode.<br>0: active<br>1: passive |
| Google Drive upload parameters | |
| account-id | Account ID |
| photo-path | User avatar address |
| user-name | Username |
| access-token | Access token. |
| refresh-token | Refresh token |
| dir-name | Directory name. |
| parents | Parent directory ID. |
| Dropbox upload parameters | |
| account-id | Account ID |
| photo-path | User avatar address |
| user-name | Username |
| access-token | Access token. |
| refresh-token | Refresh token |
| dir-name | Directory name. |

| Parameter | Description |
| --- | --- |
| YouTube upload parameters | |
| account-id | Account ID |
| photo-path | User avatar address |
| user-name | Username |
| access-token | Access token. |
| refresh-token | Refresh token |
| privacy | Authority |

## Response Body

```
{
  "result": 0
}
```

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

# send-file-del-server

> Added at V2.3

Use this interface to delete servers for file uploading.

## HTTP Request

```
GET http://ip/usapi?method=send-file-del-server&id=0
```

| Parameter | Description |
| --- | --- |
| method | send-file-del-server |
| id | Server ID |

## Response Body

```
{
  "result": 0
}
```

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

# send-file-enable-server

> Added at V2.3

Use the interface to enable a server. The first added server is enabled by default. And at one time, only one server is supported to be uploaded to.

## HTTP Request

```
GET http://ip/usapi?method=send-file-enable-server&id=1&is-use=1
```

| Parameter | Description |
| --- | --- |
| method | send-file-enable-server |
| id | Server ID |
| is-use | Enable status of the server for uploading.<br>0: Disabled<br>1: Enabled |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# send-file-set-server

> Added at V2.3

Use the interface to edit settings of the upload server.

## HTTP Request

```
GET http://ip/usapi?method=send-file-set-server&id=xxx&type=xxx&net-mode=1&...
```

| Parameter | Description |
| --- | --- |
| method | send-file-set-server |
| id | Server ID |
| type | Server type.<br>0: FTP/SFTP<br>1: Google Drive<br>2: Dropbox<br>3: YouTube |
| net-mode | Indicates the network priority.<br>0: Mobile broadband first<br>1: wired Ethernet first<br>2: Wi-Fi first |
| FTP/SFTP | |
| proto | Protocol type.<br>0: FTP<br>1: SFTP |
| url | Server address. |
| port | Server port. |
| dir-name | Target directory name. |
| encryption | FTP encryption type.<br>0: plaintext FTP only<br>1: explicit FTP over TLS<br>2: implicit FTP over TLS |
| login-type | Login type.<br>0: Anonymous<br>1: Normal |
| user-name | User name. |
| passwd | User password. |
| mode | Transfer mode.<br>0: active<br>1: passive |
| Google Drive | |
| account-id | Account id. |
| photo-path | Path for User avatar. |
| user-name | User name. |
| access-token | Access token. |
| refresh-token | Refresh token. |
| dir-name | Target directory name. |
| parents | Parents folder id |
| Dropbox | |
| account-id | Account id. |
| photo-path | Path for User avatar. |
| user-name | User name |
| access-token | Access token. |
| refresh-token | Refresh token. |

| Parameter | Description |
| --- | --- |
| dir-name | Target directory name. |
| YouTube | |
| account-id | Account id. |
| photo-path | Path for User avatar. |
| user-name | User name |
| access-token | Access token. |
| refresh-token | Refresh token. |
| privacy | Privacy |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# send-file-start-test-server

> Added at V2.3

Use the interface to start the upload sever test. You can use send-file-stop-test-server to stop it. FTP/SFTP servers are supported.

## HTTP Request

```
GET http://ip/usapi?method=send-file-start-test-server&type=xxx&net-mode=1&...
```

| Parameter | Description |
| --- | --- |
| method | send-file-start-test-server |
| type | Server type.<br>0: FTP/SFTP<br>1: Google Drive<br>2: Dropbox<br>3: YouTube |
| net-mode | Network priority.<br>0: mobile broadband first<br>1: wired Ethernet first<br>2: Wi-Fi first |
| FTP/SFTP | |
| proto | Protocol type.<br>0: FTP<br>1: SFTP |
| url | Server address. |
| port | Server port. |
| dir-name | Target directory name. |
| encryption | FTP encryption type.<br>0: plaintext FTP only<br>1: explicit FTP over TLS<br>2: implicit FTP over TLS |
| login-type | Login type.<br>0: Anonymous<br>1: Normal |
| user-name | User name. |
| passwd | User password. |
| mode | Transfer mode.<br>0: active<br>1: passive |

## Response Body

```
{
  "result": 0
}
```

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

# send-file-stop-test-server

> Added at V2.3

Use the interface to stop the upload test. You can start a test by using send-file-start-test-server.

## HTTP Request

```
GET http://ip/usapi?method=send-file-stop-test-server
```

| Parameter | Description |
| --- | --- |
| method | send-file-stop-test-server |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# clear-test-send-file

> Added at V2.3

Use this interface to reset the device to the initial state (retInit=27) when upload test fails or succeeds.

## HTTP Request

```
GET http://ip/usapi?method=clear-test-send-file
```

| Parameter | Description |
| --- | --- |
| method | clear-test-send-file |

## Response Body

```
{
  "result": 0
}
```

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

# send-file-add

> Added at V2.3

Use this interface to add files to the file upload list, currently it only supports uploading files recorded on SD card.

## HTTP Request

```
POST http://ip/usapi?method=send-file-add
```

| Parameter | Description |
| --- | --- |
| method | send-file-add |

## Request Header

```
Content-Type: application/json;charset=UTF-8
```

## Request Payload

```
{
  disk-type: 1,                       // Storage device type, 0: USB flash drive, 1: SD card
  media-files: ["VID_6_14.mp4"]       // Array of file names to be deleted
}
```

## Response Body

```
{
  "result": 0
}
```

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

# send-file-del

> Added at V2.3

Use this interface to delete files from the file upload list.

## HTTP Request

```
POST http://ip/usapi?method=send-file-del
```

| Parameter | Description |
| --- | --- |
| method | send-file-del |

## Request Header

```
Content-Type: application/json;charset=UTF-8
```

## Request Payload

```
{
  disk-type: 1,                       // Storage device type, 0: USB flash drive, 1: SD card
  media-files: ["VID_6_14.mp4"]       // Array of file names to be deleted
}
```

## Response Body

```
{
  "result": 0
}
```

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

# send-file-clear

> Added at V2.3

Use this interface to clear file list.

## HTTP Request

```
GET http://ip/usapi?method=send-file-clear
```

| Parameter | Description |
| --- | --- |
| method | send-file-clear |

## Response Body

```
{
  "result": 0
}
```

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

# send-file-get-status

> Added at V2.3

Use the interface to obtain file upload related data, such as upload list, upload process.

## HTTP Request

```
GET http://ip/usapi?method=send-file-get-status&disk-type=1&start=0&count=0
```

| Parameter | Description |
| --- | --- |
| method | send-file-get-status |
| disk-type | Disk where files are saved. 0: USB flash drive. 1: SD card |
| start | Upload index, which starts from 0. |
| count | The number of uploads. |

## Response Body

JSON structure is as follows:

```
{
  "result": 0,                    // Returned status
  "total-count-ongoing": 1,       // The number of files to be uploaded
  "total-count-done": 2,          // The number of files that has been uploaded
  "start": 0,
  "count": 10,
  "status": {}                    // upload status
  "media-files": {},              // upload list
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# send-file-set-is-auto

> Added at V2.3

Use the interface to set whether to automatically upload files stored in SD card. By default, it is disabled.

## HTTP Request

```
GET http://ip/usapi?method=send-file-set-is-auto&is-auto=0
```

| Parameter | Description |
| --- | --- |
| method | send-file-set-is-auto |
| is-auto | 0: auto upload is disabled.<br>1: auto upload is enabled. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# send-file-start

> Added at V2.3

Use the interface to start uploads. By default, it is enabled.

## HTTP Request

```
GET http://ip/usapi?method=send-file-start
```

| Parameter | Description |
| --- | --- |
| method | send-file-start |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# send-file-stop

> Added at V2.3

Use the interface to stop uploading, including the ongoing one.

## HTTP Request

```
GET http://ip/usapi?method=send-file-stop
```

| Parameter | Description |
| --- | --- |
| method | send-file-stop |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# add-image

Use this interface to add up to 8 JPEG or PNG graphics which should be smaller than 1920x1080, 512KB.

## HTTP Request

```
POST http://ip/usapi?method=add-image&name=xxx
```

| Parameter | Description |
|---|---|
| method | add-image |
| name | Reserved |
| enable-colorkey | Reserved |
| colorkey-mode | Reserved |
| key-color | Reserved |
| tolerance | Reserved |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
|---|---|
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-image

Use this interface to modify pictures and keep the interface reserved.

## HTTP Request

```
GET http://ip/usapi?method=set-image&id=xxx
```

| Parameter | Description |
| --- | --- |
| method | set-image |
| id | Record channel ID which can be obtained using get-settings. |
| name | Reserved |
| enable-colorkey | Reserved |
| colorkey-mode | Reserved |
| key-color | Reserved |
| tolerance | Reserved |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# del-image

Use this interface to delete pictures.

## HTTP Request

```
GET http://ip/usapi?method=del-image&id=1
```

| Parameter | Description |
| --- | --- |
| method | del-image |
| id | Image ID, you can obtain it using get-images. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-images

Use this interface to obtain list of uploaded pictures.

## HTTP Request

```
GET http://ip/usapi?method=get-images
```

| Parameter | Description |
| --- | --- |
| method | get-images |

## Response Body

```
{
  "result": 0,
  "images": [],
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# add-surface

Use this interface to add an overlay. The main stream and sub stream supports 8 overlays each, 16 in total.

Obtain the ranges of overlay parameters using get-info.

```
{
  "surface": {
    "image": {},          // picture restrictions
    "image-type": [],     // range of picture formats
    "type": [],           // range of overlay types
    "position": [],       // range of overlay locations
    "font-family": [],    // range of fonts
    "font-style": [],     // range of font styles
    "font-weight": [],    // range of font weights
    "time-format": [],    // range of time formats
  }
}
```

## HTTP Request

```
GET http://ip/usapi?method=add-surface&type=xxx&stream-index=1...
```

| Parameter | Description |
| --- | --- |
| method | add-surface |
| stream-index | 0: main stream<br>1: sub stream |
| position | Overlay location. |
| x-offset | The x-coordinate of the upper left corner of the overlay position, which is valid when the overlay location is customized. |
| y-offset | The y-coordinate of the upper left corner of the overlay position, which is valid when the overlay location is customized. |
| margin | The width between the overlay and the outer margin. The default value is 0. |
| condition | Reserved. |
| class | Overlay types.<br>0: text<br>1: system clock<br>2: picture |
| Text | |
| font-family | Font family. |
| font-size | Font size. |
| font-style | Font style. |
| font-weight | Font weight. |
| font-color | Font color. |
| line-width | Line width. |
| line-color | Line color. |
| width | Width of text box. |
| height | Height of text box. |
| text | Text content. |
| System time | |
| font-family | Font family. |
| font-size | Font size. |
| font-style | Font style. |
| font-weight | Font weight. |
| font-color | Font color. |
| line-width | Line width. |
| line-color | Line color. |
| width | Width of time box. |
| height | Height of time box. |
| text | Time format. |
| Picture | |
| index | Picture ID which can be obtained using get-images. |
| alpha | alpha value ranges from 0 to 255. |
| scale | Resize a picture from 1% to 400%. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-enable-surface

Use this interface to set enable status of all overlays for the main stream and sub stream.

## HTTP Request

```
GET http://ip/usapi?method=set-enable-surface&stream-index=1&enable=1
```

| Parameter | Description |
|---|---|
| method | set-enable-surface |
| stream-index | 0: main stream<br>1: sub stream |
| enable | 0: disable<br>1: enable |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
|---|---|
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# enable-surface

Use this interface to enable overlay function to enter status of waiting to work. Then you can make all overlays effective using set-enable-surface.

## HTTP Request

```
GET http://ip/usapi?method=enable-surface&id=1&is-use=1
```

| Parameter | Description |
| --- | --- |
| method | enable-surface |
| id | Overlay ID, you can obtain it using get-surfaces. |
| is-use | 0: disable<br>1: enable |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-surface

Use this interface to modify overlay settings.

## HTTP Request

```
GET http://ip/usapi?method=set-surface&id=xxx&stream-index=xxx&...
```

| Parameter | Description |
| --- | --- |
| method | set-surface |
| id | Overlay ID which can be obtained using get-surfaces. |
| stream-index | 0: main stream<br>1: sub stream |
| position | Overlay location. |
| x-offset | The x-coordinate of the upper left corner of the overlay position, which is valid when the overlay location is customized. |
| y-offset | The y-coordinate of the upper left corner of the overlay position, which is valid when the overlay location is customized. |
| margin | The width between the overlay and the outer margin. The default value is 0. |
| condition | Reserved. |
| class | Overlay options.<br>0: text<br>1: system clock<br>2: picture |
| Text | |
| font-family | Font family. |
| font-size | Font size. |
| font-style | Font style. |
| font-weight | Font weight. |
| font-color | Font color. |
| line-width | Font line width. |
| line-color | Font line color. |
| width | Text width. |
| height | Text height. |
| text | Content. |
| System time | |
| font-family | Font family. |
| font-size | Font size. |
| font-style | Font style. |
| font-weight | Font weight. |
| font-color | Font color. |
| line-width | Line width. |
| line-color | Line color. |
| width | Text width. |
| height | Text height. |
| text | Time format. |
| Picture | |
| index | Picture ID which can be obtained using get-images. |
| alpha | alpha ranges from 0 to 255. |
| scale | Scale an image from 1% to 400%. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# del-surface

Use this interface to delete overlays.

## HTTP Request

```
GET http://ip/usapi?method=del-surface&id=1
```

| Parameter | Description |
| --- | --- |
| method | del-surface |
| id | Overlay ID, you can obtain it using get-surfaces. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-surfaces

Use this interface to list all overlays.

## HTTP Request

```
GET http://ip/usapi?method=get-surfaces
```

| Parameter | Description |
| --- | --- |
| method | get-surfaces |

## Response Body

```
{
  "result": 0,
  "main-surface": 1,      // enable overlays for the main stream
  "second-surface": 0,    // disable overlays for the sub stream
  "surfaces": [],
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# add-scheduler

Use this interface to add a schedule. You can add 8 schedulers for each streaming session or record task.

## HTTP Request

```
GET http://ip/usapi?method=add-scheduler&chn-type=xxx&chn-id=xxx...
```

| Parameter | Description |
| --- | --- |
| method | add-scheduler |
| chn-type | Channel type.<br>0: streaming channel<br>1: record channel<br>2: auto-reboot |
| chn-id | Channel ID.<br>Streaming channel which can be obtained using get-settings or get-rec-channels. |
| title | Schedule title. The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). It can not start or end with spaces. |
| desc | Schedule description. The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). It can not start or end with spaces. |
| is-full-day | 0: not a full day schedule.<br>1: a full day schedule. |
| time-begin | Start time formats like 2023-02-02 10:00:00. |
| time-end | End time formats like 2023-02-02 11:00:00. |
| is-repeat | 0: not recurring event.<br>1: recurring event. |
| repeat-event | 0: daily<br>1: weekly<br>2: monthly<br>3: yearly |
| Daily | |
| repeat-interval | The number of days between each occurrence. |
| repeat-is-workday | Every weekday |
| Weekly | |
| repeat-is-interval | The number of weeks between each occurrence. |
| repeat-wdays | Specifies mask(s) for on which day(s) of the week the event occurs.<br>0x01: Monday<br>0x02: Tuesday<br>0x04: Wednesday<br>0x08: Thursday<br>0x10: Friday<br>0x20: Saturday<br>0x40: Sunday |
| Monthly | |
| repeat-interval | The number of months between each occurrence. |
| repeat-mday | Specifies on which day of the month the event occurs. |
| repeat-wdy | Specifies on which week the event occurs. |
| repeat-idx | Specifies on which day(s) the event can occur.<br>0: Monday<br>1: Tuesday<br>2: Wednesday<br>3: Thursday<br>4: Friday<br>5: Saturday<br>6: Sunday |

| Parameter | Description |
| --- | --- |
| Yearly | |
| repeat-month | Specifies in which month the event occurs. |
| repeat-mday | Specifies on which day the event occurs. |
| repeat-wdy | Specifies on which week the event occurs. |
| repeat-idx | Specifies on which day(s) the event can occur.<br>0: Monday<br>1: Tuesday<br>2: Wednesday<br>3: Thursday<br>4: Friday<br>5: Saturday<br>6: Sunday |
| end-event | Specifies the end event.<br>0: no ending.<br>1: end by repeat times<br>2: end by date. |
| Repeat times | |
| end-interval | Specifies the number of occurrences. Must be a positive integer. |
| End date | |
| end-dateline | Specifies the date to stop applying the pattern. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# enable-scheduler

Use this interface to enable a scheduler.

## HTTP Request

```
GET http://ip/usapi?method=enable-scheduler&id=1&is-use=1&...
```

| Parameter | Description |
| --- | --- |
| method | enable-scheduler |
| id | Scheduler ID which can be obtained via get-schedulers. |
| chn-type | Channel type.<br>0: live channel<br>1: record channel<br>2: auto-reboot |
| chn-id | -1, reserved. |
| is-use | 0: disable a scheduler.<br>1: enable a scheduler. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-scheduler

Use this interface to set schedulers.

## HTTP Request

```
GET http://ip/usapi?method=set-scheduler&id=xxx&chn-type=xxx&chn-id=xxx&...
```

| Parameter | Description |
| --- | --- |
| method | set-scheduler |
| id | Scheduler ID which can be obtained via get-schedulers. |
| chn-type | Channel type.<br>0: live channel<br>1: record channel<br>2: auto-reboot |
| chn-id | Channel ID.<br>Live channel ID which can be obtained via get-settings.<br>Record channel ID which can be obtained via get-rec-channels. |
| title | Schedule title. The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). It can not start or end with spaces. |
| desc | Schedule description. The string ranges from 1 to 32 characters which contains A-Z, a-z, 0-9, spaces and special characters like ._-+'[](). It can not start or end with spaces. |
| is-full-day | 0: not a full day schedule.<br>1: a full day schedule. |
| time-begin | Start time formats like 2023-02-02 10:00:00. |
| time-end | End time formats like 2023-02-02 11:00:00. |
| is-repeat | 0: not recurring event.<br>1: recurring event. |
| repeat-event | 0: no repeats<br>1: daily<br>2: weekly<br>3: monthly<br>4: yearly |
| Daily | |
| repeat-interval | The number of days between each occurrence. |
| repeat-is-workday | Every weekday |
| Weekly | |
| repeat-is-interval | The number of weeks between each occurrence. |
| repeat-wdays | Specifies mask(s) for on which day(s) of the week the event occurs.<br>0x01: Monday<br>0x02: Tuesday<br>0x04: Wednesday<br>0x08: Thursday<br>0x10: Friday<br>0x20: Saturday<br>0x40: Sunday |
| Monthly | |
| repeat-interval | The number of months between each occurrence. |
| repeat-mday | Specifies on which day of the month the event occurs. |
| repeat-wdy | Specifies on which week the event occurs. |

| Parameter | Description |
| --- | --- |
| repeat-idx | Specifies on which day(s) the event can occur.<br>0: Monday<br>1: Tuesday<br>2: Wednesday<br>3: Thursday<br>4: Friday<br>5: Saturday<br>6: Sunday |
| Yearly | |
| repeat-month | Specifies in which month the event occurs. |
| repeat-mday | Specifies on which day the event occurs. |
| repeat-wdy | Specifies on which week the event occurs. |
| repeat-idx | Specifies on which day(s) the event can occur.<br>0: Monday<br>1: Tuesday<br>2: Wednesday<br>3: Thursday<br>4: Friday<br>5: Saturday<br>6: Sunday |
| end-event | Specifies the end event.<br>0: no ending.<br>1: end by repeat times<br>2: end by date. |
| Repeat times | |
| end-interval | Specifies the number of occurrences. Must be a positive integer. |
| End date | |
| end-dateline | Specifies the date to stop applying the pattern. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# del-scheduler

Use this interface to delete a scheduler.

## HTTP Request

```
GET http://ip/usapi?method=del-scheduler&id=1&...
```

| Parameter | Description |
| --- | --- |
| method | del-scheduler |
| id | Scheduler ID which can be obtained via get-schedulers. |
| chn-type | Channel type.<br>0: live channel<br>1: record channel<br>2: auto-reboot |
| chn-id | -1, reserved. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-schedulers

Use this interface to obtain scheduler configurations.

## HTTP Request

```
GET http://ip/usapi?method=get-schedulers&id=xxx&chn-type=xxx&chn-id=xxx
```

| Parameter | Description |
| --- | --- |
| method | get-schedulers |
| id | Scheduler ID which can be obtained via get-schedulers. -1 indicates to get all scheduling information for the specific channel type. |
| chn-type | Channel type.<br>0: live channel<br>1: record channel<br>2: auto-reboot |
| chn-id | -1, reserved. |

## Response Body

```
{
  "result": 0,
  "schedulers": [],
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# reboot

Use this interface to reboot and reconnect to your device.

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

## HTTP Request

```
GET http://ip/usapi?method=reboot
```

| Parameter | Description |
| --- | --- |
| method | reboot |

## Response Body

```
{
  "result": 0
}
```

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

# reset-all-settings

Use this interface to reset all settings back to default.

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 restart status.

## HTTP Request

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

| Parameter | Description |
| --- | --- |
| method | reset-all-settings |

## Response Body

```
{
  "result": 0
}
```

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

# import-settings

> Added at V2.3

Use this interface to import a configuration file to your device, in JSON format.

## HTTP Request

```
POST http://ip/usapi?method=import-settings
```

| Parameter | Description |
| --- | --- |
| method | import-settings |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# export-settings

> Added at V2.3

Use this interface to save configurations as a JSON file to local folder.

## HTTP Request

```
GET http://ip/usapi?method=export-settings&file-name=...
```

| Parameter | Description |
| --- | --- |
| method | export-settings |
| file-name | File path. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# login

Use this 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/usapi?method=login&id=xxx&pass=xxx
```

| Parameter | Description |
| --- | --- |
| method | login |
| id | Indicates user name. |
| pass | Indicates MD5 encrypted password. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | 0: the request was accepted successfully. 36: the username or password is incorrect. Refer to API Status Codes to find specific description for other values. |

# logout

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

## HTTP Request

```
GET http://ip/usapi?method=logout
```

| Parameter | Description |
| --- | --- |
| method | logout |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | 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/usapi?method=get-users
```

| Parameter | Description |
| --- | --- |
| method | get-users |

## Response Body

```
{
  "result": 0,
  "users": [
    {
      "id": "Admin",
      "type": 1
    },
    {
      "id": "Test",
      "type": 2
    }
  ]
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |
| users | Indicates the user group arrays. id indicates user name. type indicates whether the user is an administrator(1) or a general user(2). |

# add-user

Use the interface to add users with administrative rights.

## HTTP Request

```
GET http://ip/usapi?method=add-user&id=xxx&pass=xxx&is-admin=0
```

| Parameter | Description |
| --- | --- |
| method | add-user |
| id | Indicates the user name. |
| pass | Indicates MD5 encrypted password. |
| is-admin | Indicates whether an administrator is added. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>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/usapi?method=del-user&id=xxx
```

| Parameter | Description |
| --- | --- |
| method | del-user |
| id | Indicates the user name. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# ch-passwd

Use this interface to modify the password after logging in.

## HTTP Request

```
GET http://ip/usapi?method=ch-passwd&pass=xxx&new-pass=xxx
```

| Parameter | Description |
| --- | --- |
| method | ch-passwd |
| pass | Indicates MD5 encrypted old password. |
| new-pass | Indicates MD5 encrypted new password. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-passwd

Use this interface to reset user password without entering the old password. Only admin user is allowed to perform the operation.

## HTTP Request

```
GET http://ip/usapi?method=set-passwd&id=xxx&pass=xxx
```

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

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-net

Use the interface to configure Ethernet network.

## HTTP Request

```
GET http://ip/usapi?method=set-net&type=0&is-dhcp=1&ip=10.10.107.212&mask=255.255.0.0&router=10.10.0.1&dns=10.0.0.3
```

| Parameter | Description |
| --- | --- |
| method | set-net |
| type | 0: Wi-Fi<br>1: wired Ethernet network |
| is-dhcp | Indicates whether to obtain an IP address from the DHCP server.<br>0 indicates to set IP address manually.<br>1 indicates to obtain an IP address from the DHCP server dynamically. |
| ip | Indicates Ethernet IP address. |
| mask | Indicates the subnet mask. |
| router | Indicates the gateway. |
| dns | Indicates DNS server. |

## Response Body

```
{
  "result": 0
}
```

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

# scan-wifi-results

Use this interface to obtain available Wi-Fi networks.

## HTTP Request

```
GET http://ip/usapi?method=scan-wifi-results
```

| Parameter | Description |
| --- | --- |
| method | scan-wifi-results |

## Response Body

```
{
  "result": 0
  "user-items": [
  ],
  "scan-items": [
  ]
}
```

**Wi-Fi Network Connected**

```
"user-items": [
  {
    "name": "",
    "freq": 5785,
    "level": -35,
    "is-auto": 0,
    "is-use": 0
  }
]
```

**Wi-Fi Network Not Connected**

```
"scan-items": [
  {
    "name": "",
    "freq": 5785,
    "level": -35,
    "is-auto": 0,
    "is-use": 0
  }
]
```

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

# connect-wifi-first

> Added at V2.2

Use this interface to connect your device to a Wi-Fi network for the first time.

## HTTP Request

```
GET http://ip/usapi?method=connect-wifi-first&name=magewell&passwd=1111111&secu=2&is-auto=1&is-hide=0
```

| Parameter | Description |
| --- | --- |
| method | connect-wifi-first |
| name | Indicates name of Wi-Fi network. |
| passwd | Indicates password of Wi-Fi network. |
| secu | Indicates encryption method of Wi-Fi network: 0 - unencrypted; 1 - wep; 2 - WPA/PSK; 3 - WPA2/PSK. |
| is-auto | Indicates whether to auto-connect to the saved Wi-Fi network. |
| is-hide | Indicates whether connecting to a hidden Wi-Fi network. |

## Response Body

```
{
  "result": 0
}
```

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

# connect-wifi

Use this interface to connect to a saved Wi-Fi network.

## HTTP Request

```
GET http://ip/usapi?method=connect-wifi&name=magewell&is-auto=1
```

| Parameter | Description |
| --- | --- |
| method | connect-wifi |
| name | Indicates name of Wi-Fi network. |
| is-auto | Indicates whether to auto-connect to the saved Wi-Fi network. |

## Response Body

```
{
  "result": 0
}
```

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

# cancel-connect-wifi

Use this interface to cancel current Wi-Fi connection.

## HTTP Request

```
GET http://ip/usapi?method=cancel-connect-wifi&name=magewell
```

| Parameter | Description |
| --- | --- |
| method | cancel-connect-wifi |
| name | Wi-Fi network name |

## Response Body

```
{
  "result": 0
}
```

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

# disconnect-wifi

Use this interface to disconnect from a Wi-Fi Network.

## HTTP Request

```
GET http://ip/usapi?method=disconnect-wifi
```

| Parameter | Description |
| --- | --- |
| method | disconnect-wifi |

## Response Body

```
{
  "result": 0
}
```

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

# forget-wifi

Use this interface to forget a Wi-Fi network and delete information about the hot spot from your device.

## HTTP Request

```
GET http://ip/usapi?method=forget-wifi&name=magewell
```

| Parameter | Description |
| --- | --- |
| method | forget-wifi |
| name | Indicate a Wi-Fi network name |

## Response Body

```
{
  "result": 0
}
```

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

# set-connect-wifi-auto

Use this interface to set whether to allow your device to connect automatically to a Wi-Fi network.

## HTTP Request

```
GET http://ip/usapi?method=set-connect-wifi-auto&name=magewell&is-auto=1
```

| Parameter | Description |
| --- | --- |
| method | set-connect-wifi-auto |
| name | Indicate Wi-Fi network name |
| is-auto | whether to allow the device to connect automatically to a specific Wi-Fi |

## Response Body

```
{
  "result": 0
}
```

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

# clear-connect-wifi

Use this interface to reset device to initial state (retInit=27) when it fails to configure Wi-Fi using connect-wifi-first.

## HTTP Request

```
GET http://ip/usapi?method=clear-connect-wifi
```

| Parameter | Description |
| --- | --- |
| method | clear-connect-wifi |

## Response Body

```
{
  "result": 0
}
```

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

# open-softap

Use this interface to turn on the AP mode.

## HTTP Request

```
GET http://ip/usapi?method=open-softap
```

| Parameter | Description |
| --- | --- |
| method | open-softap |

## Response Body

```
{
  "result": 0
}
```

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

# close-softap

Use this interface to turn off AP mode.

## HTTP Request

```
GET http://ip/usapi?method=close-softap
```

| Parameter | Description |
| --- | --- |
| method | close-softap |

## Response Body

```
{
  "result": 0
}
```

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

# set-rndis-config

Use this interface to set USB NET.

## HTTP Request

```
GET http://ip/usapi?method=set-rndis-config&addr=192.168.66.1
```

| Parameter | Description |
| --- | --- |
| method | set-rndis-config |
| addr | USB NET IP address. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# update

There are two ways to perform the firmware update:

- Manual update: upload the specified firmware file using upload-update-file before update.
- Online update: use online-update-check to check if there is a new version available.

In order to perform the firmware update:

- Firmware checking must not be in progress.

You can obtain current device running status mask using get-status.

```
"cur-status": 65552                    // device running status mask
```

The output of `cur-status` & Device Status Mask is as follows:

| Device status | Condition |
| --- | --- |
| Firmware update is not in progress | cur-status & statusCheckUpgrade != statusCheckUpgrade |

## HTTP Request

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

| Parameter | Description |
| --- | --- |
| method | update |
| mode | Firmware update method.<br>upload: manual update.<br>online: check and update automatically when device is connecting with Ethernet. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status. 0 indicates the encoder begins to update. Refer to API Status Codes to find specific description for other values. |

## Update Status

Obtain **upgrade-status** using get-status.

```
"upgrade-status": {
  "result": 27,
  "step": 0,
  "percent": 0,
  "mode": "none",
  "client-id": ""
}
```

| Item | Description |
| --- | --- |
| result | Indicates returned update status.<br>27: initial status.<br>2: updating.<br>0: the request was accepted successfully.<br>Refer to API Status Codes to find specific description for other values. |
| step | Indicates update steps. |
| percent | Indicates the percentage of the update step. |
| mode | Indicates firmware update type.<br>none: initial status.<br>upload: manual update<br>online: online update |
| client-id | Reserved. |

Call clear-upgrade to reset the status to 27 (Initial status) after update failed.

# upload-update-file

Use this interface to upload the .mwf firmware file to your device.

## HTTP Request

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

| Parameter | Description |
| --- | --- |
| method | upload-update-file |

## Response Body

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

| Item | Description |
| --- | --- |
| status | Indicates returned status.<br>0 indicates that the operation is performed successfully.<br>Refer to API Status Codes to find specific description for other values. |
| up-to-date | Indicates whether the current firmware is up to date. If yes, it is true; otherwise, it is false. |
| version | Indicates the uploaded firmware version number. |
| size | Indicates the uploaded file size in bytes. |

Call update to update the unit after a successful upload.

# cancel-download

Use this interface to cancel the firmware downloading when the firmware is updating online using the update interface.

## HTTP Request

```
GET http://ip/usapi?method=cancel-download
```

| Parameter | Description |
| --- | --- |
| method | cancel-download |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Indicates returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# online-update-check

Use this interface to check for new firmware versions.

- In order to conduct the firmware checking, an update can not be in progress.

You can obtain current device running status mask using get-status:

```
"cur-status": 65552                    // device running status mask
```

The output of `cur-status` & Device Status Mask is as follows:

| Device status | Condition |
| --- | --- |
| Firmware update is not in progress | cur-status & statusUpgrade != statusUpgrade |

## HTTP Request

```
GET http://ip/usapi?method=online-update-check
```

| Parameter | Description |
| --- | --- |
| method | online-update-check |

## Response Body

```
{
  "result": 0
}
```

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

## Detection Status

Obtain **check-upgrade** and **upgrade** using get-status.

```
"check-upgrade": {
  "result": 0,
  "client-id": ""
},
"upgrade": {
  "ver": "1.2.123",
  "date": "2012-1-1 00:00:00",
  "size-byte": 12004784,
  "info": [
    {
      "version": "1.2.123",
      "changelog": "## Develop version 1.2. ## Develop version2."
    }
  ]
}
```

| Item | Description |
| --- | --- |
| result | Indicates returned status.<br>27: initial status<br>2: checking<br>0: the request was accepted successfully.<br>Refer to API Status Codes to find specific description for other values. |
| ver | Indicates new firmware version. |
| date | Indicates release date of the new firmware. |
| size-byte | Indicates file size of new firmware(B). |
| info | Indicates release note. |
| client-id | Reserved. |

Call clear-check-update to reset the status to Initial status(27) after detection failed.

# clear-upgrade

Use this interface to reset the device to the initial state (retInit=27) when the device fails to update manually or automatically using update.

## HTTP Request

```
GET http://ip/usapi?method=clear-upgrade
```

| Parameter | Description |
| --- | --- |
| method | clear-upgrade |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Indicates returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# clear-check-update

Use this interface to reset the device to the initial state (retInit=27) when new firmware check fails or succeeds using the online-update-check.

## HTTP Request

```
GET http://ip/usapi?method=clear-check-update
```

| Parameter | Description |
| --- | --- |
| method | clear-check-update |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Indicates returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-enable-check-update

Use this interface to set whether to allow the device to automatically and regularly check for new firmware versions.

## HTTP Request

```
GET http://ip/usapi?method=set-enable-check-update&is-check-update=1
```

| Parameter | Description |
| --- | --- |
| method | set-enable-check-update |
| is-check-update | 0: disable auto-check<br>1: enable auto-check |

## Response Body

```
{
  "result": 0
}
```

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

# import-edid

Use the interface to import EDID to the input port.

## HTTP Request

```
POST http://ip/usapi?method=import-edid
```

| Parameter | Description |
| --- | --- |
| method | import-edid |

## Response Body

```
{
  "result": 0
}
```

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

# export-edid

Use the interface to export EDID of the input port.

## HTTP Request

```
GET http://ip/usapi?method=export-edid&file-name=...
```

| Parameter | Description |
| --- | --- |
| method | export-edid |
| file-name | Path for exported file. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-default-edid

Use the interface to restore EDID of the input port to the default value.

## HTTP Request

```
GET http://ip/usapi?method=set-default-edid
```

| Parameter | Description |
| --- | --- |
| method | set-default-edid |

## Response Body


```
{
  "result": 0
  "data": "AP///////wA09wEAAQAAAAEaAQOAAAB4Au6Vo1RMmSYPUFT//4AxQEVAYUBxQIGA0QDhwAEACOgAMPJwWoCwWIoAUB10AAAeAjqAGHE4LU
BYLEUAUB10AAAeAAAA/QAPlg+HPAAAAAAAAAAAAAAAA/ABNQUdFV0VMTAogICAgAWYCA1HxV2EQHwQTBRQgISJdXl9gZWZiY2QHFgMSMgl/BxUHUD0GwFc
GAF9/AWd/AINPAADiAA9uAwwAEAC4eCEQgAECAwRn2F3EAXiAA+MPAeABHYAYcRwWIFgsJQBAhGMAAJ5mIVaqUQAeMEaPMwBQHXQAAB4AAAAAAAAAAAA
zw=="
}
```


| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-edid-config

Use the interface to obtain EDID related information of the input port.

## HTTP Request

```
GET http://ip/usapi?method=get-edid-config
```

| Parameter | Description |
| --- | --- |
| method | get-edid-config |

## Response Body


```
{
  "result": 0
  "smart-edid": 1,
  "keep-last": 0,
  "add-audio": 1,
  "limit-pixel-clock": 1,
  "data": "AP///////wA09wEAAQAAAAEaAQOAAAB4Au6Vo1RMmSYPUFT//4AxQEVAYUBxQIGA0QDhwAEACOgAMPJwWoCwWIoAUB10AAAeAjqAGHE4LU
BYLEUAUB10AAAeAAAA/QAPlg+HPAAAAAAAAAAAAAAAA/ABNQUdFV0VMTAogICAgAWYCA1HxV2EQHwQTBRQgISJdXl9gZWZiY2QHFgMSMgl/BxUHUD0GwFc
GAF9/AWd/AINPAADiAA9uAwwAEAC4eCEQgAECAwRn2F3EAXiAA+MPAeABHYAYcRwWIFgsJQBAhGMAAJ5mIVaqUQAeMEaPMwBQHXQAAB4AAAAAAAAAAAA
zw=="
}
```


| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# set-edid-config

Use the interface to modify EDID related information for the input port.

## HTTP Request

```
GET http://ip/usapi?method=set-edid-config&...
```

| Parameter | Description |
| --- | --- |
| method | set-edid-config |
| smart-edid | 0: Disable smart EDID<br>1: Enable smart EDID |
| keep-last | 0: Do not use the last loop-through EDID<br>1: Use the last loop-through EDID |
| add-audio | 0: Do not force add audio<br>1: Force add audio |
| limit-pixel-clock | 0: Do not use limit pixel clock<br>1: Use Limit pixel clock |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# get-loop-through-edid

Use the interface to obtain EDID of loop-through port.

## HTTP Request

```
GET http://ip/usapi?method=get-loop-through-edid
```

| Parameter | Description |
| --- | --- |
| method | get-loop-through-edid |

## Response Body


```
{
  "result": 0
  "data": "AP///////wA09wEAAQAAAAEaAQOAAAB4Au6Vo1RMmSYPUFT//4AxQEVAYUBxQIGA0QDhwAEACOgAMPJwWoCwWIoAUB10AAAeAjqAGHE4LU
BYLEUAUB10AAAeAAAA/QAPlg+HPAAAAAAAAAAAAAAAA/ABNQUdFV0VMTAogICAgAWYCA1HxV2EQHwQTBRQgISJdXl9gZWZiY2QHFgMSMgl/BxUHUD0GwFc
GAF9/AWd/AINPAADiAA9uAwwAEAC4eCEQgAECAwRn2F3EAXiAA+MPAeABHYAYcRwWIFgsJQBAhGMAAJ5mIVaqUQAeMEaPMwBQHXQAAB4AAAAAAAAAAAA
zw=="
}
```


| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# export-loop-through-edid

Use the interface to export the EDID of the loop-through port.

## HTTP Request

```
GET http://ip/usapi?method=export-loop-through-edid&file-name=...
```

| Parameter | Description |
| --- | --- |
| method | export-loop-through-edid |
| file-name | Path for exported file. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | Returned status.<br>0 indicates that the request was accepted successfully. Refer to API Status Codes to find specific description for other values. |

# cloud-reg-ex

Use the interface to register your device with Control Hub. You can host your device to 2 Control Hub 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 | Control Hub ID. Options are 0 and 1. |
| cloud-code | 4-digit string invitation code given by the Control Hub. |
| cloud-ip-addr | IP address or domain of the Control Hub. |
| cloud-http-port | HTTP port of the Control Hub server. |
| cloud-enable-https | 0: disable https<br>1: enable https |
| cloud-https-port | HTTPS port of the Control Hub server. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | 0 indicates that the request was accepted successfully. Refer to Control Hub API Status Codes to find specific description for other values. |

# cloud-unreg-ex

Use the interface to release your device from a Control Hub.

## HTTP Request

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

| Parameter | Description |
| --- | --- |
| method | cloud-reg-ex |
| id | Control Hub ID. Options are 0 and 1. |

## Response Body

```
{
  "result": 0
}
```

| Item | Description |
| --- | --- |
| result | 0 indicates that the request was accepted successfully. Refer to Control Hub API Status Codes to find specific description for other values. |

# cloud-status

Use the interface to obtain status of the Control Hub 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 | Control Hub version, should be 1. |

## Response Body

```
{
  "device_id": "B313221201001", // serial number of your device
"number": 2,                    // count of Control Hub 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
  }
]

}
```

| Item | Description |
| --- | --- |
| result | 0 indicates that the request was accepted successfully. Refer to Control Hub API Status Codes to find specific description for other values. |