E3 API Documentation (Version 1.21.0008)

Examples:

* **GET**

```
curl -X GET "http://127.0.0.1/api/systemctrl/users/auth_info" \
     -H "authorization: eyJ0eXAiOi..."  # Replace with valid Token
```

* **POST**

```
curl -X POST "http://127.0.0.1/api/systemctrl/users/auth_info" \
     -H "Content-Type: application/json" \
     -H "authorization: eyJ0eXAiOi..." \
     -d '{"enable": false}'
```

System Service/Service of systemctrl

1.1 User Management /Users

1.1.1 User Login

* **Interface Description**

Requesting this interface alone cannot directly log in. You need to use the returned token and alias values from this interface, combine them with the username to construct a cookie, and add it to the request header to request the verification interface 1.1.2. Only after passing verification can you log in.

* **Request URL**

/api/systemctrl/users/login

* **Request Method**

POST

* **Request Parameters**

```
{
  "username": "admin",
  "password": "Admin123"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
App	{"language":"en"}	Y	{"language":"en"}	Request header parameter. Currently only supports Chinese and English languages, "en"/"zh" respectively, used for multi-language output of popup prompts. **Note:** In the current version, if you want to return correct

				error prompts when requesting this interface alone, please be sure to include this parameter in the request header. Otherwise, the msg field in the returned prompt will be null
username	String	Y	admin	Username
password	String	Y	Admin123	Password

* **Response Parameters**

```
{
    "result": "ok",
    "data": {
        "token": "0621da14f9d6546688cf87c5eab9c2f9",
        "alias": "Admin",
        "changed": true
    },
    "msg": null
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
token	String	Login-issued token for maintaining login session
alias	String	Alias
changed	Boolean	Whether the user has changed the initial password. If the initial password has not been changed, the frontend redirects to the initial password change page

1.1.2 Login Verification

* **Interface Description**

Used for session verification and authentication for both normal login requests and kilolink reverse proxy requests. Normal login requests need to add cookies to the request header and assemble field values, refer to examples; kilolink reverse proxy requests need to add the platform field to the request and specify the corresponding field identifier, refer to examples.

Note: Version 1.21 and later added API authentication switch. If this switch is enabled, each interface will additionally verify the Authorization field, which needs to be added to the request header parameters, otherwise the interface will return Unauthorized.

* **Request URL**

/api/systemctrl/users/session

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
platform	String	Y	"this-is-made-by-kiloview-for-platform-login"	Request parameter. If you want to use this interface alone, users need to add this value separately to the kilolink server-side request header.
Cookie	String	Y	"language=zh; Lang=zh-CN; username=admin; user=admin; alias=Admin; token=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJ1c2VybmFtZSI6ImFkbWluIiwibWQ1X3N0cil6ImVhMWI3MWI5YTljMWFkNjAwNWI1"	Request header parameter. If you want to use this interface alone, users

				need to add this value separately to the request header.
Authorization	String	Y	eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJ1c2VybmFtZSI6ImFkbWluIiwibWQ1X3N0cil6ImVhMWI3MWI5YTljMWFkNjAwNWI1	Request header parameter. If authentication is enabled, each interface will verify this parameter.

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.1.3 Get All Users

* **Interface Description**

Requesting this interface can get all loginable users saved on the current device

* **Request URL**

/api/systemctrl/users/list

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "data": [
        {
            "id": "admin",
            "alias": "Admin",
            "web": true,
            "api": true,
            "create_time": "1970-01-01 00:00:00"
        }
    ]
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
id	String	Username
alias	String	Alias
web	Boolean	Whether to allow adding users on the web side
api	Boolean	
create_time	String	Creation time

1.1.4 Add User

* **Interface Description**

Interface for administrators or other logged-in users to add new users

* **Request URL**

/api/systemctrl/users/add

* **Request Method**

POST

* **Request Parameters**

```
{
    "id": "test_user",
    "password": "qwer1234",
    "confirmNewPassword": "qwer1234",
    "alias": "test_user",
    "enable_web": true,
    "enable_api":true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	String	Y	admin	Username
password	String	Y	Admin123	Password
confirmNewPassword	String	Y	Admin123	Confirm password
alias	String	Y	admin	Alias
enable_web	Boolean	Y	true	Whether to allow adding users on the web side
enable_api	Boolean	Y	true	

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.1.5 Delete User

* **Interface Description**

When requesting this interface, pass in a single username or a list of usernames, and then you can delete the corresponding users.

* **Request URL**

/api/systemctrl/users/remove

* **Request Method**

POST

* **Request Parameters**

```
Single deletion example
{
  "ids": "Jack"
}

Batch deletion example
{
  "ids": ["Jack", "Bob"]
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
ids	String/Array	Y	["Jack"]	Username/Username list

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.1.6 Modify User Information

* **Interface Description**

Request this interface to modify user information other than those already saved on the device. Username is required, all other options are optional

* **Request URL**

/api/systemctrl/users/modify

* **Request Method**

POST

* **Request Parameters**

```
{
    "id": "test1",
    "alias": "test11",
    "enable_web": true,
    "enable_api":true,
    "password": "Admin001"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	String	Y	admin	Username
alias	String	N	user1	Alias
enable_web	boolean	N	true	Whether to allow adding users on the web side
enable_api	boolean	N	true	
password	String	N	Admin123	Password

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.1.7 Get Authentication Information

* **Interface Description**

Get authentication information

* **Request URL**

/api/systemctrl/users/auth_info

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "enable": false
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
enable	Boolean	Whether authentication is enabled (disabled by default)

1.1.8 Set Authentication Information

* **Interface Description**

Toggle API authentication

* **Request URL**

/api/systemctrl/users/auth_info

* **Request Method**

POST

* **Request Parameters**

```
{
  "enable": false
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description

enable	Boolean	Y	true	Whether to enable authentication

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.2 Time and Timezone Settings/Area and time

1.2.1 Set Region Timezone

* **Interface Description**

Request this interface to set the region timezone, need to pass in the standard time string of the specified region

* **Request URL**

/api/systemctrl/systime/setLocation

* **Request Method**

POST

* **Request Parameters**

```
{
    "timezone": "Asia/Shanghai",
    "offset": 8,
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
timezone	String	Y	"Asia/Shanghai"	Timezone
offset	Integer	N	8	When timezone cannot be found, this field will be used. This field is the hours added or subtracted from Greenwich Mean Time, such as GMT+8, range is -14 to 12

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.2.2 Set System Time

* **Interface Description**

Request this interface to set system time. You can choose to synchronize with current PC, manually set time, or synchronize from NTP server.

* **Request URL**

/api/systemctrl/systime/setTime

* **Request Method**

POST

* **Request Parameters**

```
{
  "time": "2024-10-11 10:29:30",
  "ntp": "ntp1.aliyun.com ntp2.aliyun.com",
  "timetype": "pc"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
timetype	String	Y	"pc"	Time setting method pc: Synchronize with current PC; manual: Manual time setting; ntp: Synchronize from NTP server
time	String	N	"2023-08-07 17:37:14"	Standard format time, format is "Y-m-d H:M:S". Required when timetype parameter value is pc or manual!
ntp	String	N	"ntp1.aliyun.com ntp2.aliyun.com ntp3.aliyun.com"	NTP server address, multiple servers separated by spaces. Required when timetype parameter value is ntp!

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.2.3 Get System Time and Timezone

* **Interface Description**

Get system time and timezone information

* **Request URL**

/api/systemctrl/systime/get

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": null,
  "data": {
    "time": "2024-07-31 18:04:56",
    "timetype": "pc",
    "Timezone": "Asia/Shanghai",
    "offset": 8,
    "ntp": "ntp1.aliyun.com ntp2.aliyun.com ntp3.aliyun.com"
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
time	String	Current system time
timetype	String	Time setting method
Timezone	String	Timezone
offset	Integer	When timezone cannot be found, this field will be used. This field is the hours added or subtracted from Greenwich Mean Time, such as GMT+8, range is -14 to 12
ntp	String	NTP server address, multiple servers separated by spaces.

1.2.4 Get NTP Status

* **Interface Description**

Get current NTP status, this interface only returns when NTP is set

* **Request URL**

/api/systemctrl/systime/ntpstatus

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
["string"]
```

* **Response Parameter Description**

Returns a list, values in the list are corresponding NTP status

1.3 System Settings/System setting

1.3.1 Get Open Source License

* **Interface Description**

Request this interface to get open source license, fixed value.

* **Request URL**

/api/systemctrl/system/components

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**


```
{
  "result": "ok",
  "data": {
    "components": [
      {
        "name": "vue",
        "url": "MIT",
        "software": "MIT License",
        "address": "https://github.com/vuejs/vue"
      },
      {
        "name": "Element-UI",
        "url": "MIT",
        "software": "MIT License",
        "address": "https://github.com/ElemeFE/element"
      },
      {
        "name": "python3",
        "url": "PSF",
        "software": "PSF",
```

```
        "address": "http://www.python.org"
      },
      {
        "name": "nginx",
        "url": "BSD2C",
        "software": "BSD-2c",
        "address": "http://nginx.org"
      },
      {
        "name": "libev",
        "url": "BSD2C",
        "url2": "GPL",
        "software": "BSD-2c",
        "software2": "GPLv2+",
        "address": "http://dist.schmorp.de/libev"
      },
      {
        "name": "openssl",
        "url": "OpenSSL",
        "url2": "SSLeay",
        "software": "OpenSSL",
        "software2": "SSLeay",
        "address": "http://www.openssl.org"
      }
    ]
  }
}
```


* **Response Parameter Description**

Field Name	Field Type	Field Description
name	String	License name
url	String	License domain
software	String	License version
address	String	License address

1.3.2 Get Device Name

* **Interface Description**

Request this interface to get the device name, which is usually specified by the user. If not manually set, it defaults to device model + serial number.

* **Request URL**

/api/systemctrl/system/getHostname

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": null,
  "data": {
    "hostname": "E3-201412000F1DB"
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
hostname	String	Device name

1.3.3 Set Device Name

* **Interface Description**

Set device name.

* **Request URL**

/api/systemctrl/system/setHostname

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
name	String	Y	"E3"	Device name

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.4 Get HTTP and HTTPS Port Switch

* **Interface Description**

This interface is provided for the frontend to get the current status of HTTP and HTTPS port switches saved on the device and display them on the page.

* **Request URL**

/api/systemctrl/system/getProtocol

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": null,
  "data": {
    "http": true,
    "https": true,
    "httpPort": 80,
    "httpsPort": 443
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
http	Boolean	Whether to enable HTTP connection
https	Boolean	Whether to enable HTTPS connection
httpPort	Integer	HTTP port number
httpsPort	Integer	HTTPS port number

1.3.5 Set HTTP and HTTPS Port Switch

* **Interface Description**

By default, HTTPS is not enabled on this device. If you want to use the voice intercom function, you can turn on the HTTPS switch through this interface

* **Request URL**

/api/systemctrl/system/setProtocol

* **Request Method**

POST

* **Request Parameters**

```
{
  "http": true,
  "https": true,
  "httpPort": 80,
  "httpsPort": 443
```

```
}
// HTTP and HTTPS cannot be disabled at the same time
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
http	Boolean	Y	true	Whether to enable HTTP connection
https	Boolean	Y	true	Whether to enable HTTPS connection
httpPort	Integer	Y	80	Set HTTP port number
httpsPort	Integer	Y	443	Set HTTPS port number

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.6 Get SSL Certificate and Key

* **Interface Description**

Get the storage location of user-defined certificates and keys, and return whether the reset certificate button is available.

* **Request URL**

/api/systemctrl/system/ssl

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": null,
  "data": {
    "ssl_crt": "",
    "ssl_key": "",
    "enable_reset": false
```

```
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
ssl_crt	String	Custom certificate storage location. Empty if no custom certificate is uploaded
ssl_key	String	Custom key storage location. Empty if no custom key is uploaded
enable_reset	Boolean	Whether certificate reset is available

1.3.7 Upload SSL Certificate and Key

* **Interface Description**

Used for users to upload custom SSL certificates and keys. After uploading, it will not be automatically applied. If uploaded again without applying, regardless of whether the uploaded filename is the same, it will overwrite the previously uploaded file.

* **Request URL**

/api/systemctrl/system/ssl/{file_type}

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
file_type	String	Y	crt	"crt": Certificate file; "key": Key file
file	Binary	Y	File	Certificate or key file. Certificate requires .crt or .pem, key requires .key

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.8 Apply Certificate

* **Interface Description**

Apply previously uploaded certificates and keys. Will validate certificate and key compliance and matching.

* **Request URL**

/api/systemctrl/system/ssl

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": null
}
```

* **Response Parameter Description**

None

1.3.9 Reset Certificate

* **Interface Description**

Used to restore SSL certificates and keys to factory settings

* **Request URL**

/api/systemctrl/system/resetSsl

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": null
}
```

* **Response Parameter Description**

None

1.3.10 Factory Reset

* **Interface Description**

By requesting this interface, all settings made on the current device later will be cleared and restored to the fresh state of the current version.

* **Request URL**

/api/systemctrl/system/reFactory

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.11 Reset

* **Interface Description**

By requesting this interface, you can restart the codec encoding and decoding service.

* **Request URL**

/api/systemctrl/system/restore

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.12 Reboot Device

* **Interface Description**

By requesting this interface, the device will reboot immediately

* **Request URL**

/api/systemctrl/system/reboot

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.13 Ping

* **Interface Description**

This interface tests the connectivity between the device and the target IP

* **Request URL**

/api/systemctrl/system/ping

* **Request Method**

POST

* **Request Parameters**

```
{
  "target_addr": "192.168.35.22"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
target_addr	String	Y	192.168.35.22	Target IP

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "loss_rate": 100,
    "reachable": false
  },
  "msg": null
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
loss_rate	Integer	Loss rate
reachable	Boolean	Whether target IP is reachable

1.3.14 Get Network Card Speed

* **Interface Description**

The current device has two network cards: eth0 and eth1. When requesting this interface, you can choose to specify a network card to return its speed. If no parameter is given, the speeds of both network cards will be returned to the user by default.

* **Request URL**

/api/systemctrl/system/getNetworkSpeed

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
iframe	String	N	eth0	When this parameter is provided in the request, the corresponding network card speed will be returned according to this parameter. When not filled, both eth0 and eth1 are returned

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "eth0": {
      "receive": 71.45,
      "transmit": 7741.28,
      "speed": 1000
    },
    "eth1": {}
```

```
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
receive	Float	Amount of data received between two interface calls
transmit	Float	Amount of data transmitted
speed	Integer	Network card speed

1.3.15 Get System Information

* **Interface Description**

Get specified information through given parameters. In the current version, device parameters can be selected to enable or disable among device firmware version, CPU usage, memory usage, disk usage, and uptime.

* **Request URL**

/api/systemctrl/system/getSystemInfo

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
version	Boolean	N	true	Version information, software version, hardware version, NDI version, serial number
cpu	Boolean	N	true	Return CPU utilization percent(%)
memory	Boolean	N	true	Return memory usage percent(%), total memory total(kb), memory used used(kb)
disk	Boolean	N	true	Disk utilization percent(%), total disk total(kb), remaining disk free(kb), used disk used(kb)
persisTime	Boolean	N	true	System uptime uptime(s)

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "version": {
```

```
      "ndiVersion": "5.1.3",
      "hardwareVersion": "3.0",
      "softwareVersion": "1.00.0003",
      "serialNumber": "201412000F1DB",
      "product": "P3",
      "oem": "kiloview"
    },
    "cpu": {
      "precent": 10.891
    },
    "mem": {
      "precent": 27.3,
      "total": 1029500,
      "used": 280996
    },
    "disk": {
      "precent": 27,
      "free": 1368528,
      "used": 508904,
      "total": 1998672
    },
    "persisTime": {
      "uptime": 71664.16
    },
    "temp": {
      "temp": 40
    }
  }
}
```


* **Response Parameter Description**

Field Name	Field Type	Field Description
version	Object	Version information, software version, hardware version, NDI version, serial number
cpu	Object	Return CPU utilization percent(%)
mem	Object	Return memory usage percent(%), total memory total(kb), memory used used(kb)
disk	Object	Disk utilization percent(%), total disk total(kb), remaining disk free(kb), used disk used(kb)
persisTime	Object	System uptime uptime(s)

1.3.16 Upload Firmware Upgrade

* **Interface Description**

This interface is used to upload firmware for upgrade. When using this interface alone, you need to construct file parameters to continue.

* **Request URL**

/api/systemctrl/system/upload

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
file	Binary	Y	bin file	Firmware package file

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.17 Chunked Upload Firmware Upgrade

* **Interface Description**

File chunked upload

* **Request URL**

/api/systemctrl/system/uploadfile

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
identifier	String	Y	admin	File unique identifier
number	String	Y	0	File chunk sequence number (initial value is 0)
file_type	String	Y	bin	File type/extension
file	Binary	Y	bin file	Firmware package

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.18 Firmware Merge

* **Interface Description**

Firmware merge

* **Request URL**

/api/systemctrl/system/mergefile

* **Request Method**

POST

* **Request Parameters**

```
{
  "identifier": "string",
  "number": "string",
  "file_type": "string"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
identifier	String	Y	admin	File unique identifier
number	String	Y	2	File chunk sequence number
file_type	String	Y	bin	File type/extension

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.3.19 Product Test Service Switch

* **Interface Description**

This interface is used to provide the webui-production page with a switch to enable py-production-module

* **Request URL**

/api/systemctrl/system/production_off

* **Request Method**

POST

* **Request Parameters**

```
{
  "value": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
value	Boolean	Y	true	Product test service switch. This indicates setting the switch

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "value": true
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
value	Boolean	Product test service switch. This reflects whether the switch is activated

1.3.20 Service Start/Stop Status

* **Interface Description**

Used to get the switch status of production service

* **Request URL**

/api/systemctrl/system/production_stat

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "value": true
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
value	Boolean	Status of product test service module. Returns whether the current service is activated.

1.4 System Preset/System preset

1.4.1 Get Module List

* **Interface Description**

Request this interface to get all module lists

* **Request URL**

/api/systemctrl/system_preset/modules

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "data": [
    "time",
    "user",
    "ptz",
    "edid",
    "maintenance",
    "codec_stream",
    "record",
    "talk",
    "osd",
    "panel"
  ]
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
data	Array	Module list. time: Area and time settings; user: User management settings; ptz: PTZ serial port settings; edid: EDID settings; timed_reboot: Scheduled reboot settings; codec_stream: Encoding and stream parameter settings; record: Recording configuration; talk: Voice communication; osd:

		OSD text overlay; panel: Small screen panel settings

1.4.2 Get Preset Configuration

* **Interface Description**

Request this interface to get preset setting list

* **Request URL**

/api/systemctrl/system_preset/get

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "data": [
      {
        "pid": "df5bbf9a-3c14-4444-a477-ab77e407cb7f",
        "name": "888"
      },
      {
        "pid": "b68bbc3b-a35d-45a7-b552-6b3c264b0797",
        "name": "777"
      }
  ]
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
pid	String	Preset ID, unique and non-repeating
name	String	Preset name, unique and non-repeating

1.4.3 Import Preset Configuration to This Device

* **Interface Description**

Request this interface to import preset configuration to this device

* **Request URL**

/api/systemctrl/system_preset/import

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
file	Binary	Y	Preset configuration file	Preset file, can export preset configuration file from other devices and import into this device

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.4.4 Save Module Configuration to Preset

* **Interface Description**

Request this interface to save system configuration to preset

* **Request URL**

/api/systemctrl/system_preset/save

* **Request Method**

POST

* **Request Parameters**

```
{
    "name": "preset_name",
    "modules": ["time"]
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
name	String	Y	admin	Preset name, unique and non-repeating
modules	Array	Y	["time"]	Module names, obtained through "Get Module List", indicating which configuration files need to be saved to the preset configuration

* **Response Parameters**

```
{
    "result": "ok",
```

```
    "msg": null
}
```

* **Response Parameter Description**

None

1.4.5 Download Module Configuration to Local Machine

* **Interface Description**

Request this interface to save system configuration to preset

* **Request URL**

/api/systemctrl/system_preset/download

* **Request Method**

GET

* **Request Parameters**

name=123&modules=["time"]

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
name	String	Y	admin	Preset file name
modules	String	Y	["time","osd"]	Module names, obtained through "Get Module List", indicating which configuration files need to be saved to the preset configuration

* **Response Parameters**

```
file: File(...)
content-disposition: attachment; filename={filename}.zip
content-type: application/octet-stream
```

* **Response Parameter Description**

Download file

1.4.6 Load Preset Configuration to Device

* **Interface Description**

Request this interface to load preset configuration to this device

* **Request URL**

/api/systemctrl/system_preset/{pid}/load

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
pid	String	Y	admin	Preset ID

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.4.7 Delete Preset Configuration

* **Interface Description**

Request this interface to delete preset configuration

* **Request URL**

/api/systemctrl/system_preset/{pid}

* **Request Method**

DELETE

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
pid	String	Y	admin	Preset ID

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

1.4.8 Export Preset Configuration to Local Machine

* **Interface Description**

Request this interface to export preset configuration to local machine

* **Request URL**

/api/systemctrl/system_preset/{pid}/export

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
pid	String	Y	admin	Preset ID

* **Response Parameters**

None

* **Response Parameter Description**

Download file

1.5 Log Service/System log

1.5.1 Get Logs

* **Interface Description**

Get logs for the corresponding module

* **Request URL**

/api/systemctrl/system_log/get/{logname}

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
logname	String	Y	codec	Module name, specifically: codec/streamer/record/network/system, representing codec service log, streaming service log, recording service log, network status log, system service log respectively

* **Response Parameters**


```
{
  "result": "ok",
  "data": "[2024-07-18 17:24:23,437] INFO:     <codec> /tmp/video_main,
status=<enum GST_STATE_CHANGE_ASYNC of type Gst.StateChangeReturn>\n[2024-
07-18 17:24:23,451] INFO:     <codec> /tmp/video_sub, status=<enum
GST_STATE_CHANGE_ASYNC of type Gst.StateChangeReturn>\n[2024-07-18
17:24:23,460] INFO:     <codec> /tmp/video_preview, status=<enum
```

```
GST_STATE_CHANGE_ASYNC of type Gst.StateChangeReturn>\n[2024-07-18
17:24:23,718]"
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
result	String	"ok" indicates success, "error" indicates error
data	String	Log content

1.5.2 Export System Logs

* **Interface Description**

Export system logs

* **Request URL**

/api/systemctrl/system_log/export/{time}

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
time	String	Y	old	old or new, representing system historical logs and current system logs respectively

* **Response Parameters**

```
file: File(...)
content-disposition: attachment; filename={filename}.zip
content-type: application/octet-stream
```

* **Response Parameter Description**

Download log file

1.6 System Maintenance/System Maintenance

1.6.1 Get System Maintenance Configuration

* **Interface Description**

Get system maintenance configuration

* **Request URL**

/api/systemctrl/system_maintenance/get

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "enable": false,
    "policy": "day",
    "start_date": "1970-01-01 00:00:00",
    "months": [],
    "weeks": [],
    "days": [],
    "day": 1
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
enable	Boolean	System maintenance start/stop status
policy	String	System maintenance activation method, can only be day, week, month, representing daily, weekly, monthly policies respectively
start_date	String	Start time, can be set to a future time, the scheduled restart task will start executing from the set time, time format must be "%Y-%m-%d %H:%M:%S" time string
months	Array	Month configuration, data must be in the range [1, 12]
weeks	Array	Week configuration, data must be in the range [0, 6], 0 represents Sunday, 1 represents Monday, 2 represents Tuesday, and so on
days	Array	Day configuration, data must be in the range [1, 31]
day	Integer	Data must be in the range [1, 31], every how many days to restart

1.6.2 Modify System Maintenance Configuration

* **Interface Description**

Modify system maintenance configuration

* **Request URL**

/api/systemctrl/system_maintenance/set

* **Request Method**

POST

* **Request Parameters**

```
{
  "enable": false,
  "policy": "day",
  "start_date": "1970-01-01 00:00:00",
  "months": [
    12
  ],
  "weeks": [
    6
  ],
  "days": [
    31
  ],
  "day": 31
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enable	Boolean	Y	false	System maintenance start/stop status
policy	String	Y	day	System maintenance activation method
start_date	String	Y	1970-01-01 00:00:00	Start time
months	Array	Y	[1,2]	Month configuration
weeks	Array	Y	[6,0]	Week configuration
days	Array	Y	[1,5]	Day configuration
day	Integer	Y	1	Specific day

* **Response Parameters**

```
{
  "result": "ok",
}
```

* **Response Parameter Description**

None

Recording Service/Service of record

2.1 Recording Configuration/Record

2.1.1 Delete Recording File

* **Interface Description**

Delete recording file

* **Request URL**

/api/record/record/remove_file

* **Request Method**

POST

* **Request Parameters**

```
{
  "path": "/run/media/sda1/RECORD/HDMI20231106_171002_497891/REC-HDMI-
20231106171002497891l.mp4"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
path	String	Y	/run/media/sda1/RECORD/HDMI20231106_171002_497891/REC-HDMI-20231106171002497891l.mp4	Path of the recording file to be deleted

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

2.1.2 Get Recording File List

* **Interface Description**

Get recording file list

* **Request URL**

/api/record/record/get_disk_files

* **Request Method**

GET

* **Request Parameters**

device=/run/media/sda1

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
device	String	Y	/run/media/sda1	Mounted device path
stream	String	N	hdmi	Stream category

* **Response Parameters**


```
{
    "result": "ok",
    "data": [
      {
        "path": "/run/media/sda1/RECORD/HDMI20231106_174429_641406/REC-
HDMI-202311061744296414 0636.mp4",
        "name": "REC-HDMI-202311061744296414 0636.mp4",
        "size": 12.84,
        "current": true,
        "stream": "hdmi",
        "start_time": "2023-11-06 17:44:29",
        "end_time": null
      },
      {
        "path": "/run/media/sda1/RECORD/HDMI20231106_174330_644981/REC-
HDMI-202311061743306449 8135.mp4",
        "name": "REC-HDMI-202311061743306449 8135.mp4",
        "size": 15.06,
        "current": false,
        "stream": "hdmi",
        "start_time": "2023-11-06 17:43:30",
        "end_time": "2023-11-06 17:44:29"
      }
    ]
  }
```


* **Response Parameter Description**

Field Name	Field Type	Field Description
path	String	Recording file path
name	String	Recording file name
size	Integer	File size in MB
current	Boolean	Whether it is the current recording file, if it is a file being recorded, download is not allowed, otherwise file corruption will occur during playback
stream	String	Video input source, hdmi/sdi/pip
start_time	String	Recording start time
end_time	String	Recording end time

2.1.3 Select USB Storage

* **Interface Description**

Through this interface, you can select USB disk, indicating that videos will be recorded to this USB disk during recording.

* **Request URL**

/api/record/record/choose_usb

* **Request Method**

POST

* **Request Parameters**

```
{
  "id": "123",
  "choose": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	String	Y	admin	Storage device ID, NAS disk is user-set unique ID, USB disk is automatically generated disk letter like sda, sdb, etc.
choose	Boolean	Y	true	Whether to select as recording storage disk, if not selected, recording will not be saved to this storage disk, and vice versa

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

2.1.4 Select NAS Storage

* **Interface Description**

Through this interface, you can select NAS disk, indicating that videos will be recorded to this NAS disk during recording.

* **Request URL**

/api/record/record/choose_nas

* **Request Method**

POST

* **Request Parameters**

```
{
  "id": "123",
```

```
  "choose": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	String	Y	admin	Storage device ID, NAS disk is user-set unique ID, USB disk is automatically generated disk letter like sda, sdb, etc.
choose	Boolean	Y	true	Whether to select as recording storage disk, if not selected, recording will not be saved to this storage disk, and vice versa

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

2.1.5 Storage List

* **Interface Description**

Get storage media list

* **Request URL**

/api/record/record/disk_list

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "data": {
      "nas": [
        {
          "id": "123",
          "name": "123",
          "type": "cifs",
          "host": "192.168.43.1",
          "volume": "abc",
```

```
        "options": "user=,password=",
        "mounted": "/media/nas/123",
        "filesys": "",
        "status": "mounted",
        "choose": false,
        "disk_type": "",
        "total": 283584,
        "used": 41314,
        "free": 242270,
        "percent": 14
      }
    ],
    "usb": [
      {
        "id": "sda1",
        "name": "sda1",
        "type": "",
        "host": "",
        "volume": "/dev/sda1",
        "options": "",
        "mounted": "/run/media/sda1",
        "filesys": "vfat",
        "status": "mounted",
        "choose": true,
        "disk_type": "usb",
        "total": 29534,
        "used": 23948,
        "free": 5585,
        "percent": 81
      }
    ]
  }
}
```


* **Response Parameter Description**

Field Name	Field Type	Field Description
id	String	User-specified unique ID
name	String	User-specified NAS disk name
type	String	Only NAS disk has type, "cifs", "nfs"
host	String	Only NAS disk has host name, file system host name
volume	String	Disk path
options	String	Mount options
mounted	String	Mounted Unix path address
filesys	String	Only USB disk has file system type, file system type, vfat, ntfs
status	String	Mount status, mounted (mounted) / mounting (mounting) / mount_fail (mount failed)
choose	Boolean	Whether selected

disk_type	String	Disk type, not very meaningful
total	Integer	Current disk total size in MB
used	Integer	Current disk used size in MB
free	Integer	Current disk remaining size in MB
percent	Integer	Current disk usage rate, percentage, 0-100

2.1.6 Recording Information

* **Interface Description**

Through this interface, you can get the recording information set by the user.

* **Request URL**

/api/record/record/get_record_info

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "disk_type": "largest",
    "format": "mp4",
    "file_prefix": "REC",
    "limit_type": "size-loop",
    "limit_size": 512,
    "limit_time": 3600,
    "disk_policy": "overwrite",
    "follow_timecode_start": false
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
disk_type	String	Specified partition, temporarily not used, no practical meaning, can be ignored
format	String	Recording format, mp4, mov
file_prefix	String	File prefix, 0-10 character string
limit_type	String	File limit type, none for no size and time limit, time-loop

		for splitting by duration, size-loop for splitting by size
limit_size	Integer	File limit size, will be used when limit_type is size-loop, size range is 512-51200MB
limit_time	Integer	File limit duration, will be used when limit_type is time-loop, time range is 60-14400s
disk_policy	String	Disk policy, overwrite (when disk space is insufficient, automatically overwrite old recording files), noSpace (when disk space is insufficient)
follow_timecode_start	Boolean	Whether to follow SDI timecode startup, when true and SDI is enabled and connected to SDI camera, recording will start/stop directly when SDI timecode changes

2.1.7 Video Recording Configuration

* **Interface Description**

Through this interface, you can set recording information yourself

* **Request URL**

/api/record/record/settings

* **Request Method**

POST

* **Request Parameters**

```
{
  "format": "mp4",
  "file_prefix": "REC",
  "limit_type": "time-loop",
  "limit_size": 51200,
  "limit_time": 14400,
  "disk_policy": "noSpace",
  "follow_timecode_start": false
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
format	String	Y	MP4	Recording format, mp4, mov, ts
file_prefix	String	Y	REC	File prefix, 0-10 character string
limit_type	String	Y	time_loop	File limit type, none for no size and time limit, time-loop for splitting by duration, size-loop for splitting by size

limit_size	Integer	Y	512	File limit size, will be used when limit_type is size-loop, size range is 512-51200MB
limit_time	Integer	Y	60	File limit duration, will be used when limit_type is time-loop, time range is 60-14400s
disk_policy	String	Y	noSpace	Disk policy, overwrite (when disk space is insufficient, automatically overwrite old recording files), noSpace (when disk space is insufficient)
follow_timecode_start	Boolean	N	false	Whether to follow SDI timecode startup, when true and SDI is enabled and connected to SDI camera, recording will start/stop directly when SDI timecode changes

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

2.2 Recording Button/Recording

2.2.1 Video Recording

* **Interface Description**

Through this interface, you can start and stop the recording module

* **Request URL**

/api/record/{interface}/recording

* **Request Method**

POST

* **Request Parameters**

```
{
  "start": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
start	Boolean	Y	true	Whether to start recording, true to start recording, false to stop recording

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

2.2.2 Get Recording Status

* **Interface Description**

Get the current recording status

* **Request URL**

/api/record/{interface}/recording

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
      "status": false
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
result	String	"ok" indicates success, "error" indicates error
status	Boolean	Whether recording is enabled

2.3 Network Storage/NAS Manager

2.3.1 Add Network Storage

* **Interface Description**

Through this interface, you can manually add network storage (cifs, nfs file systems) to the current device

* **Request URL**

/api/record/nas/add

* **Request Method**

POST

* **Request Parameters**

```
{
    "id": "123",
    "name": "123",
    "type": "cifs",
    "host": "192.168.43.1",
    "volume": "abc",
    "options": "user=,password="
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	String	Y	123	User-specified unique ID
name	String	Y	123	User-specified NAS disk name
type	String	Y	cifs	Type: "cifs", "nfs"
host	String	Y	192.168.35.22	NAS file system host
volume	String	Y	abc	Mount directory
options	String	Y	user=,password=	Mount parameters

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

2.3.2 Remove Network Storage

* **Interface Description**

Through this interface, you can remove network storage (cifs, nfs file systems) from the device

* **Request URL**

/api/record/nas/remove

* **Request Method**

POST

* **Request Parameters**

```
{
  "id": "123"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	String	Y	123	User-specified unique ID

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

Streaming Service/Service of stream

3.1 Stream Service/Stream

3.1.1 Get Stream List

* **Interface Description**

Get streaming list information

* **Request URL**

/api/streamer/{interface}/stream/list

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description

interface	String	Y	hdmi	hdmi: HDMI interface, sdi: SDI interface, pip: picture-in-picture, uvc: USB Camera

* **Response Parameters**


```
[
  {
    "id": "a08290a345356a77",
    "type": "ndi_hx",
    "name": "NDI-HX",
    "enable": false,
    "status": "stop",
    "bindAudio": 1,
    "ttl": 1,
    "channel_name": "channel-hdmi",
    "group": "",
    "netmask": "255.255.0.0",
    "connection": "disable_rudp",
    "netprefix": "239.255.0.0",
    "discovery_server": "",
    "addressUrl": "offline"
  }
]
```


* **Response Parameter Description**

Field Name	Field Type	Field Description
-	Array	Each OBJECT stores the stream status, corresponding stream properties can refer to parameters when creating stream

3.1.2 Add Stream

* **Interface Description**

Add a stream

* **Request URL**

/api/streamer/{interface}/stream

* **Request Method**

POST

* **Request Parameters**


```
{
  "port": 554,
  "httpTunnelPort": 8554,
  "session": "ch01",
  "auth": true,
  "multicast_enable": false,
  "multicast_addr": "224.0.0.1",
  "multicast_ttl": 127,
  "multicast_port_min": 31000,
  "multicast_port_max": 31004,
  "name": "test",
```

```
  "type": "rtsp",
  "bindAudio": 1,
  "bindVideo": "main"
}
```

* **RTSP Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
port	Integer	Y	554	RTSP port
httpTunnelPort	Integer	Y	8554	Tunnel port
session	String	Y	ch01	Session ID, will be used as path parameter for streaming address
auth	Boolean	Y	true	Whether to enable user authentication
multicast_enable	Boolean	Y	true	Whether to enable multicast
multicast_addr	String	Y	224.0.0.1	Multicast address
multicast_ttl	Integer	Y	127	Multicast TTL value
multicast_port_min	Integer	Y	31000	Multicast minimum port number
multicast_port_max	Integer	Y	31004	Multicast maximum port number
name	String	Y	test	Stream name
type	String	Y	rtsp	Stream type, default is rtsp
bindAudio	Integer	Y	1	Audio encoding ID, determines which audio channel user uses

* **RTMP/RTMPS Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
address	String	Y	rtmp://youtube.com/live2/test	RTMP streaming address
bindAudio	Integer	Y	1	Audio encoding

				ID, determines which audio channel user uses
bindVideo	String	N	main	Whether to use main stream or sub stream video encoding configuration. Default is main if not provided
connIntv	Integer	Y	3	Reconnection interval in seconds, maximum 10 reconnections
connTimeout	Integer	Y	15	Connection timeout in seconds, refers to socket timeout
name	String	Y	123	Stream name
user	String	Y	user	RTMP server authentication account, can be set in media user management
password	String	Y	user	RTMP server authentication password
oldRtmp	Boolean	N	false	Use old RTMP version if true. Default is false
type	String	Y	rtmp	Stream type, default is rtmp

* **SRT Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
address	String	Y	srt://192.168.40.2	Required for caller/Rendezvous mode, can be empty string for listener mode

bindAudio	Integer	Y	1	Audio encoding ID, determines which audio channel user uses
bindVideo	String	N	main	Whether to use main stream or sub stream video encoding configuration. Default is main if not provided
mode	String	Y	caller	SRT mode. caller/listener/rendezvous
name	String	Y	123	Stream name
port	Integer	Y	5700	Target receiving port
latency	Integer	Y	500	SRT latency in milliseconds
streamid	String	N		SRT stream ID
maxbw	Integer	N	-1	Maximum bandwidth
pbkeylen	Integer	N	0	Passphrase key length
passphrase	String	N		Passphrase
ts_service_name	String	N	Encoder	Service name
ts_service_provider	String	N	Encoder device	Service provider
ts_transport_stream_id	Integer	N	101	Transport stream ID
ts_tables_version	Integer	N	6	Version number
ts_pcr_period	Integer	N	20	PCR write interval, PCR period
ts_start_pid	Integer	N	480	Start ES PID, Stream start PID
ts_pmt_start_pid	Integer	N	481	Start PMT PID, PMT start PID
type	String	Y	srt	Stream type, default is srt

* **HLS Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
session	String	Y	ch01	Session ID, will be used as path

				parameter for streaming address
bindAudio	Integer	Y	1	Audio encoding ID, determines which audio channel user uses
bindVideo	String	N	main	Whether to use main stream or sub stream video encoding configuration. Default is main if not provided
name	String	Y	123	Stream name
segmentTime	Integer	Y	5	Length of each TS segment, default in seconds (s)
type	String	Y	hls	Stream type, default is hls

* **ts-udp Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
address	String	Y	192.168.40.2	Target receiving address, can also be multicast address
bindAudio	Integer	Y	1	Audio encoding ID, determines which audio channel user uses
bindVideo	String	N	main	Whether to use main stream or sub stream video encoding configuration. Default is main if not provided
name	String	Y	123	Stream name
port	Integer	Y	5700	Target receiving port
ttl	Integer	Y	127	Multicast TTL
ts_null_multiple	Float	Y	0	TS packet null packet multiplier, set null packet multiplier according to current bitrate setting, generally 0, 1.2, 1.5, 2.0, 3.0, 4.0, 5.0
bindPort	int	N	0	Bind local UDP socket port. Range: 0 - 65535. Default is 0, meaning system automatically selects an unused port

type	String	Y	ts	Stream type, default is ts
ts_service_name	String	Y	Encoder	Service name
ts_service_provider	String	Y	Encoder device	Service provider
ts_transport_stream_id	Integer	Y	101	Transport ID
ts_tables_version	Integer	Y	6	Version number
ts_pcr_period	Integer	Y	20	PCR write interval
ts_start_pid	Integer	Y	480	Start ES PID
ts_pmt_start_pid	Integer	Y	481	Start PMT PID

* **RTP Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
bindAudio	Integer	Y	1	Audio encoding ID, determines which audio channel user uses
bindVideo	String	N	main	Whether to use main stream or sub stream video encoding configuration. Default is main if not provided
name	String	Y	123	Stream name
address	String	Y	192.168.40.2	Target receiving address
port	Integer	Y	5700	Target receiving port
load_type	String	Y	ts	Payload type. Currently only ts
ts_service_name	String	Y	Encoder	TS stream advanced parameter, used for MPEG-TS to identify service name. Default is "Encoder"
ts_service_provider	String	Y	Encoder device	TS stream advanced parameter, default is "Encoder device"
ts_transport_stream_id	Integer	N	101	Transport ID
ts_tables_version	Integer	N	6	Version number

ts_pcr_period	Integer	N	20	PCR write interval
ts_start_pid	Integer	N	480	Start ES PID
ts_pmt_start_pid	Integer	N	481	Start PMT PID
ts_null_multiple	Float	N	0	TS packet null packet multiplier, set null packet multiplier according to current bitrate setting, generally 0, 1.2, 1.5, 2.0, 3.0, 4.0, 5.0
ttl	Integer	N	127	Multicast TTL
type	String	Y	rtp	Stream type, default is rtp

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.1.3 Modify Stream

* **Interface Description**

Modify single stream configuration

* **Request URL**

/api/streamer/{interface}/stream/{stream_id}

* **Request Method**

PUT

* **Request Parameters**

```
{
  "group": "",
  "channel_name": "channel-hdmi",
  "connection": "disable_rudp",
  "netprefix": "239.255.0.0",
  "netmask": "255.255.0.0",
  "ttl": 1,
  "discovery_server": "",
  "id": "a08290a345356a77",
  "name": "NDI-HX",
  "type": "ndi_hx",
  "bindAudio": 1,
  "bindVideo": "main"
}
```

* **Request Parameter Description**

Below are NDI parameter descriptions, other stream parameters can refer to parameters when creating streams.

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
id	String	Y	a08290a345356a77	Stream ID to be modified
name	String	Y	test	Stream name
group	String	Y	public	Can be empty, defaults to public if empty
channel_name	String	Y	channel-hdmi	Channel name
connection	String	Y	disable_rudp	Connection method, default is disable_rudp. disable_rudp: multi-tcp, rudp: reliable udp, udp: udp, multicast: multicast
netprefix	String	Y	239.255.0.0	Multicast address, not effective when connection method is not multicast
netmask	String	Y	255.255.0.0	Multicast subnet mask, not effective when connection method is not multicast
ttl	Integer	Y	127	Multicast TTL, not effective when connection method is not multicast
discovery_server	String	Y	192.168.40.2	Discovery server
type	String	Y	ndi_hx	Stream type, default is ndi_hx
bindAudio	Integer	Y	1	Audio encoding ID, determines which audio channel user uses

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.1.4 Delete Stream

* **Interface Description**

Delete specified stream by stream ID

* **Request URL**

/api/streamer/{interface}/stream/{stream_id}

* **Request Method**

DELETE

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
stream_id	String	Y	a08290a345356a77	Stream ID

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.1.5 Stream Switch

* **Interface Description**

Enable/disable specified stream by stream ID

* **Request URL**

/api/streamer/{interface}/stream/enable

* **Request Method**

POST

* **Request Parameters**

```
 {
   "id": "a08290a345356a77",
   "enable": true
 }
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	hdmi	Path parameter, will be concatenated in URL. hdmi/sdi/pip/uvc
id	String	Y	a08290a345356a77	Stream ID
enable	String	Y	true	Stream switch

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.1.6 Reset NDI

* **Interface Description**

Reset NDI

* **Request URL**

/api/streamer/{interface}/stream/ndi/reset

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.1.7 Get WebRTC

* **Interface Description**

Get WebRTC Port and SDP Mode

* **Request URL**

/api/streamer/{interface}/stream/get_webrtc

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
mode	Integer	Y	0	0: video; 1: image

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.1.8 Set WebRTC

* **Interface Description**

Set WebRTC mode

* **Request URL**

/api/streamer/{interface}/stream/set_webrtc

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
stream_id	String	Y	admin	Stream ID
mode	Integer	Y	0	0: video; 1: image

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.1.9 Get Media Users

* **Interface Description**

Get media users for RTSP service

* **Request URL**

/api/streamer/{interface}/stream/media_user

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "user_list": [
      "admin"
    ]
  }
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
user_list	Array	Media username list

3.1.10 Add Media User

* **Interface Description**

Add media user for RTSP service

* **Request URL**

/api/streamer/{interface}/stream/media_user

* **Request Method**

POST

* **Request Parameters**

```
{
  "username": "admin",
  "password": "Admin123"
    }
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
username	String	Y	admin	Username
password	String	Y	Admin123	Password

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.1.11 Delete Media User

* **Interface Description**

Delete media user by username

* **Request URL**

/api/streamer/{interface}/stream/media_user/{username}

* **Request Method**

DELETE

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
username	String	Y	admin	Username

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.2 PTZ Settings/PTZ setting

3.2.1 PTZ Control

* **Interface Description**

By requesting this interface and passing in corresponding actions and speeds, you can simulate the way of controlling the camera through the panel on the page, and directly control the PTZ direction, focus and zoom.

* **Request URL**

/api/streamer/ptz/control

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
action	String	Y	up	Select from the following strings: "up", "left", "down", "right"
speed	Integer	N	50	Speed to be passed in, enter number 0~100, default 50, actions like home, stop-move, stop-all, etc. do not need to pass this value
id	Integer	N	2	Preset position to be passed in, mainly used for commands ending with preset, pass in number, recommend 1-16

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.2.2 Get PTZ Information

* **Interface Description**

This interface mainly gets the connection and control configuration information for PTZ cameras on the current device.

* **Request URL**

/api/streamer/ptz/info

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "enable": 0,
    "typ": "serial",
    "network": {
      "protocol": "TCP",
      "addr": "",
      "port": 1,
      "ptz_protocol": "Sony Visca",
      "ptz_addr": "1"
    },
    "serial": {
      "device": "none",
      "baudrate": 9600,
      "parity": "none",
      "startBits": 8,
      "endBits": 1,
      "xonxoff": 0,
      "rtscts": 0,
      "ptz_protocol": "Sony Visca",
      "ptz_addr": "1"
    }
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
enable	Boolean	Whether PTZ function is enabled
typ	String	Connection method network: network connection serial: serial connection
network	Object	Network connection protocol: Network protocol. TCP/UDP; addr: PTZ camera IP address; port: PTZ camera port; ptz_protocol: PTZ protocol. "Sony Visca", "Pelco-d" and "Pelco-p"
serial	Object	Serial connection device: Serial driver; baudrate: Baud rate; parity: Parity; startBits: Data bits; xonxoff: XON/XOFF switch; rtscts: RTS/CTS switch

3.2.3 Get PTZ Protocols

* **Interface Description**

In the current version, supported protocols include Sony Visca, Pelco-d, Pelco-p. By requesting this interface, you can get the corresponding protocol names through the data field in the return field.

* **Request URL**

/api/streamer/ptz/protocol

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null,
    "data": [
        "Sony Visca",
        "Pelco-d",
        "Pelco-p"
    ]
}
```

* **Response Parameter Description**

None

3.2.4 Get Serial Devices

* **Interface Description**

When serial devices are connected, or when directly using serial cables plugged into this machine, you can use this interface to get the device nodes of serial devices

* **Request URL**

/api/streamer/ptz/serial_device

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "data": [
      {
        "device": "ttyUSB0",
        "driver": "FTDI"
      },
    ]
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
device	String	Serial device name
driver	String	Driver name

3.2.5 Modify PTZ Information

* **Interface Description**

Through this interface, by passing in corresponding field parameters, modify the PTZ connection and control information saved on the device

* **Request URL**

/api/streamer/ptz/modify

* **Request Method**

POST

* **Request Parameters**

```
{
	"enable": 1,
	"typ": "network",
	"device": "none",
	"baudrate": 9600,
	"parity": "none",
	"startBits": 8,
	"endBits": 1,
	"xonxoff": 0,
	"rtscts": 0,
	"ptz_protocol": "Sony Visca",
	"ptz_addr": 1,
	"protocol": "UDP",
	"addr": "192.168.38.18",
	"port": 50381
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enable	Integer	Y	0	PTZ control switch. 0 disable; 1 enable
typ	String	Y	network	PTZ type. network/serial/usb
device	String	N	ttyUSB0	Serial driver device
baudrate	Integer	N	9600	Baud rate
parity	String	N		Parity check
startBits	Integer	N	8	Data bits
endBits	Integer	N	1	Stop bits

xonxoff	Integer	N	0	XON/XOFF switch
rtscts	Integer	N	0	RTS/CTS switch
ptz_protocol	String	N	Sony Visca	PTZ protocol, currently selectable protocols include: "Sony Visca", "Pelco-d", "Pelco-p"
ptz_addr	Integer	N	1	Serial address position. Fixed parameter within protocol. Number, 1 or 0
protocol	String	N	UDP/TCP	Network protocol
addr	String	N	192.168.35.35	PTZ camera IP address
port	Integer	N	60381	PTZ camera port

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.3 Panel Stream/Panel Stream

3.3.1 Get Quick Stream Status

* **Interface Description**

Get quick stream status

* **Request URL**

/api/streamer/panel_stream/shortcuts_stream

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "shortcutsRecordList": [],
  "shortcutsRecord": false,
  "shortcutsStream": false,
  "shortcutsEnable": false
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
shortcutsRecordList	Array	Stream list added to quick stream
shortcutsRecord	Boolean	Quick recording switch
shortcutsStream	Boolean	Quick streaming switch
shortcutsEnable	Boolean	Quick operation status

3.3.2 Quick Stream Switch

* **Interface Description**

Quick stream switch

* **Request URL**

/api/streamer/panel_stream/shortcuts_stream

* **Request Method**

POST

* **Request Parameters**

```
{
  "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enable	String	Y	true	Quick stream switch

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.3.3 Set Quick Stream Switch Status

* **Interface Description**

Set quick stream switch status. Calling this interface only changes the quick stream status in the configuration file, does not actually toggle quick streaming.

* **Request URL**

/api/streamer/panel_stream/set_shortcuts_enable

* **Request Method**

POST

* **Request Parameters**

```
{
  "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enable	String	Y	true	Quick stream switch

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.3.4 Get Tally Light Settings

* **Interface Description**

Get the encoding (hdmi/sdi/mix) currently bound to the tally light display

* **Request URL**

/api/streamer/panel_stream/get_tally_setting

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
"sdi"
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
"sdi"	String	hdmi/sdi/pip/off - encoding currently bound to tally light display

3.3.5 Change Tally Light Settings

* **Interface Description**

Change the encoding (hdmi/sdi/mix) currently bound to the tally light display. This interface does not set the tally light status. Only when set to a specified encoding and the NDI|HX

stream of that encoding is turned on, and the tally status is set for that NDI|HX stream, will the tally light take effect.

* **Request URL**

/api/streamer/panel_stream/set_tally_setting

* **Request Method**

POST

* **Request Parameters**

```
{
  "param": "hdmi"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
param	String	Y	"hdmi"	hdmi/sdi/pip/off - encoding currently bound to tally light display

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

3.4 Quick Stream/shortcuts

3.4.1 Get Quick Stream List

* **Interface Description**

Get current quick stream settings

* **Request URL**

/api/streamer/shortcuts/list

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "panel_enable": true,
  "shortcuts_record": [],
  "hdmi": [
    {
      "id": "a08290a345356a77",
      "type": "ndi_hx",
      "name": "NDI-HX",
      "enable": false,
      "status": "stop",
      "bindAudio": 1,
      "ttl": 1,
      "channel_name": "channel-hdmi",
      "group": "",
      "netmask": "255.255.0.0",
      "connection": "disable_rudp",
      "netprefix": "239.255.0.0",
      "discovery_server": "",
      "auto_enable": false
    }
  ],
  "sdi": [
    {
      "id": "38e19b8c6c15f7c1",
      "type": "ndi_hx",
      "name": "NDI-HX",
      "enable": false,
      "status": "stop",
      "bindAudio": 1,
      "ttl": 1,
      "channel_name": "channel-sdi",
      "group": "",
      "netmask": "255.255.0.0",
      "connection": "disable_rudp",
      "netprefix": "239.255.0.0",
      "discovery_server": "",
      "auto_enable": false
    }
  ],
  "pip": [
    {
      "id": "60c47e02dd3246a2",
      "type": "ndi_hx",
      "name": "NDI-HX",
      "enable": false,
      "status": "stop",
      "bindAudio": 1,
      "ttl": 1,
      "channel_name": "channel-mix",
      "group": "",
      "netmask": "255.255.0.0",
      "connection": "disable_rudp",
      "netprefix": "239.255.0.0",
      "discovery_server": "",
      "auto_enable": false
    }
  ]
}
```

* **Response Parameter Description**

Parameters same as stream list, with new parameter auto_enable, type Boolean, indicating whether this stream is added to the quick stream list

3.4.2 Configure Quick Stream

* **Interface Description**

Configure quick stream

* **Request URL**

/api/streamer/shortcuts/set

* **Request Method**

POST

* **Request Parameters**

```
{
  "panel_enable": true,
  "shortcuts_record": ["hdmi", "sdi", "pip"],
  "shortcuts_stream": {
      "hdmi": ["d8df2ef3e0b3ca86"],
      "sdi": ["38e19b8c6c15f7c1","0cc29b8bc74cd729"],
      "pip": ["60c47e02dd3246a2"]
  }
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
shortcuts_record	Array	Y	["hdmi", "sdi", "pip"]	Sources added to quick recording

shortcuts_stream	Object	Y	{
			"hdmi": ["d8df2ef3e0b3ca86"],
			"sdi": ["38e19b8c6c15f7c1","0cc29b8bc74cd729"],
			"pip": ["60c47e02dd3246a2"]
			}
				Stream list added to quick streaming

panel_enable	Boolean	N	False	Whether to enable front panel streaming function. Default is

				True (enabled)

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

Network Service/Service of network

4.1 Network Management/Network management

4.1.1 Get eth0 Network Information (For PC)

* **Interface Description**

Get eth0 network information

* **Request URL**

/api/networkmanager/network/GetLinkinfo

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "data": [
    {
      "status": "up",
      "address": "192.168.3.37",
      "netmask": "255.255.255.0",
      "gw": "192.168.3.1",
      "mac": "18:C3:F4:20:F1:DB",
      "method": "dhcp",
      "enable": true,
      "dns":
"223.5.5.5;223.6.6.6;101.226.4.6;180.76.76.76;114.114.114.114;119.29.29.29;
192.168.3.1",
      "device": "eth0"
    }
  ]
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
status	String	Whether current network is activated. Status determined by whether current network port is connected to network. "up": network activated "down": network not activated
address	String	IP address. May come from DHCP or manual setting.
netmask	String	Subnet mask
gw	String	Gateway
mac	String	MAC address
method	String	Address acquisition method dhcp: DHCP automatic acquisition; static: manual setting
enable	Boolean	Whether current network card is valid. In current version this field defaults to true
dns	String	DNS, each DNS address separated by semicolon, returned as string.
device	String	Network card

4.1.2 Modify Current Device Network Information (All)

* **Interface Description**

Modify current device network information

* **Request URL**

/api/networkmanager/network/ChangeLinkinfo

* **Request Method**

POST

* **Request Parameters**

```
{
  "ifname": "eth0",
  "cfg": {
        "address": "0.0.0.0",
        "netmask": "255.255.255.0",
        "gw": "",
        "mac": "44:07:6A:5F:D4:F7",
        "method": "dhcp",
        "enable": true,
        "dns": "223.5.5.5;224.5.5.5",
    }
}
```

* **Request Parameter Description**

Parameter	Parameter	Required	Sample Value	Description

Name	Type			
address	String	Y	192.168.35.35	IP address
netmask	String	Y	255.255.255.0	Subnet mask
gw	String	Y	192.168.35.254	Gateway
mac	String	Y	44:07:6A:5F:D4:F7	MAC address
method	String	Y	dhcp	Address acquisition method, dhcp: DHCP automatic acquisition; static: manual setting
enable	Boolean	Y	true	Whether current network card is valid. Manual setting
dns	String	N	223.5.5.5;224.5.5.5	DNS address, multiple separated by semicolon

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

4.1.3 Ethernet Switch

* **Interface Description**

Used to control whether current network card is activated

* **Request URL**

/api/networkmanager/network/SetSwitch

* **Request Method**

POST

* **Request Parameters**

```
{
  "ifname": "eth0",
  "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
iframe	String	Y	eth0	Network card
enable	Boolean	Y	true	Enable/disable current

				network card

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

4.1.4 Get Network Card Information (For Small Screen)

* **Interface Description**

Get network card information (for small screen)

* **Request URL**

/api/networkmanager/network/GetEthernets

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
iframe	String	Y	eth0	Network card name

* **Response Parameters**

```
{
  "result": "ok",
  "data": {
    "status": "up",
    "address": "192.168.3.37",
    "netmask": "255.255.255.0",
    "gw": "192.168.3.1",
    "mac": "18:C3:F4:20:F1:DB",
    "method": "dhcp",
    "enable": true,
    "dns":
"223.5.5.5;223.6.6.6;101.226.4.6;180.76.76.76;114.114.114.114;119.29.29.29;
192.168.3.1",
    "device": "eth0"
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description

status	String	Whether current network is activated. Status determined by whether current network port is connected to network. "up": network activated "down": network not activated
address	String	IP
netmask	String	Subnet mask
gw	String	Gateway
mac	String	MAC address
method	String	Address acquisition method dhcp: DHCP automatic acquisition; static: manual setting
enable	Boolean	Whether current network card is enabled. In current version this field defaults to true
dns	String	DNS, each DNS address separated by semicolon, returned as string.
device	String	Network card

4.1.5 Set Network Card Information

* **Interface Description**

Set network card information

* **Request URL**

/api/networkmanager/network/SetEthernets

* **Request Method**

POST

* **Request Parameters**

```
{
    "ifname": "eth0",
    "address": "192.168.38.217",
    "netmask": "255.255.255.0",
    "gw": "192.168.38.254",
    "mac": "56:3D:69:9B:5A:C7",
    "method": "static",
    "dns": "223.5.5.5;224.5.5.5",
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
iframe	String	Y	eth0	Network card name
address	String	Y	192.168.35.35	IP address
netmask	String	Y	255.255.255.0	Subnet mask
gw	String	Y	192.168.38.254	Gateway

mac	String	Y	56:3D:69:9B:5A:C7	MAC address
method	String	Y	dhcp	IP acquisition method
dns	String	Y	223.5.5.5;224.5.5.5	DNS address

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

4.1.6 Reset MDNS

* **Interface Description**

Immediately restart MDNS

* **Request URL**

/api/networkmanager/network/ResetMDNS

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

4.2 Static Route Management/Static routing

4.2.1 Add Static Route

* **Interface Description**

Request this interface to add static route address

* **Request URL**

/api/networkmanager/static/routing/add

* **Request Method**

POST

* **Request Parameters**

```
{
    "interface":"eth0",
    "target":"192.168.38.12",
    "netmask":"255.255.255.0",
    "gateway":"192.168.38.254",
    "mtu":1500,
    "metric":0
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
interface	String	Y	eth0	Network card
target	String	Y	192.168.42.76	Target IP address
netmask	String	Y	255.255.255.0	Subnet mask
gateway	String	Y	192.168.43.254	Gateway
mtu	Integer	Y	0	Route cost
metric	Integer	Y	1500	Maximum transmission unit

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

4.2.2 Get Static Route List

* **Interface Description**

If the device has saved previously set static route list, you can request this interface to get the static route list.

* **Request URL**

/api/networkmanager/static/routing/get

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "interface":"eth0",
    "target":"192.168.38.12",
    "netmask":"255.255.255.0",
    "gateway":"192.168.38.254",
    "mtu":1500,
    "metric":0
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
interface	String	Network card
target	String	Target
netmask	String	Network mask
gateway	String	Gateway
mtu	Integer	Maximum transmission unit
metric	Integer	Route cost
status	Integer	Route enable status

4.2.3 Modify Static Route

* **Interface Description**

Modify specified static route

* **Request URL**

/api/networkmanager/static/routing/modify

* **Request Method**

POST

* **Request Parameters**

```
{
    "id":1,
    "interface":"eth0",
    "target":"192.168.38.12",
    "netmask":"255.255.255.0",
    "gateway":"192.168.38.254",
    "mtu":1500,
    "metric":0
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	String	Y	1	Route list ID
interface	String	Y	eth0	Network card
target	String	Y	192.168.35.22	Target IP
netmask	String	Y	255.255.255.0	Subnet mask
gateway	String	Y	192.168.38.254	Gateway
mtu	Integer	Y	0	Maximum transmission unit
metric	Integer	Y	1500	Route cost

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

4.2.4 Delete Static Route

* **Interface Description**

Request this interface to delete single static route, or batch delete multiple static routes

* **Request URL**

/api/networkmanager/static/routing/del

* **Request Method**

POST

* **Request Parameters**

```
// Delete single
{
  "ids": 1
}
// Delete multiple
{
  "ids": [1, 2]
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
ids	Array	Y	[1]	Route ID or ID array

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

4.2.5 Static Route Switch

* **Interface Description**

By requesting this interface, you can enable/disable specified route

* **Request URL**

/api/networkmanager/static/routing/set

* **Request Method**

POST

* **Request Parameters**

```
{
    "id": 1,
    "status": 1
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	Integer	Y	1	Route ID
status	Integer	Y	1	Enable/disable specified route

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

Kilolink Client/Service of kilolink client

5.1 kilolink/kilolink

5.1.1 Get Current Device Network Interface

* **Interface Description**

Get current device network interface, will be deprecated after small screen modification is complete

* **Request URL**

/api/kilolink/networks

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "list": ["eth0"]
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
list	Array	Network interface list

5.1.2 Get Kilolink Client Settings

* **Interface Description**

Get kilolink client settings

* **Request URL**

/api/kilolink/get

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "cfg": {
    "ip": "",
    "port": 50000,
    "ifname": [],
    "key": "",
    "crypto": false,
    "enable": false,
```

```
  },
  "status": 1
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
ip	String	Server address
port	Integer	Service port
iframe	Array	Network interface
key	String	Authorization code
crypto	Boolean	Whether encrypted
enable	Boolean	Whether enabled
status	Integer	Connection status

5.1.3 Set Kilolink Client Configuration

* **Interface Description**

Set kilolink client configuration

* **Request URL**

/api/kilolink/set

* **Request Method**

POST

* **Request Parameters**

```
{
  "cfg":{
    "enable":false,
    "key":"ASdq41a",
    "ip":"192.168.1.40",
    "port":50000,
    "crypto":false,
    "ifname":["eth0"]
    }
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
ip	String	Y	192.168.1.40	Server address
port	Integer	Y	5000	Service port
iframe	Array	Y	["eth0"]	Network interface
key	String	Y		Authorization code

crypto	Boolean	Y	false	Whether encrypted
enable	Boolean	Y	false	Whether enabled

* **Response Parameters**

```
{
    "result": "ok"
}
```

* **Response Parameter Description**

None

Codec Service/Service of codec

6.1 Video Input/Video in

6.1.1 Get EDID Information

* **Interface Description**

Get EDID information

* **Request URL**

/api/codec/vin/edid

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "edid_priority": "2",
  "edid":
"AP///////wAmhQMAQhYDAAshAQOAoFp46mehpVVNoicOUFQhCAABAQEBAQEBAQEBAQEBAQEBBH
QAMPJwWoCwWIoAIMIxAAAeAAAAEAAAAAAAAAAAAAAAAAAAAAAA/ABFMy1FTkNPREVSCiAgAAAAE
AAAAAAAAAAAAAAAAAAAAdICAznxVF9eXZAfIiEgBRQEEz49PAMHFhIBIwsHB4MQAABtAwwAEAAI
ACAAYAECA2fYXcQBeIAD4Q8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAg==",
  "reset": false
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
edid	String	Direct return of plain text EDID information, no JSON parsing needed EDID information in base64 format, needs to be converted to

		hexadecimal values for display.
edid_priority	String	Priority. 1:1080p, 2:4k, "":no priority
reset	Boolean	Whether reset button is available

6.1.2 Upload EDID Information

* **Interface Description**

Upload EDID information

* **Request URL**

/api/codec/vin/edid/upload

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
file	Binary	Y		Binary file

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.1.3 Set EDID Priority

* **Interface Description**

Reset EDID information

* **Request URL**

/api/codec/vin/edid/priority

* **Request Method**

POST

* **Request Parameters**

```
{
  "edid_priority": "1"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
edid_priority	String	Y	1	Priority. 1:1080p, 2:4k, "":no priority

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.1.4 Reset EDID Information

* **Interface Description**

Reset EDID information

* **Request URL**

/api/codec/vin/edid/reset

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.1.5 Get Enabled Encoding

* **Interface Description**

Get enabled encoding interface

* **Request URL**

/api/codec/vin/active_interface

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "hdmi: true,
  "sdi": false,
  "pip": false,
  "uvc": false
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
hdmi	Boolean	Whether HDMI encoding is enabled
sdi	Boolean	Whether SDI encoding is enabled
pip	Boolean	Whether picture-in-picture encoding is enabled
uvc	Boolean	Whether UVC encoding is enabled

6.1.6 Get Video Source Information

* **Interface Description**

Get information of the input source.

* **Request URL**

/api/codec/{interface}/vin/detail

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "signal": "locked",
  "format": "1920x1080p 60Hz",
  "width": 1920,
  "height": 1080,
  "interlaced": false,
  "fps": 60,
  "type": "HDMI",
  "interface": "hdmi",
```

```
  "max_width": 3840,
  "max_height": 2160,
  "max_fps": 60
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
singal	String	Current signal status, locked means signal is connected, none means no signal connected
format	String	Video source input format
width	Boolean	Video source width
height	Integer	Video source height
interlaced	Integer	Whether video source image is interlaced
fps	Boolean	Frame rate
type	String	HDMI or SDI, video source input type
interface	String	hdmi or sdi, video source input interface
max_width	Integer	Current source maximum width
max_height	Integer	Current source maximum height
max_fps	Integer	Current source maximum frame rate
vertical	Boolean	Whether source is portrait resolution
input_fps	Integer	Input source frame rate. Same as fps
input_encode	String	Input encoding format, h264,h265,mjpeg
input_resolution	String	Input resolution

6.1.7 Get Video Format List

* **Interface Description**

Get current video format list, UVC only

* **Request URL**

/api/codec/{interface}/vin/list_format

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**


```
[
  {
    "label": "MJPEG",
    "value": "mjpeg",
    "children": [
      {
        "label": "1920X1080",
        "value": "1920x1080",
        "children": [
          {
            "label": 60,
            "value": 60
          },
          {
            "label": 30,
            "value": 30
          }
        ]
      },
      {
        "label": "1280X720",
        "value": "1280x720",
        "children": [
          {
            "label": 60,
            "value": 60
          },
          {
            "label": 30,
            "value": 30
          }
        ]
      },
      {
        "label": "1080X1920",
        "value": "1080x1920",
        "children": [
          {
            "label": 30,
            "value": 30
          }
        ]
      },
      {
        "label": "720X1280",
        "value": "720x1280",
        "children": [
          {
            "label": 30,
            "value": 30
          }
        ]
      }
    ]
  }
]
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
label	String	First level: video encoding format; Second level: resolution; Third level: frame rate
value	String	Corresponding value
children	dict	

6.1.8 Modify Video Source Information

* **Interface Description**

Modify video source information. Only UVC and PIP support.

* **Request URL**

/api/codec/{interface}/vin/source

* **Request Method**

POST

* **Request Parameters**

```
uvc:
{
  "input_encode": "mjpeg",
  "input_resolution": "1920x1080",
  "input_fps": 24
}
pip:
{
  "width": 1920,
  "height": 1080,
  "input_fps": 24
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
input_encode	String	N	mjpeg	Input encoding format, optional, value range is h264,h265,mjpeg
input_resolution	String	N	1920x1080	Input resolution, optional, like 1920x1080. Either this or width/height can be used
input_fps	Integer	N	24	Input frame rate, optional, like 30
width	Integer	N	1920	Picture width, optional
height	Integer	N	1080	Picture height, optional

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.2 Audio/Audio

6.2.1 Get Input Channel Audio Source Information

* **Interface Description**

Used to get audio source information of input channels

* **Request URL**

/api/codec/{interface}/audio/input

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "source": "hdmi",
  "sampling": 44100,
  "channels": 2,
  "aichannel": 0,
  "gain": -20
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
source	String	Audio source, hdmi/sdi/line-in/uvc
sampling	Integer	Audio sampling rate of audio input source
channels	Integer	Audio channel count of audio input source
aichannel	Integer	Audio channel used, 0 represents 1/2, 2 represents 3/4, 3 represents 5/6 and so on
gain	Integer	Audio gain value, range -40 ~ 20

6.2.2 Select Audio Input Source

* **Interface Description**

Select audio input source

* **Request URL**

/api/codec/{interface}/audio/input/source

* **Request Method**

POST

* **Request Parameters**

```
{
  "source": "string",
  "gain": 0,
  "mute": false
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
source	String	Y	sdi	Audio input source, hdmi/sdi/linein/uvc
gain	Integer	N	0	Audio gain value, range -40 ~ 20
mute	Boolean	N	false	Whether muted. true means mute enabled

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.2.3 Get Audio Encoding List

* **Interface Description**

Get audio encoding list

* **Request URL**

/api/codec/{interface}/audio/encode/list

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
[
        {
            "name": "channel-1",
            "volume": 0,
            "resample": "fastest",
            "channels": 2,
            "sampleSize": 1024,
            "sampling": 48000,
            "codec": "AAC",
            "bitrate": 64000,
            "sampleWidth": 16,
            "g711Law": "PCMU",
            "id": 1
        },
        {
            "name": "channel-2",
            "volume": 0,
            "resample": "fastest",
            "channels": 1,
            "sampleSize": 1024,
            "sampling": 8000,
            "codec": "G711",
            "bitrate": 64000,
            "sampleWidth": 16,
            "g711Law": "PCMU",
            "id": 2
        }
    ]
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
id	Integer	Audio encoding ID, unique ID
name	String	Audio encoding name
resample	String	G.711 resampling strategy, common (high quality), fastest (general)
channels	Integer	Audio channel count, G.711 audio channel count is fixed at 1
sampling	Integer	Audio sampling rate
codec	String	Audio encoding format, AAC, G.711, MP2, MP3
bitrate	Integer	Encoding bitrate, unit kbps
g711law	String	G.711 audio format, PCMU (u-Law), PCMA (a-Law)

6.2.4 Add Audio Encoding

* **Interface Description**

Add audio encoding

* **Request URL**

/api/codec/{interface}/audio/encode

* **Request Method**

POST

* **Request Parameters**

```
{
  "name": "string",
  "codec": "string",
  "sampling": 0,
  "bitrate": 524288,
  "channels": 0,
  "resample": "string",
  "g711Law": "string",
  "track_num": 1
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
name	String	Y	666	Audio encoding name
codec	String	Y	AAC	Audio encoding format, AAC/G711/MP2/MP3
sampling	String	N	8000	Audio sampling rate
bitrate	Integer	N	64000	Audio encoding bitrate
channels	Integer	N	2	Audio channel count
resample	String	N	fastest	G.711 resampling strategy
g711Law	String	N	PCMU	G.711 format, PCMU (u-Law), PCMA (a-Law)
track_num	Integer	N	1	Audio track count

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.2.5 Modify Audio Encoding

* **Interface Description**

Modify audio encoding

* **Request URL**

/api/codec/{interface}/audio/encode/{audio_id}

* **Request Method**

PUT

* **Request Parameters**

```
{
  "id": 1,
  "name": "123",
  "codec": "G711",
  "resample": "fastest",
  "sampling": 8000,
  "channels": 1,
  "bitrate": 64000,
  "g711Law": "PCMA"',
  "track_num": 1
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	Integer	Y	1	Audio encoding unique ID, used to specify which audio encoding setting to modify
name	String	Y	666	Audio encoding name
codec	String	Y	G711	Audio encoding format
resample	String	Y	fastest	G.711 resampling strategy
sampling	Integer	Y	8000	Audio sampling rate
channels	Integer	Y	1	Audio channel count
bitrate	Integer	Y	64000	Audio encoding bitrate
g711Law	String	Y	PCMU	G.711 audio format, PCMU (u-Law), PCMA (a-Law)
track_num	Integer	N	1	Audio track count

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.2.6 Delete Audio Encoding

* **Interface Description**

Delete audio encoding configuration

* **Request URL**

/api/codec/{interface}/audio/encode/{audio_id}

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.2.7 Get Audio Source List

* **Interface Description**

Get list of audio sources for current interface

* **Request URL**

/api/codec/{interface}/audio/input/list_source

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
[
  {
    "label": "HDMI",
    "value": "hdmi"
  },
  {
    "label": "SDI",
```

```
    "value": "sdi"
  },
  {
    "label": "Line In",
    "value": "linein"
  },
  {
    "label": "USB Camera",
    "value": "uvc"
  }
]
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
label	String	Audio source name
value	String	Audio source interface name

6.3 Video Encoding/Video encode

6.3.1 Get Current Encoding Parameter Configuration

* **Interface Description**

Get current encoding parameter configuration

* **Request URL**

/api/codec/{interface}/venc/settings

* **Request Method**

GET

* **Request Parameters**

```
venc_type=main
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
Interface	String	Y	hdmi	hdmi/sdi/pip/uvc, indicating the corresponding encoding enabled
venc_type	String	N	main	main/sub/both, indicating to get encoding parameters for main stream or sub stream. Default is main if not specified

* **Response Parameters**

```
{
  "codec": "H264",
  "enable": true,
  "grey": false,
  "profile": 0,
```

```
  "picHeight": 1,
  "picWidth": 1,
  "mode": "CBR",
  "gop": 60,
  "fps": 60,
  "real_fps": 60,
  "real_fps_float": 59.94,
  "bitrate": 20000,
  "maxBitrate": 6000,
  "minQp": 24,
  "maxQp": 51,
  "minIQp": 24,
  "minIp": 1,
  "maxIp": 20,
  "minQfactor": 80,
  "maxQfactor": 85,
  "deinterlaceMode": "weave",
  "srcHeight": 1080,
  "srcWidth": 1920,
  "realWidth": 1920,
  "realHeight": 1080,
  "timecode_type": 0
}
```


* **Response Parameter Description**

Field Name	Field Type	Field Description
codec	String	Video encoding format, H264 or H265
enable	Boolean	Whether enabled
grey	Boolean	Whether image color displays grayscale
profile	Integer	Video profile, 0:Baseline 1:Main Profile 2: High Profile
picHeight	Integer	Image height, Note: when both picHeight and picWidth are 1, it means consistent with input source width and height
picWidth	Integer	Image width, Note: when both picHeight and picWidth are 1, it means consistent with input source width and height
mode	String	Bitrate mode, CBR constant bitrate mode, VBR variable bitrate mode
gop	Integer	GOP size
fps	Integer/String	Frame rate, when custom frame rate, set an INT integer, i.e., specified bitrate. If STRING, pass values like auto (automatic full frame rate), half (automatically halve encoding frame rate when frame rate >=50)
real_fps	Integer	Real frame rate set by user, corresponding real frame rate when frame rate is set to auto, half mode
real_pfs_float	Float	Real frame rate with floating point set by user, corresponding real frame rate when frame rate is set to

		auto, half mode. To properly display decimal frame rates like 59.94, 29.97, 23.98, so users clearly know the real decimal frame rate being encoded
bitrate	Integer	CBR constant encoding bitrate, unit kb/s
maxBitrate	Integer	VBR variable bitrate, maximum bitrate size, unit kb/s
minQp	Integer	Variable bitrate mode minimum Qp value
maxQp	Integer	Variable bitrate mode maximum Qp value
minIQp	Integer	Variable bitrate mode minimum IQp value
minIp	Integer	Constant bitrate mode Ip frame ratio range minimum value
maxIp	Integer	Constant bitrate mode Ip frame ratio range maximum value
minQfactor	Integer	MJPEG encoding format image quality range minimum value
maxQfactor	Integer	MJPEG encoding format image quality range maximum value
deinterlaceMode	String	weave/line_doubling, deinterlacing mode
srcHeight	Integer	Input source video height
srcWidth	Integer	Input source video width
realWidth	Integer	Real encoded video width
realHeight	Integer	Real encoded video height
timecode_type	Integer	Timecode type 0 means timecode disabled, 1 means system time, 2 means input source time (not supported yet)

6.3.2 Modify Encoding Parameters

* **Interface Description**

Modify current video encoding parameters

* **Request URL**

/api/codec/{interface}/venc/settings

* **Request Method**

POST

* **Request Parameters**

```
{
    "venc_type": "main",
    "codec": "H264",
    "grey": false,
```

```
    "profile": 0,
    "picHeight": 1,
    "picWidth": 1,
    "mode": "CBR",
    "gop": 60,
    "fps": 60,
    "bitrate": 3000,
    "maxBitrate": 6000,
    "minQp": 24,
    "maxQp": 51,
    "minIQp": 24,
    "minQfactor": 80,
    "maxQfactor": 85,
    "deinterlaceMode": "line_doubling",
    "timecode_type": 0
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
venc_type	String	N	main	main/sub, indicating to set encoding parameters for main stream or sub stream. Default is main if not specified
codec	String	Y	H264	Video encoding format, H264/H265/MJPEG
grey	Boolean	Y	false	Whether to make image grayscale processed
fps	Integer	Y	60	Frame rate size
picHeight	Integer	Y	1	Image height, Note: when both picHeight and picWidth are 1, it means consistent with input source width and height
picWidth	Integer	Y	1	Image width, Note: when both picHeight and picWidth are 1, it means consistent with input source width and height
mode	String	N	CBR	Bitrate mode
profile	Integer	N	0	Video profile 0:Baseline 1:Main Profile 2: High Profile Note: when video encoding format is not H264, this value can only be 0
gop	Integer	N	60	GOP size
bitrate	Integer	N	3000	CBR constant encoding bitrate, unit kb/s

maxBitrate	Integer	N	6000	VBR variable bitrate, maximum bitrate size, unit kb/s
minQp	Integer	N	24	Variable bitrate mode minimum Qp value
maxQp	Integer	N	51	Variable bitrate mode maximum Qp value
minIQp	Integer	N	24	Variable bitrate mode minimum IQp value
minIp	Integer	N	1	CBR mode minimum Ip frame ratio
maxIp	Integer	N	20	CBR mode maximum Ip frame ratio
minQfactor	Integer	N	80	MJPEG encoding format image quality range minimum value
maxQfactor	Integer	N	85	MJPEG encoding format image quality range maximum value
deinterlaceMode	String	N	line_doubling	Deinterlacing mode, line_doubling/weave
timecode_type	Integer	N	0	Timecode type 0 means timecode disabled, 1 means system time, 2 means input source time (not supported yet)

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.3.3 Set Encoding Bitrate

* **Interface Description**

Set encoding bitrate parameters

* **Request URL**

/api/codec/{interface}/venc/bitrate

* **Request Method**

POST

* **Request Parameters**

```
{
  "venc_type": "main",
```

```
  "bitrate": 102400
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
venc_type	String	N	main	main/sub, indicating to set bitrate for main stream or sub stream. Default is main if not specified
bitrate	Integer	Y	102400	CBR constant encoding bitrate, unit kb/s

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.3.4 Encoding Switch

* **Interface Description**

This interface is used to completely disable the corresponding video and audio encoding of the input source.

* **Request URL**

/api/codec/{interface}/venc/enable

* **Request Method**

POST

* **Request Parameters**

```
{
  "enable": false
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enable	Boolean	Y	true	Encoding switch

* **Response Parameters**

```
{
  "result": "ok",
  "msg": ""
}
```

* **Response Parameter Description**

None

6.3.5 Switch Picture-in-Picture Primary/Secondary

* **Interface Description**

This interface is used to switch which image is the primary image in picture-in-picture

* **Request URL**

/api/codec/pip/venc/pip_back_update

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": ""
}
```

* **Response Parameter Description**

None

6.3.6 Get Picture-in-Picture Layout

* **Interface Description**

This interface is used to get picture-in-picture layout parameters

* **Request URL**

/api/codec/pip/venc/pip_layout_setting

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
[
   {
     "height": 100,
     "width": 100,
     "name": "hdmi",
```

```
    "x": 0,
    "y": 0,
    "zIndex": 1,
    "enable": true
  },
  {
    "height": 33.33,
    "width": 33.33,
    "name": "sdi",
    "x": 65,
    "y": 64,
    "zIndex": 2,
    "enable": true
  }
]
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
name	String	Video source name, hdmi/sdi
width	Float	Image width of the frame
height	Float	Image height of the frame
x	Integer	X coordinate of the frame, calculated as percentage
y	Integer	Y coordinate of the frame, calculated as percentage
zIndex	Integer	Frame layer, higher number means higher layer
enable	Boolean	Whether current video source frame is displayed

6.3.7 Set Picture-in-Picture Layout

* **Interface Description**

This interface is used to set picture-in-picture layout

* **Request URL**

/api/codec/pip/venc/pip_layout_setting

* **Request Method**

POST

* **Request Parameters**

```
[
  {
    "height": 100,
    "width": 100,
    "name": "hdmi",
    "x": 0,
    "y": 0,
    "zIndex": 1,
    "enable": true
  },
  {
```

```
      "height": 33.33,
      "width": 33.33,
      "name": "sdi",
      "x": 65,
      "y": 64,
      "zIndex": 2,
      "enable": true
    }
  ]
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
name	String	Y	hdmi	Video source name, hdmi/sdi
x	Float	Y	33.33	Image width of the frame
y	Float	Y	33.33	Image height of the frame
width	Integer	Y	50	X coordinate of the frame, calculated as percentage
height	Integer	Y	50	Y coordinate of the frame, calculated as percentage
zIndex	Integer	Y	1	Frame layer, higher number means higher layer
enable	Boolean	Y	true	Whether current video source frame is displayed

* **Response Parameters**

```
{
  "result": "ok",
  "msg": ""
}
```

* **Response Parameter Description**

None

6.3.8 Get Picture-in-Picture Video Source Frame Rate & Resolution

* **Interface Description**

This interface is used to get picture-in-picture layout parameters

* **Request URL**

/api/codec/pip/venc/pip_fps_setting

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "fps": 50,
  "width": 1920,
  "height": 1080,
  "vertical": false
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
fps	Integer	Set video source frame rate. Options: 24/25/30/50/60
width	Integer	Set video source width
height	Integer	Set video source height
vertical	Boolean	Whether current is portrait resolution. If height>width then true

6.3.9 Set Picture-in-Picture Video Source Frame Rate & Resolution

* **Interface Description**

This interface is used to set picture-in-picture layout

* **Request URL**

/api/codec/pip/venc/pip_fps_setting

* **Request Method**

POST

* **Request Parameters**

```
{
  "fps": 50,
  "width": 1920,
  "height": 1080
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
fps	Integer	N	50	Set video source frame rate. Options: 24/25/30/50/60
width	Integer	N	1920	Set video source width
height	Integer	N	1080	Set video source height

* **Response Parameters**

```
{
  "result": "ok",
  "msg": ""
}
```

* **Response Parameter Description**

None

6.3.10 Get Whether Sub Stream Configuration Complies with NDI Standard

* **Interface Description**

This interface is used to get whether current sub stream settings comply with NDI|HX protocol standard. NDI|HX sub stream resolution cannot exceed 640*360, and cannot use MJPEG encoding format.

* **Request URL**

/api/codec/{interface}/venc/complie_NDIstandard

* **Request Method**

GET

* **Request Parameters**

None

* **Response Parameters**

```
{
  "is_standard": True,
  "ndi_hx_is_streaming": False
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
is_standard	Boolean	Whether current sub stream settings comply with NDI\
is_ndi_hx_is_streaming	Boolean	Whether current interface's NDI stream is enabled, true means enabled

6.3.11 Restore Sub Stream to NDI Standard Compliant Configuration

* **Interface Description**

This interface is used to restore sub stream to NDI standard compliant configuration

* **Request URL**

/api/codec/{interface}/venc/complie_NDIstandard

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": ""
}
```

* **Response Parameter Description**

None

6.3.12 Get Current Encoding Snapshot

* **Interface Description**

When sub stream is set to MJPEG, this interface can be called to get current encoding snapshot. If encoding is not enabled or sub stream is not set to MJPEG encoding format, it returns a default black background with white text prompt image.

* **Request URL**

/api/codec/{interface}/venc/snap

* **Request Method**

GET

* **Request Parameters**

None

* **Response Parameters**

```
image/jpeg
```

* **Response Parameter Description**

None

6.4 Video Processing/VPSS

6.4.1 Get Image List

* **Interface Description**

Used to get image list in OSD overlay

* **Request URL**

/api/codec/vpss/image

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
[
    {
        "size_h": 276,
        "size_w": 342,
        "url": "/img/3f33d7027c5111eea32f180dab8597db.png",
        "name": "123",
        "path": "/data/storage/img/3f33d7027c5111eea32f180dab8597db.png",
        "id": "3f33d7027c5111eea32f180dab8597db"
    }
]
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
id	String	Image unique ID
size_h	Integer	Image height
size_w	Integer	Image width
url	String	Concatenate host to get static image resource
name	String	Image name
path	String	Unix filesystem path

6.4.2 Upload Image

* **Interface Description**

Upload image

* **Request URL**

/api/codec/vpss/image

* **Request Method**

POST

* **Request Parameters**

```
{
    "file": (binary)
    "name": 456
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description

file	Binary	Y		Image file
name	String	Y	123	Image name

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.3 Delete Image

* **Interface Description**

Delete image

* **Request URL**

/api/codec/vpss/image/{image_id}

* **Request Method**

DELETE

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.4 Get VPSS Object Video Input Crop Parameters

* **Interface Description**

Get VPSS object video input crop parameters

* **Request URL**

/api/codec/{interface}/vpss/input/crop

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "crop_en": true,
  "crop_x": 25,
  "crop_y": 25,
  "crop_w": 50,
  "crop_h": 50
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
crop_en	Boolean	Whether cropping is enabled. The below parameters only take effect when true
crop_x	Integer	Crop start x coordinate, calculated as percentage
crop_y	Integer	Crop start y coordinate, calculated as percentage
crop_w	Integer	Crop frame width, calculated as percentage
crop_h	Integer	Crop frame height, calculated as percentage

6.4.5 Set VPSS Object Video Input Crop Parameters

* **Interface Description**

Modify VPSS object video input crop parameters. Currently only takes effect when called in picture-in-picture mode, can crop hdmi/sdi video sources separately.

* **Request URL**

/api/codec/{interface}/vpss/input/crop

* **Request Method**

POST

* **Request Parameters**

```
{
  "crop_en": true,
  "crop_x": 25,
  "crop_y": 25,
  "crop_w": 50,
  "crop_h": 50
}
```

* **Request Parameter Description**

Parameter	Parameter	Required	Sample	Description

Name	Type		Value	
crop_en	Boolean	Y	true	Whether cropping is enabled. The below parameters only take effect when true
crop_x	Integer	Y	25	Crop start x coordinate, calculated as percentage
crop_y	Integer	Y	25	Crop start y coordinate, calculated as percentage
crop_w	Integer	Y	25	Crop frame width, calculated as percentage
crop_h	Integer	Y	25	Crop frame height, calculated as percentage

* **Response Parameters**

```
{
    "result": "ok",
    "msg": ""
}
```

* **Response Parameter Description**

None

6.4.6 Get VPSS Object Video Input Rotation, Mirror, Flip Parameters

* **Interface Description**

Get VPSS object video input rotation, mirror, flip parameters.

* **Request URL**

/api/codec/{interface}/vpss/input/rmf

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "rotate": 0,
    "mirror_en": false,
    "flip_en": false
  }
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
rotate	Integer	Rotation angle, 0/90/180/270
mirror_en	Boolean	Mirror switch
flip_en	Boolean	Flip switch

6.4.7 Set VPSS Object Video Input Rotation, Mirror, Flip Parameters

* **Interface Description**

Set VPSS object video input rotation, mirror, flip parameters

* **Request URL**

/api/codec/{interface}/vpss/input/rmf

* **Request Method**

POST

* **Request Parameters**

```
{
  "rotate": 0,
  "mirror_en": false,
  "flip_en": false
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
rotate	String	Y	0	Rotation angle, 0/90/180/270
mirror_en	Boolean	Y	false	Mirror switch
flip_en	Boolean	Y	false	Flip switch

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.8 Get OSD Overlay List

* **Interface Description**

Get OSD overlay list

* **Request URL**

/api/codec/{interface}/vpss/osd

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**


```
{
  "enable": true,
  "items": [
    {
      "enable": true,
      "type": "image",
      "position": "LeftTop",
      "x": 0,
      "y": 0,
      "font_size": 1,
      "font_color": 1,
      "style": "normal",
      "outline": 0,
      "outline_color": 0,
      "text": "",
      "file_id": "66bd63907c5311eea32f180dab8597db",
      "row_spacing": 1,
      "id": "830a6f927c6d11eea32f180dab8597db",
      "name": "456",
      "pic_url": "/img/66bd63907c5311eea32f180dab8597db.png"
    },
    {
      "enable": true,
      "type": "text",
      "position": "LeftTop",
      "x": 0,
      "y": 0,
      "font_size": 1,
      "font_color": 1,
      "style": "normal",
      "outline": 0,
      "outline_color": 0,
      "text": "12313",
      "file_id": "",
      "row_spacing": 1,
      "id": "897d2f727c6d11eea32f180dab8597db"
    }
  ]
}
```


* **Response Parameter Description**

Field Name	Field Type	Field Description
id	String	Overlay item unique ID

enable	Boolean	Whether to enable this overlay item
type	String	Overlay item type, image for image overlay, time for time and date overlay, date for date overlay, clock for time overlay, text for text overlay
position	String	Overlay item position, LeftTop for top left, CenterTop for top center, RightTop for top right, LeftBottom for bottom left, CenterBottom for bottom center, RightBottom for bottom right, Center for center, Manual for custom
x	Integer	Overlay item x coordinate offset, effective when position is Manual
y	Integer	Overlay item y coordinate offset, effective when position is Manual
font_size	Integer	Overlay item font size, 0 for auto-large font, 1 for auto-medium, 2 for auto-small, other values for specific pixel size
font_color	Integer	Overlay item font color, 0 for black, 1 for white, 2 for red, 3 for blue, 4 for green, 5 for yellow, 6 for purple, 7 for cyan
style	String	Overlay item font style, normal for normal, bold for bold
outline	Integer	Overlay item border, 0 for no border, 1 for thin border, 2 for thick border
outline_color	Integer	Overlay item border color, 0 for black, 1 for white, 2 for red, 3 for blue, 4 for green, 5 for yellow, 6 for purple, 7 for cyan
text	String	Overlay item text content
file_id	String	Overlay item associated file ID
name	String	Overlay item image name
pic_url	String	Overlay item static image resource address

6.4.9 OSD Main Switch

* **Interface Description**

Enable or disable OSD overlay option

* **Request URL**

/api/codec/{interface}/vpss/osd

* **Request Method**

PUT

* **Request Parameters**

```
{
  "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enable	Boolean	Y	true	OSD overlay switch

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.10 Add OSD Information

* **Interface Description**

Add OSD overlay item

* **Request URL**

/api/codec/{interface}/vpss/osd

* **Request Method**

POST

* **Request Parameters**

```
// Text overlay:

{
    "type": "text",
    "file_id": "",
    "text": "2222222222",
    "x": 0,
    "y": 0,
    "position": "LeftTop",
    "font_size": 1,
    "style": "normal",
    "outline": 0,
    "font_color": 1,
    "outline_color": 0,
    "enable": true
}

// Date and time overlay:

{
    "id": "",
    "type": "time",
    "file_id": "",
    "text": "",
    "x": 0,
    "y": 0,
    "position": "LeftTop",
    "font_size": 1,
    "style": "normal",
    "outline": 0,
```

```
    "font_color": 1,
    "outline_color": 0,
    "enable": true
}

// Date overlay:

{
    "id": "",
    "type": "date",
    "file_id": "",
    "text": "",
    "x": 0,
    "y": 0,
    "position": "LeftTop",
    "font_size": 1,
    "style": "normal",
    "outline": 0,
    "font_color": 1,
    "outline_color": 0,
    "enable": true
}

// Time overlay:

{
    "id": "",
    "type": "clock",
    "file_id": "",
    "text": "",
    "x": 0,
    "y": 0,
    "position": "LeftTop",
    "font_size": 1,
    "style": "normal",
    "outline": 0,
    "font_color": 1,
    "outline_color": 0,
    "enable": true
}

// Image overlay:
{
    "id": "",
    "type": "image",
    "file_id": "66bd63907c5311eea32f180dab8597db",
    "text": "",
    "x": 0,
    "y": 0,
    "position": "LeftTop",
    "font_size": 1,
    "style": "normal",
    "outline": 0,
    "font_color": 1,
    "outline_color": 0,
    "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enable	Boolean	Y	true	Whether to enable this overlay item
type	String	Y	text	Overlay type, image for image overlay, time for time and date overlay, date for date overlay, clock for time overlay, text for text overlay
file_id	String	Y		Only needed for image overlay, pass image ID
text	String	Y	123	Only needed for text overlay, text content
x	Integer	Y	0	Custom position x coordinate for overlay
y	Integer	Y	0	Custom position y coordinate for overlay
position	String	Y	LeftTop	Overlay position
font_size	Integer	Y	0	Overlay item font size, 0 for auto-large font, 1 for auto-medium, 2 for auto-small, other values for specific pixel size
style	String	Y	normal	Overlay text style, normal for normal, bold for bold
outline	Integer	Y	0	Overlay border
font_color	Integer	Y	1	Overlay item font color, 0 for black, 1 for white, 2 for red, 3 for blue, 4 for green, 5 for yellow, 6 for purple, 7 for cyan
outline_color	Integer	Y	1	Border color, 0 for black, 1 for white, 2 for red, 3 for blue, 4 for green, 5 for yellow, 6 for purple, 7 for cyan

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.11 Get OSD Overlay Material Information

* **Interface Description**

Get single OSD overlay item information

* **Request URL**

/api/codec/{interface}/vpss/osd/{osd_id}

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**


```
{
  "enable": true,
  "type": "text",
  "position": "Manual",
  "x": 200,
  "y": 200,
  "font_size": 1,
  "font_color": 3,
  "style": "bold",
  "outline": 2,
  "outline_color": 5,
  "text": "12313",
  "file_id": "3f33d7027c5111eea32f180dab8597db",
  "row_spacing": 1,
  "id": "897d2f727c6d11eea32f180dab8597db"
}
```


* **Response Parameter Description**

Field Name	Field Type	Field Description
enable	Boolean	Whether to enable this overlay item
type	String	Overlay item type, image for image overlay, time for time and date overlay, date for date overlay, clock for time overlay, text for text overlay
position	String	Overlay item position, LeftTop for top left, CenterTop for top center, RightTop for top right, LeftBottom for bottom left, CenterBottom for bottom center, RightBottom for bottom right, Center for center, Manual for custom
x	Integer	Overlay item x coordinate offset, effective when position is Manual
y	Integer	Overlay item y coordinate offset, effective when position is Manual
font_size	Integer	Overlay item font size, 0 for auto-large font, 1 for auto-medium, 2 for auto-small, other values for specific pixel size

font_color	Integer	Overlay item font color, 0 for black, 1 for white, 2 for red, 3 for blue, 4 for green, 5 for yellow, 6 for purple, 7 for cyan
style	String	Overlay item font style, normal for normal, bold for bold
outline	Integer	Overlay item border, 0 for no border, 1 for thin border, 2 for thick border
outline_color	Integer	Overlay item border color, 0 for black, 1 for white, 2 for red, 3 for blue, 4 for green, 5 for yellow, 6 for purple, 7 for cyan
text	String	Overlay item text content
file_id	String	Overlay item associated file ID
name	String	Overlay item image name
pic_url	String	Overlay item static image resource address
id	String	Overlay item unique ID

6.4.12 Modify OSD Material Information

* **Interface Description**

Modify OSD material information

* **Request URL**

/api/codec/{interface}/vpss/osd/{osd_id}

* **Request Method**

PUT

* **Request Parameters**

```
{
    "id": "897d2f727c6d11eea32f180dab8597db",
    "type": "text",
    "file_id": "3f33d7027c5111eea32f180dab8597db",
    "text": "12313666",
    "x": 200,
    "y": 200,
    "position": "Manual",
    "font_size": 1,
    "style": "bold",
    "outline": 2,
    "font_color": 3,
    "outline_color": 5,
    "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
id	String	Y	897d2f727c6d11eea32f180dab8597db	Specify which

				overlay item to modify
type	String	Y	text	Overlay type, image for image overlay, time for time and date overlay, date for date overlay, clock for time overlay, text for text overlay
file_id	String	Y		Only needed for image overlay, pass image ID
text	String	Y	123	Only needed for text overlay, text content
x	Integer	Y	0	Custom position x coordinate for overlay
y	Integer	Y	0	Custom position y coordinate for overlay
position	String	Y	LeftTop	Overlay position
font_size	Integer	Y	0	Overlay item font size, 0 for auto-large

				font, 1 for auto-medium, 2 for auto-small, other values for specific pixel size
style	String	Y	normal	Overlay text style, normal for normal, bold for bold
outline	Integer	Y	0	Overlay border
font_color	Integer	Y	1	Overlay item font color, 0 for black, 1 for white, 2 for red, 3 for blue, 4 for green, 5 for yellow, 6 for purple, 7 for cyan
outline_color	Integer	Y	1	Border color, 0 for black, 1 for white, 2 for red, 3 for blue, 4 for green, 5 for yellow, 6 for purple, 7 for cyan
enable	Boolean	Y	true	Whether to enable this overlay item

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.13 Delete OSD Material

* **Interface Description**

Delete single OSD overlay item

* **Request URL**

/api/codec/{interface}/vpss/osd/{osd_id}

* **Request Method**

DELETE

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.14 Apply Crop Parameters to Layout Settings

* **Interface Description**

In picture-in-picture mode, request this interface to apply hdmi/sdi crop parameters to current picture-in-picture layout. Need to pass current layout parameters.

* **Request URL**

/api/codec/{interface}/vpss/input/crop_apply

* **Request Method**

POST

* **Request Parameters**

```
[
  {
    "height": 100,
    "width": 100,
```

```
    "name": "hdmi",
    "x": 0,
    "y": 0,
    "zIndex": 1,
    "enable": true
  },
  {
    "height": 33.33,
    "width": 33.33,
    "name": "sdi",
    "x": 65,
    "y": 64,
    "zIndex": 2,
    "enable": true
  }
]
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
height	Integer	Y	100	Image height of the frame
width	Integer	Y	100	Image width of the frame
name	String	Y	hdmi	Video source name, hdmi/sdi
x	Integer	Y	0	X coordinate of the frame, calculated as percentage
y	Integer	Y	0	Y coordinate of the frame, calculated as percentage
zIndex	Integer	Y	1	Frame layer, higher number means higher layer
enable	Boolean	Y	true	Whether current video source frame is displayed

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.15 Get Static Frame Image List

* **Interface Description**

Get "static frame standby" images. When HDMI/SDI/USB has no signal, this image will be used as default output image

* **Request URL**

/api/codec/vpss/static_frame

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
[
  {
    "size_h": 1080,
    "size_w": 1920,
    "url": "/frame/static_frame.png",
    "path": "/data/storage/frame/static_frame.png",
    "yuv_path": "/data/storage/frame/static_frame.yuv",
    "id": "static_frame",
    "pixel_format": 0
  }
]
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
id	String	Image unique ID. Currently fixed as "static_frame"
size_h	Integer	Image height
size_w	Integer	Image width
url	String	Concatenate host to get static image resource
path	String	Image system path
yuv_path	String	YUV file system path

6.4.16 Upload Static Frame Image

* **Interface Description**

Upload static frame image

* **Request URL**

/api/codec/vpss/static_frame

* **Request Method**

POST

* **Request Parameters**

```
{
    "file": (binary)
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
file	Binary	Y		Image file

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

6.4.17 Reset Static Frame Preset Configuration

* **Interface Description**

Reset static frame image to default image

* **Request URL**

/api/codec/vpss/static_frame/reset

* **Request Method**

POST

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

Voice Intercom/Service of talk

7.1 Voice Intercom/Service of talk

7.1.1 Get Talk Service Version

* **Interface Description**

Get current version number of voice intercom server

* **Request URL**

/api/talk/talkVersion

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": {
    "version": "1.10.0003"
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
version	String	Version number

7.1.2 Set Language

* **Interface Description**

Set language

* **Request URL**

/api/talk/setLanguage

* **Request Method**

POST

* **Request Parameters**

```
{
  "language": "cn"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
language	String	Y	en	Language

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

7.1.3 Query Local Device Serial Number

* **Interface Description**

Query local device serial number

* **Request URL**

/api/talk/queryLocalDeviceSerial

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": {
    "serial": "201412000F1DB"
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
serial	String	Serial number

7.1.4 Delete Device

* **Interface Description**

Delete device

* **Request URL**

/api/talk/deleteDevice

* **Request Method**

POST

* **Request Parameters**

```
{
  "device_ip": "192.168.43.176"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description

device_ip	String	Y	192.168.43.176	Device IP

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

7.1.5 Query Device List

* **Interface Description**

Query device list

* **Request URL**

/api/talk/queryDeviceList

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "result": "ok",
  "msg": {
    "local_device": {
      "name": "P3-201412000F1DB",
      "ip": "192.168.35.35",
      "type": "device",
      "usb_status": false,
      "talk_status": false,
      "connect_status": "noconnect",
      "connect_ip": null,
      "connect_type": null,
      "version": "1.10.0003",
      "new_version": true,
      "http_port": 80,
      "https_port": 443
    },
    "other_device": []
  }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description

name	String	Device name
ip	String	Device IP
type	String	Device type
usb_status	Boolean	USB status
talk_status	Boolean	Talk status
connect_status	String	Connection status
connect_ip	String	Connection target IP
connect_type	String	Connection target type
version	String	Talk service version
new_version	Boolean	New or old version
http_port	Integer	Open HTTP port
https_port	Integer	Open HTTPS port

7.1.6 Add Device

* **Interface Description**

Add device

* **Request URL**

/api/talk/addDevice

* **Request Method**

POST

* **Request Parameters**

```
{
  "auth_code": "",
  "type": "device",
  "ip": "192.168.40.100",
  "http_port": 80,
  "https_port": 443,
  "serial": "7116110002301"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
auth_code	String	Y		KIS authorization code, auth_code is None when type is "device"
type	String	Y	device	Type, device, server
ip	String	Y	192.168.40.100	Device IP

http_port	Integer	Y	80	Device open HTTP port, default: 80
https_port	Integer	Y	443	Device open HTTPS port, default: 443
serial	String	Y	7116110002301	Serial number

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

7.1.7 Set Local Device Connection with Device

* **Interface Description**

Set local device connection with device

* **Request URL**

/api/talk/setLDLinkDEnable

* **Request Method**

POST

* **Request Parameters**

```
{
  "l_dev_ip": "192.168.38.74",
  "dev_ip": "192.168.40.100",
  "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
l_dev_ip	String	Y	192.168.38.74	Local device IP
dev_ip	String	Y	192.168.40.100	Target IP
enable	Boolean	Y	true	Whether to talk

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

7.1.8 Set Web Connection with Device

* **Interface Description**

Set web connection with device

* **Request URL**

/api/talk/setWLinkDEnable

* **Request Method**

POST

* **Request Parameters**

```
{
  "web_ip": "192.168.40.122",
  "dev_ip": "192.168.43.176",
  "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
web_ip	String	Y	192.168.40.122	Web IP
dev_ip	String	Y	192.168.43.176	Device IP
enable	Boolean	Y	true	Whether to talk

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

7.1.9 Set Device and Voice Server Connection

* **Interface Description**

Set device and voice server connection

* **Request URL**

/api/talk/setLDLinkSEnable

* **Request Method**

POST

* **Request Parameters**

```
{
  "l_dev_ip": "192.168.35.11",
  "ser_ip": "192.168.40.100",
```

```
  "enable": true
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
l_dev_ip	String	Y	192.168.35.11	Local device IP
ser_ip	String	Y	192.168.40.100	Target server IP
enable	Boolean	Y	true	Whether to talk

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

7.1.10 Device Request Connection, Connection Between Device and Local Device (Interface Not Open to Frontend)

* **Interface Description**

Device request connection, connection between device and local device (interface not open to frontend)

* **Request URL**

/api/talk/dLinkLDEnable

* **Request Method**

POST

* **Request Parameters**

```
{
  "c_dev_ip": "192.168.40.10",
  "c_dev_info": {
    "version": "1.10.0001",
    "http_port": 80,
    "https_port": 443
  },
  "s_dev_ip": "192.168.40.100"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
c_dev_ip	String	Y	192.168.40.10	Device IP
c_dev_info	Object	Y		Device information
s_dev_ip	String	Y	192.168.40.100	Local device IP

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

7.1.11 Notify Device to Delete Talk (Interface Not Open to Frontend)

* **Interface Description**

Notify device to delete talk (interface not open to frontend)

* **Request URL**

/api/talk/notifyDevDelTalk

* **Request Method**

POST

* **Request Parameters**

```
{
  "c_ip": "192.168.40.10",
  "s_ip": "192.168.40.100"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
c_ip	String	Y	192.168.40.10	Client device IP
s_ip	String	Y	192.168.40.100	Server device IP

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

7.1.12 Query Device Connection Status

* **Interface Description**

Query device connection status

* **Request URL**

/api/talk/queryLDeviceConnectStatus

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "result": "ok",
    "msg": {
        "connect_status": "noconnect",
        "connect_ip": "0.0.0.0"
    }
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
connect_status	String	Device connection status Not connected: noconnect; Connecting: connecting; Connected: connected
connect_ip	String	Device IP

ONVIF Service/Service of onvif

8.1 ONVIF Service/Service of onvif

8.1.1 Get ONVIF Service Status

* **Interface Description**

Query device connection status

* **Request URL**

/api/onvifmanage/onvif/get

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
  "discoverable": true,
  "control": {
```

```
    "enabled": true,
    "discover_port": 3702,
    "port": 8080
  },
  "admin_name": "admin",
  "admin_password": "",
  "auth_req": false,
  "location": "default",
  "device_name": "",
  "device_type": ""
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
discoverable	Boolean	Whether device can be discovered
control	Object	ONVIF control options
enable	Boolean	Whether ONVIF service is enabled
discover_port	Integer	ONVIF discovery service port
port	Integer	Device discovery port
admin_name	String	Username
admin_password	String	Password
auth_req	Boolean	Whether to enable user authentication
location	String	Location information
device_name	String	Device name
device_type	String	Device type

8.1.2 Set ONVIF Service Status

* **Interface Description**

Set ONVIF service status

* **Request URL**

/api/onvifmanage/onvif/set

* **Request Method**

POST

* **Request Parameters**

```
{
    "control": {
       "enabled": true,
       "discover_port": 3702,
       "port": 8080
    },
    "discoverable": true,
    "auth_req": false,
```

```
    "admin_name": "Admin",
    "admin_password": "",
    "location": "default",
    "device_name": "",
    "device_type": ""
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enabled	Boolean	Y	false	Whether ONVIF service is enabled
discover_port	Integer	Y	3702	ONVIF discovery service port (modification not supported yet)
port	Integer	Y	8080	Device discovery port
discoverable	Boolean	Y	true	When ONVIF service is enabled, whether device can be automatically discovered
auth_req	Boolean	Y	true	Whether to enable user authentication
admin_name	String	Y	admin	Username for authentication when authentication is enabled
admin_password	String	Y	Admin123	User password for authentication when authentication is enabled, defaults to Admin123 if empty
location	String	Y	default	Location information
device_name	String	Y	E3	Device name
device_type	String	Y	E3	Device type

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None

9. NDI Bridge Service/Bridge service

9.1 NDI Bridge Service/Bridge service

9.1.1 Get Bridge Settings

* **Interface Description**

Call this interface to get current NDI bridge configuration.

* **Request URL**

/api/bridge/get

* **Request Method**

GET

* **Request Parameters**

None

* **Request Parameter Description**

None

* **Response Parameters**

```
{
    "enable": true,
    "recv": "Public",
    "address": "192.168.35.70",
    "port": "5990",
    "secure": "",
    "id": "E3"
}
```

* **Response Parameter Description**

Field Name	Field Type	Field Description
enable	Boolean	Whether NDI bridge is enabled
recv	String	Group name to share to access group, default is Public
address	String	Public IP of NDI Host to connect to
port	String	Corresponding port number of NDI Host, default 5990
secure	String	Encryption key required for connection, default is empty
id	String	Name of source mapped to NDI Host

9.1.2 Set Bridge Configuration

* **Interface Description**

Set bridge configuration.

* **Request URL**

/api/bridge/set

* **Request Method**

POST

* **Request Parameters**

```
{
    "enable": true,
    "recv": "Public",
```

```
    "address": "192.168.35.70",
    "port": "5990",
    "secure": "",
    "id": "E3"
}
```

* **Request Parameter Description**

Parameter Name	Parameter Type	Required	Sample Value	Description
enabled	Boolean	Y	false	Whether NDI bridge is enabled
recv	String	Y	Public	Group name to share to access group, default is Public
address	String	Y	192.168.35.70	Public IP of NDI Host to connect to
port	String	Y	5990	Corresponding port number of NDI Host, default 5990
secure	String	Y		Encryption key required for connection, default is empty
id	String	Y	E3	Name of source mapped to NDI Host

* **Response Parameters**

```
{
    "result": "ok",
    "msg": null
}
```

* **Response Parameter Description**

None