

CAM-0402-BRG

Application Programming Interface

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0. Device Communication

0.1 Overview

The following contains the connection and commands to control the CAM-0402-BRG. By following the content contained in this document, the device can be controlled and configured via 3rd party control system.

! IMPORTANT NOTE: Due to differences between WyreStorm device model versions within a series, some commands have different parameters based on the model and version. These differences are noted where applicable and should be followed, as sending an incorrect parameter may cause the unit to lock up and become inoperable.

0.2 Network Connection

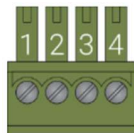
By default, the IP address is assigned by the DHCP server. If the DHCP server is not available the unit will use a link local IP address based on its MAC address, if the unit was not already configured via the Web interface.

Default communication port number is 23.

0.3 Serial Connection

The CAM-0402-BRG uses a 3-pin RS-232 with no hardware flow control. Most control systems and computers are DTE where pin 2 is RX, this can vary from device to device. Refer to the documentation for the connected device for pin functionality to ensure that the correct connections can be made.

RS-232 Settings
Baud Rate: 9600
Data Bits: 8bits
Parity: None
Stop Bits: 1bit
Flow Control: None



WyreStorm Connector			3 rd Party device
Pin 1	12V DC Out	No Connection	Reserved
Pin 2	TX (Transmit)	---> To --->	RX (Receive)
Pin 3	RX (Receive)	---> To --->	TX (Transmit)
Pin 4	G (Ground)	---> To --->	G (Ground)

0.4 Command Delimiters for Sent Commands

All commands should be delimited with carriage return and line feed.

Accepted delimiter characters are:

Character	Shorthand	Hex Notation	Escape Notation	Decimal Notation
Line Feed	LF	0A	\n	10
Carriage Return + Line Feed	CR LF	0D 0A	\r\n	13 10

Please note, most 3rd party control software will either append these characters automatically or an option to specify them will be present. It is important that the last delimited character is LF and not CR.

1. Device Management

1.1 Set Device Alias

Set an alias for the device

Command Structure SET ALIAS < DeviceName >	Parameters: DeviceName = The alias to set, up to 31 characters long, only allows letters (case-sensitive), numbers, spaces, underscores ('_'), dashes ('-'), and spaces. Spaces cannot appear at the beginning or end.
Response Structure ALIAS < DeviceName >	
Command Example SET ALIAS MeetingRoom	
Response Example ALIAS MeetingRoom	
Additional Notes: Default value:CAM-0402-XXXX,where XXXXis the last two hexadecimal digits of the MAC address. For example, CAM-0402-BRG-327C	

1.2 Get Device Alias

Command Structure GET ALIAS	Parameters:
Response Structure ALIAS < DeviceName >	
Command Example GET ALIAS	
Response Example ALIAS MeetingRoom	
Additional Notes:	

1.3 Get Device Version Information

Command Structure GET VER < ALL ModuleName >	Parameters: ModuleName = The software module you want to get information for, currently supports the following values: MAINSOC, CAMCHIP, VIDEOCHIP ALL = Get version information for all software modules, the device returns version information for all software modules line by line
Response Structure VER < ModuleName > < Version > or VER < ModuleName1 > < Version1 > VER < ModuleName2 > < Version2 > ...	
Command Example GET VER MAINSOC	
Response Example VER MAINSOC 1.4.0	
Additional Notes:	

1.4 Device Reboot

Command the device to restart

Command Structure REBOOT	Parameters:
Response Structure REBOOT	
Command Example REBOOT	
Response Example REBOOT	
Additional Notes:	

1.5 Device Reset

Command to restore factory settings on the device

Command Structure RESET	Parameters:
Response Structure RESET	
Command Example RESET	
Response Example RESET	
Additional Notes:	

1.6 Get Device Serial Number

Read device serial number information

Command Structure GET SYS_SN	Parameters:
Response Structure SYS_SN < SerialNumber >	
Command Example GET SYS_SN	
Response Example SYS_SN WS29125260001	
Additional Notes:	

1.7 Get MAC Address

Get the device's MAC address information

Command Structure GET MACADDR	Parameters:
Response Structure MACADDR < MACAddress >	
Command Example GET MACADDR	
Response Example MACADDR E4:CE:02:13:5F:A1	
Additional Notes:	

2. Input/Output Settings

2.1 Set Output Resolution

Set the resolution for the HDMI output. You can directly specify a resolution or let the device choose the resolution automatically.

Command Structure SET VIDOUT_RES [OUT1] < AUTO Resolution >	Parameters: AUTO= Automatically selects the best resolution for the connected display based on its EDID. Resolution = A specific resolution, with the following available options: 3840x2160P@30 2560x1440P@30 1920x1080P@60 1920x1080P@50 1920x1080P@30 1680x1050P@60 1600x1200P@60 1440x900P@60 1366x768P@60 1280x1024P@60 1280x800P@60 1280x720P@60 1024x768P@60 720x576P@50 720x480P@60
Response Structure VIDOUT_RES OUT1 < AUTO Resolution >	
Command Example SET VIDOUT_RES OUT1 AUTO	
Response Example VIDOUT_RES OUT1 AUTO	
Additional Notes: The HDMI output automatically chooses the resolution when set to AUTO.	

2.2 Get Output Resolution

Get the resolution of the video output interface

Command Structure GET VIDOUT_RES < OUT1 USB ALL >	Parameters: ALL = Get the resolution of both output interfaces, and the device will return two lines with each output interface's resolution. AUTO= An output interface is set to automatic resolution DISCONNECTED=The HDMI interface is set to AUTOMode but no display is connected, or the USBHOST interface declared UVC device is not open.
Response Structure VIDOUT_RES < OUT1 USB > < Resolution DISCONNECTED > [AUTO] or VIDOUT_RES OUT1 < Resolution DISCONNECTED > [AUTO] VIDOUT_RES USB < Resolution DISCONNECTED >	
Command Example GET VIDOUT_RES OUT1	
Response Example VIDOUT_RES OUT1 3840x2160P@30 AUTO	
Additional Notes:	

2.3 Set HD MODE

Set the USBHOST output interface to HD mode

The USBHOST interface provides video output using the UVC protocol, but its resolution cannot be directly specified. It can only choose from a set of resolutions that the device supports.

This API allows you to configure that set of resolutions. When the setting is enabled, the set only includes resolutions of 720P@30 and above.

Command Structure SET UVC_HDMODE < ON OFF >	Parameters:
Response Structure UVC_HDMODE < ON OFF >	
Command Example SET UVC_HDMODE OFF	
Response Example UVC_HDMODE OFF	
Additional Notes: Default value: HD mode is enabled with the setting ON.	

2.4 Get HD MODE

Get the HD mode status of the USBHOST output interface

Command Structure GET UVC_HDMODE	Parameters:
Response Structure UVC_HDMODE < ON OFF >	
Command Example GET UVC_HDMODE	
Response Example UVC_HDMODE OFF	
Additional Notes:	

2.5 Set Output Interface HDCP

Set whether HDCP is enabled on the output interface

Command Structure SET HDCP OUT1 < ON OFF >	Parameters:
Response Structure HDCP OUT1 < ON OFF >	
Command Example SET HDCP OUT1 OFF	
Response Example HDCP OFF	
Additional Notes: Default value: HDMI output interface HDCP is enabled, configuration value is ON.	

2.6 Get Output Interface HDCP

Check if HDCP is enabled on the output interface

Command Structure GET HDCP OUT1	Parameters:
Response Structure HDCP OUT1 < ON OFF >	
Command Example GET HDCP OUT1	
Response Example HDCP OFF	
Additional Notes:	

2.7 Get Input Connection Status

Get the connection status of input interfaces. The judgment criteria for different input interfaces vary:
HDMI input is based on a +5V signal, USBinput is based on the insertion of a USBdevice, NDI input is based on whether the NDIinput channel is assigned an NDI video source

Command Structure GET VIDIN_CONNECT < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 ALL >	Parameters: ALL = Get the connection status of all input interfaces
Response Structure VIDIN_CONNECT < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 > < DISCONNECTED CONNECTED > or VIDIN_CONNECT IN1 < DISCONNECTED CONNECTED > VIDIN_CONNECT IN2 < DISCONNECTED CONNECTED > VIDIN_CONNECT IN3 < DISCONNECTED CONNECTED > VIDIN_CONNECT IN4 < DISCONNECTED CONNECTED > VIDIN_CONNECT NDI1 < DISCONNECTED CONNECTED > VIDIN_CONNECT NDI2 < DISCONNECTED CONNECTED > VIDIN_CONNECT NDI3 < DISCONNECTED CONNECTED > VIDIN_CONNECT NDI4 < DISCONNECTED CONNECTED >	
Command Example GET VIDIN_CONNECT IN2	
Response Example VIDIN_CONNECT IN2 DISCONNECTED	
Additional Notes:	

2.8 Get Input Signal Status

Get input signal status, NO in the response message means invalid or no signal, VALID means valid or signal present .
USBinput with UVCdevice opened and receiving video data normally is considered valid. NDI input receiving valid stream is considered valid

Command Structure GET VIDIN_SIG < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 ALL >	Parameters: ALL = Get the status of all input signals
Response Structure VIDIN_SIG < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 > < NO VALID > or VIDIN_SIG IN1 < NO VALID > VIDIN_SIG IN2 < NO VALID > VIDIN_SIG IN3 < NO VALID > VIDIN_SIG IN4 < NO VALID > VIDIN_SIG NDI1 < NO VALID > VIDIN_SIG NDI2 < NO VALID > VIDIN_SIG NDI3 < NO VALID > VIDIN_SIG NDI4 < NO VALID >	
Command Example GET VIDIN_SIG IN3	
Response Example VIDIN_SIG IN3 VALID	
Additional Notes:	

2.9 Get Input Video Format

Get the video format of the input signal

Command Structure GET VIDIN_FORMAT < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 ALL >	Parameters: ALL = Get the video formats of all input interfaces INVALID = No valid video signal detected on the input interface
Response Structure VIDIN_FORMAT < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 > < INVALID VideoFormat > or VIDIN_FORMAT IN1 < INVALID VideoFormat > VIDIN_FORMAT IN2 < INVALID VideoFormat > VIDIN_FORMAT IN3 < INVALID VideoFormat > VIDIN_FORMAT IN4 < INVALID VideoFormat > VIDIN_FORMAT NDI1 < INVALID VideoFormat > VIDIN_FORMAT NDI2 < INVALID VideoFormat > VIDIN_FORMAT NDI3 < INVALID VideoFormat > VIDIN_FORMAT NDI4 < INVALID VideoFormat >	The format of the parameter VideoFormat: < WidthXHeight[P],FrameRate;HDRInfo;EncMode;ColorDepth > The value and meaning of every field are as follows: - Width = The width of the video - Height = The height of the video - P = Progressive video format - FrameRate = Frame rate - HDRInfo = Whether HDR format, now the device does not support HDR, so its value is always NONE HDR. - EncMode = Encoding mode, available values are RGB, YUV444, YUV422, H.264 - ColorDepth = Color depth, now only 8BIT - An actual example of VideoFormat: 1920X1080P,60;NONE HDR;RGB;8BIT
Command Example GET VIDIN_FORMAT IN2	
Response Example VIDIN_FORMAT IN2 3840X2160P,60;NONE HDR;RGB;8BIT	
Additional Notes:	

2.10 Get Input Audio Format

Get the audio format of the input signal

Currently, NDI input does not support audio

Command Structure GET AUDIN_FORMAT < IN1 IN2 IN3 IN4 ALL >	Parameters: ALL = Get the audio format for all input ports.
Response Structure AUDIN_FORMAT < IN1 IN2 IN3 IN4 > < INVALID AudioFormat > or AUDIN_FORMAT IN1 < INVALID AudioFormat > AUDIN_FORMAT IN2 < INVALID AudioFormat > AUDIN_FORMAT IN3 < INVALID AudioFormat > AUDIN_FORMAT IN4 < INVALID AudioFormat >	INVALID = No valid audio signal found on the input port. The format of the parameter AudioFormat: < Encoding;SamplingRate;SamplingWidth > The value and meaning of each field are as follows: - Encoding = The audio encoding type, possible values are PCM, AAC, MP3, and OPUS - SamplingRate = Sampling rate, e.g., 48kHz - SamplingWidth = Sampling width, possible values are 8BIT and 16BIT. An actual example of AudioFormat: PCM;48kHz;8BIT
Command Example GET AUDIN_FORMAT IN3	
Response Example AUDIN_FORMAT IN3 PCM;48kHz;8BIT	
Additional Notes:	

2.11 Get Output Connection Status

Check the connection status of output interfaces. The connection status of the USBHOST is based on whether the UVC device is open.

Command Structure GET VIDOUT_CONNECT < OUT1 USB ALL >	Parameters: ALL = Get the connection status of both output interfaces.
Response Structure VIDOUT_CONNECT < OUT1 USB > < CONNECTED DISCONNECTED > or VIDOUT_CONNECT OUT1 < CONNECTED DISCONNECTED > VIDOUT_CONNECT USB < CONNECTED DISCONNECTED >	
Command Example GET VIDOUT_CONNECT USB	
Response Example VIDOUT_CONNECT USB CONNECTED	
Additional Notes:	

3. Video Switching

3.0 Network Device Control API

This API allows you to manage and control AV devices over IP networks. You can send commands to turn devices on or off, change inputs, or adjust volume.

Command Structure Send a command using the HTTP POST method with JSON encoding.	Parameters: - action: Specifies the command to be executed, such as "power_on" or "volume_up". - device_id: A unique identifier for each device on the network.
Response Structure The API responds with a JSON object indicating success or failure and any relevant data.	
Command Example POST /api/control {"action": "power_on", "device_id": "12345"}	
Response Example {"status": "success", "message": "Device powered on."}	
Additional Notes: Ensure all commands are sent over a secure connection to protect device control.	

3.1 Set Fast Seamless Switching

Set whether to enable low latency mode. In low latency mode, the device turns on the camera at 1080P resolution, and USB and HDMI outputs also use the same resolution to achieve lower latency and faster switching speed. If you want to support 4K resolution, you need to turn off low latency mode.

Command Structure SET LOW_LATENCY_FN < ON OFF >	Parameters:
Response Structure LOW_LATENCY_FN < ON OFF >	
Command Example SET LOW_LATENCY_FN OFF	
Response Example LOW_LATENCY_FN OFF	
Additional Notes: Default value: Low latency mode is on, config value is ON	

3.2 Get Fast Seamless Switch

Command Structure GET LOW_LATENCY_FN	Parameters:
Response Structure LOW_LATENCY_FN < ON OFF >	
Command Example GET LOW_LATENCY_FN	
Response Example LOW_LATENCY_FN OFF	
Additional Notes:	

3.3 Switch Input Source

Switch the input to display fullscreen on all outputs

Command Structure SET SW < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 NONE >	Parameters: NONE= Switch to fullscreen mode but do not display any video source
Response Structure SW < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 NONE >	
Command Example SET SW IN1	
Response Example SW IN1	
Additional Notes:	

3.4 Get Display Status

Get the current status of the video source being displayed

Command Structure GET SW	Parameters: NONE = No video source is currently being displayed MV = Currently in multi-view mode, need to use multi-view related API to get more information
Response Structure SW < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 NONE MV >	
Command Example GET SW	
Response Example SW IN1	
Additional Notes:	

3.5 Set current layout

Switch multi-screen layout

The parameter is the layout name and is case-sensitive.

Command Structure SET MV_LAYOUT < FULLSCREEN PIP SBS LBRS PYRAMID QUAD >	Parameters: Parameter is the layout name, case-sensitive
Response Structure MV_LAYOUT < FULLSCREEN PIP SBS LBRS PYRAMID QUAD >	
Command Example SET MV_LAYOUT PIP	
Response Example MV_LAYOUT PIP	
Additional Notes:	

3.6 Set current layout with ID

Change the multiview layout

The parameter is the layout ID in hexadecimal format

Command Structure SET MV_LAYOUT < 0X100 0X101 0X102 0X103 0X104 >	Parameters: The six hexadecimal IDs match with the six layout names from the previous API.
Response Structure MV_LAYOUT < 0X100 0X101 0X102 0X103 0X104 0X105 >	
Command Example SET MV_LAYOUT 0X101	
Response Example MV_LAYOUT 0X101	
Additional Notes:	

3.7 Get Current Layout

Get the ID and name of the current multi-view layout

Command Structure GET MV_LAYOUT	Parameters:
Response Structure MV_LAYOUT < < 0X100 FULLSCREEN > < 0X101 PIP > < 0X102 SBS > < 0X103 LBRS > < 0X104 PYRAMID > < 0X105 QUAD > >	
Command Example GET MV_LAYOUT	
Response Example MV_LAYOUT 0X101 PIP	
Additional Notes:	

3.8 Set Layout and Video Source

Switch multi-window layout and set video sources for each sub-window

Command Structure SET MV_WIN_SRC < FULLSCREEN PIP SBS LBRS PYRAMID QUAD CURRENT > < WinNo1 > < Src1 > < WinNo2 > < Src2 > ...	Parameters: CURRENT=Keep the current layout unchanged, only switch the video source of specified windows WinNo can be plain numbers like 1 2 3, or in the form of Win1 Win2 Win3, etc. Src1 Src2... range from < IN1 IN2 IN3 IN4 NDI1 NDI2 NDI3 NDI4 NONE > - NONE= No video source is displayed in the sub-window, leaving it empty
Response Structure MV_WIN_SRC < FULLSCREEN PIP SBS LBRS PYRAMID QUAD > < WinNo1 > < Src1 > < WinNo2 > < Src2 > ...	
Command Example SET MV_WIN_SRC PIP 1 IN1 2 IN2	
Response Example MV_WIN_SRC PIP 1 IN1 2 IN2	
Additional Notes:	

3.9 Get Layout and Video Source

Get the current layout and video source for each sub-window

Command Structure GET MV_WIN_SRC	Parameters:
Response Structure MV_WIN_SRC < FULLSCREEN PIP SBS LBRS PYRAMID QUAD > < WinNo1 > < Src1 > < WinNo2 > < Src2 > ...	
Command Example GET MV_WIN_SRC	
Response Example MV_WIN_SRC PIP 1 IN1 2 IN2	
Additional Notes:	

3.10 Get Video Source for Specific Window

Get the video source for a specific sub-window

Command Structure GET MV_WIN_SRC CURRENT WinNo	Parameters:
Response Structure MV_WIN_SRC CURRENT < WinNo > < Src >	
Command Example GET MV_WIN_SRC CURRENT WIN2	
Response Example MV_WIN_SRC CURRENT WIN2 IN2	
Additional Notes: This API function is a subset of the previous API, used for adapting SYN-TOUCH10	

4. Audio Processing

4.1 Set Audio Mixing

The device has a built-in audio DSP, supporting audio matrix functions. It supports three audio inputs (DspIn: USBIN, HDMIIN, USBHOST) and three audio outputs (DspOut: USBIN, HDMIOUT, USBHOST), allowing any audio input to mix with any audio output signal. This API is used to set the mixing switch of a specific crosspoint in the audio matrix. To avoid audio signal feedback self-excitation, the following mixing configurations are prohibited:

USBIN --> USBIN

USBHOST --> USBHOST

Command Structure SET DSP_MIX < USBIN HDMIOUT USBHOST > < USBIN HDMIIN USBHOST > < ON OFF >	Parameters: The first parameter is the audio output. The second parameter is the audio input. ON = The specified input participates in the mix with the specified output.
Response Structure DSP_MIX < USBIN HDMIOUT USBHOST > < USBIN HDMIIN USBHOST > < ON OFF >	
Command Example SET DSP_MIX HDMIOUT HDMIIN ON	
Response Example DSP_MIX HDMIOUT HDMIIN ON	
Additional Notes: Default value: USBHOST input audio mixes with USBIN output audio, i.e., DSP_MIX USBIN USBHOST ON All other crosspoints are OFF.	

4.2 Get Mixing Settings for Specific Input and Output

Command Structure GET DSP_MIX < USBIN HDMIOUT USBHOST > < USBIN HDMIIN USBHOST >	Parameters: The first parameter is the audio output. The second parameter is the audio input.
Response Structure DSP_MIX < USBIN HDMIOUT USBHOST > < USBIN HDMIIN USBHOST > < ON OFF >	
Command Example GET DSP_MIX HDMIOUT HDMIIN	
Response Example DSP_MIX HDMIOUT HDMIIN ON	
Additional Notes:	

4.3 Get Specified Output Audio Source (Mixing Settings)

Find out which audio inputs are mixed to create the audio for a specified output

Command Structure GET DSP_MIX < USBIN HDMIOUT USBHOST ALL >	Parameters: The request message specifies an audio output The response message lists all audio inputs that are mixed for the audio output DspIn represents one of the DSP's three audio input channels (USBIN, HDMIIN, USBHOST) ALL = Get audio sources for all output channels
Response Structure DSP_MIX < USBIN HDMIOUT USBHOST > < DSPIn1 > < DSPIn2 > ... > ... or DSP_MIX USBIN < DSPIn1 > < DSPIn2 > ... DSP_MIX HDMIOUT < DSPIn1 > < DSPIn2 > ... DSP_MIX USBHOST < DSPIn1 > < DSPIn2 > ...	
Command Example GET DSP_MIX HDMIOUT	
Response Example DSP_MIX HDMIOUT USBIN HDMIIN	
Additional Notes:	

4.4 Set Audio Input Channel

Only one of the two USB input audio signals can be sent to the audio matrix processing in the device, and the same restriction applies to the two HDMI inputs.

This API is used to select one audio signal from the two USB or HDMI inputs for processing.

Command Structure 1. Set USB input audio channel SET DSP_AUD_SRC USBIN < IN1 IN2 > 2. Set HDMI input audio channel SET DSP_AUD_SRC HDMIIN < IN3 IN4 >	Parameters:
Response Structure DSP_AUD_SRC USBIN < IN1 IN2 > or DSP_AUD_SRC HDMIIN < IN3 IN4 >	
Command Example SET DSP_AUD_SRC USBIN IN2	
Response Example DSP_AUD_SRC USBIN IN2	
Additional Notes: Default values: Audio from USBIN comes from IN1 Audio from HDMIIN comes from IN3	

4.5 Get Audio Input Channel

Command Structure GET DSP_AUD_SRC < USBIN HDMIIN ALL >	Parameters: ALL = Get audio channels from both USB and HDMI inputs at the same time
Response Structure DSP_AUD_SRC USBIN < IN1 IN2 > or DSP_AUD_SRC HDMIIN < IN3 IN4 > or DSP_AUD_SRC USBIN < IN1 IN2 > DSP_AUD_SRC HDMIIN < IN3 IN4 >	
Command Example GET DSP_AUD_SRC USBIN	
Response Example DSP_AUD_SRC USBIN IN2	
Additional Notes:	

4.6 Set Audio Input Mute

The audio matrix can mute the input, and this API sets up this function.

Command Structure SET DSP_AUD_GAIN_MUTE < USBIN HDMIIN USBHOST > < ON OFF >	Parameters: USBHOST= The audio input channel in the USB HOST interface
Response Structure DSP_AUD_GAIN_MUTE < USBIN HDMIIN USBHOST > < ON OFF >	
Command Example SET DSP_AUD_GAIN_MUTE USBIN ON	
Response Example DSP_AUD_GAIN_MUTE USBIN ON	

4.7 Get Audio Input Mute Status

Command Structure GET DSP_AUD_GAIN_MUTE < USBIN HDMIIN USBHOST ALL >	Parameters: ALL = Get mute settings for all audio input channels
Response Structure DSP_AUD_GAIN_MUTE < USBIN HDMIIN USBHOST > < ON OFF > > or DSP_AUD_GAIN_MUTE USBIN < ON OFF > DSP_AUD_GAIN_MUTE HDMIIN < ON OFF > DSP_AUD_GAIN_MUTE USBHOST < ON OFF >	
Command Example GET DSP_AUD_GAIN_MUTE USBIN	
Response Example DSP_AUD_GAIN_MUTE USBIN ON	
Additional Notes: none	

4.8 Set Audio Input Gain

The audio matrix can adjust input gain. This API sets this function. When adjusting gain, the corresponding input channel will be unmuted.

Command Structure SET DSP_AUD_GAIN < USBIN HDMIIN USBHOST > < Gain >	Parameters: Gain = Input gain, measured in dB, with a range of [-20, +30]
Response Structure DSP_AUD_GAIN < USBIN HDMIIN USBHOST > < Gain >	
Command Example SET DSP_AUD_GAIN USBIN -10	
Response Example DSP_AUD_GAIN USBIN -10	
Additional Notes: Default: No gain adjustment is applied to input audio, configuration value is 0	

4.9 Get Audio Input Gain

Command Structure GET DSP_AUD_GAIN < USBIN HDMIIN USBHOST ALL >	Parameters: ALL = Get gain settings for all input channels
Response Structure DSP_AUD_GAIN < USBIN HDMIIN USBHOST > < Gain > or DSP_AUD_GAIN USBIN < Gain1 > DSP_AUD_GAIN HDMIIN < Gain2 > DSP_AUD_GAIN USBHOST < Gain3 >	
Command Example GET DSP_AUD_GAIN USBIN	
Response Example DSP_AUD_GAIN USBIN -10	
Additional Notes:	

4.10 Set Audio Output Mute

The audio matrix can mute the output, and this API sets up that function.

Command Structure SET DSP_AUD_VOL_MUTE < USBIN HDMIOUT USHHOST > < ON OFF >	Parameters: USBIN= Audio output channel from USBinput; the two USBinputs always output the same audio signal
Response Structure DSP_AUD_VOL_MUTE < USBIN HDMIOUT USHHOST > < ON OFF >	
Command Example SET DSP_AUD_VOL_MUTE USHHOST ON	
Response Example DSP_AUD_VOL_MUTE USHHOST ON	
Additional Notes: Default value: Audio output is not muted, configuration value is OFF	

4.11 Get Audio Output Mute

Command Structure GET DSP_AUD_VOL_MUTE < USBIN HDMIOUT USHHOST ALL >	Parameters: ALL = Get mute settings for all output channels
Response Structure DSP_AUD_VOL_MUTE < USBIN HDMIOUT USHHOST > < ON OFF > or DSP_AUD_VOL_MUTE USBIN < ON OFF > DSP_AUD_VOL_MUTE HDMIOUT < ON OFF > DSP_AUD_VOL_MUTE USHHOST < ON OFF >	
Command Example GET DSP_AUD_VOL_MUTE USHHOST	
Response Example DSP_AUD_VOL_MUTE USHHOST ON	
Additional Notes:	

4.12 Set Audio Output Volume

The audio matrix can adjust output volume; this API sets that function. When adjusting the volume, the respective output channel will be unmuted.

Command Structure SET_DSP_AUD_VOL < USBIN HDMIOUT USHHOST > < Volume >	Parameters: Volume = Output volume in dB, range [-100,0]
Response Structure DSP_AUD_VOL < USBIN HDMIOUT USHHOST > < Volume >	
Command Example SET_DSP_AUD_VOL USBHOST -10	
Response Example DSP_AUD_VOL USBHOST -10	
Additional Notes: Default value: do not adjust output volume, set value is 0	

4.13 Get Audio Output Volume

Command Structure GET_DSP_AUD_VOL < USBIN HDMIOUT USHHOST ALL >	Parameters: ALL = Get the volume of all output channels
Response Structure DSP_AUD_VOL < USBIN HDMIOUT USHHOST > < Volume > or DSP_AUD_VOL USBIN < Volume1 > DSP_AUD_VOL HDMIOUT < Volume2 > DSP_AUD_VOL USHHOST < Volume3 >	
Command Example GET_DSP_AUD_VOL USBHOST	
Response Example DSP_AUD_VOL USBHOST -10	
Additional Notes:	

5. Sleep/Standby and Peripheral Control

5.1 Set Auto Standby

Set the device auto standby feature. When the auto standby is turned on, if the device is idle (not displaying any video source) for a certain time (defined by the standby timeout value), it will send a shutdown command to all connected displays and turn off HDMI +5V and TMDSSignals.

Command Structure SET AUTO_STANDBY_FN < ON OFF >	Parameters: ON= Enable auto standby feature
Response Structure AUTO_STANDBY_FN < ON OFF >	
Command Example SET AUTO_STANDBY_FN OFF	
Response Example AUTO_STANDBY_FN OFF	
Additional Notes: Default value:ON	

5.2 Get Auto Standby

Get device auto standby switch status

Command Structure GET AUTO_STANDBY_FN	Parameters:
Response Structure AUTO_STANDBY_FN < ON OFF >	
Command Example GET AUTO_STANDBY_FN	
Response Example AUTO_STANDBY_FN OFF	
Additional Notes:	

5.3 Set Auto Standby Timeout

Set the auto standby timeout value

Command Structure SET AUTO_STANDBY_D < TimeOut >	Parameters: TimeOut range is 0-3600, measured in seconds
Response Structure AUTO_STANDBY_D < TimeOut >	
Command Example SET AUTO_STANDBY_D	
Response Example AUTO_STANDBY_D 100	
Additional Notes: Default value: 120	

5.4 GetAuto Standby Timeout

Get the auto standby timeout value

Command Structure GET AUTO_STANDBY_D	Parameters:
Response Structure AUTO_STANDBY_D < TimeOut >	
Command Example GET AUTO_STANDBY_D	
Response Example AUTO_STANDBY_D 100	
Additional Notes:	

5.5 Set Device Power On or Standby

Manually control device power on or standby

Command Structure SET STANDBY < ON OFF >	Parameters: ON = Power On OFF = Standby
Response Structure STANDBY < ON OFF >	
Command Example SET STANDBY ON	
Response Example STANDBY ON	
Additional Notes:	

5.6 Check Device Standby

Check if the device is powered on

Command Structure GET STANDBY	Parameters:
Response Structure STANDBY < ON OFF >	
Command Example GET STANDBY	
Response Example STANDBY ON	
Additional Notes:	

5.7 Send CECPower On/Off Command

Send a CECpower on or off command to a specific output interface

Command Structure SET CEC_PWR OUT1 < ON OFF >	Parameters:
Response Structure CEC_PWR OUT1 < ON OFF >	
Command Example SET CEC_PWR OUT1 ON	
Response Example CEC_PWR OUT1 ON	
Additional Notes:	

5.8 Set CECPower On/Off Command

Set the CECpower on or off command for a specific output port

Command Structure SET CECCMD_EDIT OUT1 < ON OFF > < CECCode >	Parameters: The parameter CECCode is the actual CEC message string in hexadecimal format, with no spaces between the bytes.
Response Structure CECCMD_EDIT OUT1 < ON OFF > < CECCode >	
Command Example SET CECCMD_EDIT OUT1 ON 4004	
Response Example CECCMD_EDIT OUT1 ON 4004	
Additional Notes: Default Values: Power On 4004 Power Off FF36	

5.9 Get CECPower Command

Get the CECpower on or off command for a specified output interface

Command Structure GET CECCMD_EDIT OUT1 < ON OFF >	Parameters:
Response Structure CECCMD_EDIT OUT1 < ON OFF > < CECCode >	
Command Example GET CECCMD_EDIT OUT1 ON	
Response Example CECCMD_EDIT OUT1 ON 4004	
Additional Notes:	

5.10 Send CECCommand String

Send a CECcommand string directly to a specific output interface

Command Structure SET CEC_CMD OUT1 < CECCode >	Parameters:
Response Structure CEC_CMD OUT1 < CECCode >	
Command Example SET CEC_CMD OUT1 4004	
Response Example CEC_CMD OUT1 4004	
Additional Notes:	

5.11 Set Serial Port Parameters

Configure four parameters of the serial port, including baud rate

Command Structure SET UART_CFG < BaudRate > < Parity > < DataBit > < StopBit >	Parameters: BaudRate is the baud rate, options are 9600, 19200, 38400, 57600, 115200 Parity indicates parity check, options are NONE, ODD, EVEN DataBit is the number of data bits, options are 7, 8 StopBit is the number of stop bits, options are 1, 2
Response Structure UART_CFG < BaudRate > < Parity > < DataBit > < StopBit >	
Command Example SET UARG_CFG 115200 NONE 8 1	
Response Example UARG_CFG 115200 NONE 8 1	
Additional Notes: Default values: 115200 NONE 8 1	

5.12 Get Serial Port Parameters

Get baud rate and other parameters of the serial port

Command Structure GET UARG_CFG	Parameters:
Response Structure UART_CFG < BaudRate > < Parity > < DataBit > < StopBit >	
Command Example GET UARG_CFG	
Response Example UARG_CFG 115200 NONE 8 1	
Additional Notes:	

5.13 Set Serial Port Baud Rate

Set the baud rate for the serial port

Command Structure SET UART_B < BaudRate >	Parameters:
Response Structure UART_B < BaudRate >	
Command Example SET UART_B 115200	
Response Example UART_B 115200	
Additional Notes:	

5.14 Get Serial Port Baud Rate

Get the baud rate parameter of the serial port

Command Structure GET UART_B	Parameters:
Response Structure UART_B < BaudRate >	
Command Example GET UART_B	
Response Example UART_B 115200	
Additional Notes:	

5.15 Set Serial Port Command

Set a serial port command

Command Structure SET UART_CMD <CmdName> <HEX STR> <CmdStr>	Parameters: CmdName = Command name, can be custom commands like VolumeUp, besides ON and OFF HEX= Command in hexadecimal format STR= Command in string format CmdStr = Command string; no spaces needed between bytes in a hex string.
Response Structure UART_CMD <CmdName> <HEX STR> <CmdStr>	
Command Example SET UART_CMD ON STR PowerOn	
Response Example UART_CMD ON STR PowerOn	
Additional Notes: By default, no serial port commands are defined.	

5.16 Delete Serial Port Command

Delete a serial port command

Command Structure SET UART_CMD_D < CmdName >	Parameters:
Response Structure UART_CMD_D < CmdName >	
Command Example SET UART_CMD_D ON	
Response Example UART_CMD_D ON	
Additional Notes:	

5.17 Get Serial Commands

Get one or all serial commands

Command Structure GET UART_CMD < CmdName ALL >	Parameters:
Response Structure UART_CMD < CmdName > < HEX STR > < CmdStr > or UART_CMD < CmdName1 > < HEX STR > < CmdStr1 > UART_CMD < CmdName2 > < HEX STR > < CmdStr2 > ...	
Command Example GET UART_CMD ON	
Response Example UART_CMD ON STR PowerOn	
Additional Notes:	

5.18 Send Serial Port Command

Send a pre-defined serial port command

Command Structure SET UART_CMD_S < CmdName >	Parameters:
Response Structure UART_CMD_S < CmdName >	
Command Example SET UART_CMD_S ON	
Response Example UART_CMD_S ON	
Additional Notes:	

5.19 Send Serial Port Command String

Directly send serial port data

Command Structure SET UART_S < HEX STR > < CmdStr >	Parameters:
Response Structure UART_S < HEX STR > < CmdStr >	
Command Example SET UART_S STR Power0n	
Response Example UART_S STR Power0n	
Additional Notes:	

5.20 Set Serial Port Power ON/OFF Function

Set if the serial port sends power ON/OFF commands.

When the serial port is in external control mode, if this setting is enabled, the device will send the corresponding command through the serial port not just by CEC when automatically or manually entering or exiting standby mode.

Command Structure SET UARTPWR_FN < ON OFF >	Parameters:
Response Structure UARTPWR_FN < ON OFF >	
Command Example SET UARTPWR_FN ON	
Response Example UARTPWR_FN ON	
Additional Notes: Default value: OFF	

5.21 Get Serial Port Power Control Function

Check if the serial port is used for sending power on/off commands

Command Structure GET UARTPWR_FN	Parameters: none
Response Structure UARTPWR_FN < ON OFF >	
Command Example GET UARTPWR_FN	
Response Example UARTPWR_FN ON	
Additional Notes: none	

5.22 Send CECand/or Serial Command

Send CECor/and serial commands simultaneously

Command Structure SET SEND_CMD < ON OFF > < RS232 CEC ALL >	Parameters: RS232= Send serial command only CEC= Send CECcommand ALL = Send both serial and CECcommands simultaneously
Response Structure SEND_CMD < ON OFF > < RS232 CEC ALL >	
Command Example SET SEND_CMD ON CEC	
Response Example SEND_CMD ON CEC	
Additional Notes:	

5.25 Set Serial Port Operation Mode

The serial port can be used for external control or to provide API services (i.e., accept control). This API can be used to set this.

Command Structure SET UART_MODE < API COM >	Parameters: API = Serial port is used to provide API services externally, at this time, any API functions that involve actually sending serial data will be disabled. COM = Serial port is used for external control
Response Structure UART_MODE < API COM >	
Command Example SET UART_MODE API	
Response Example UART_MODE API	
Additional Notes: Default value: COM	

5.26 Get Serial Port Working Mode

Get the serial port working mode

Command Structure GET UART_MODE	Parameters:
Response Structure UART_MODE < API COM >	
Command Example GET UART_MODE	
Response Example UART_MODE API	
Additional Notes:	

6. Network Management

6.1 Set IP Address-DHCP

Set DHCP IP address

Command Structure SET IPADDR DHCP	Parameters:
Response Structure IPADDR DHCP	
Command Example SET IPADDR DHCP	
Response Example IPADDR DHCP	
Additional Notes: By default, DHCPmode is used. If DHCP fails, 169.254.1.100 is used.	

6.2 Set IP Address - Static

Set a static IP address

Command Structure SET IPADDR STATIC <IPAddress> <NetMask> [Gateway [DNSServer]]	Parameters: Gateway and DNS Server are optional parameters.
Response Structure IPADDR STATIC <IPAddress> <NetMask> [Gateway [DNSServer]]	
Command Example SET IPADDR STATIC 192.168.1.34 255.255.255.0 192.168.1.1 192.168.1.2	
Response Example IPADDR STATIC 192.168.1.34 255.255.255.0 192.168.1.1 192.168.1.2	
Additional Notes:	

6.3 Get IP Address

Get the device's IP address

Command Structure GET IPADDR	Parameters:
Response Structure IPADDR < DHCP STATIC > < IPAddress > < NetMask > [Gateway [DNSServer]]	
Command Example GET IPADDR	
Response Example IPADDR STATIC 192.168.1.34 255.255.255.0 192.168.1.1 192.168.1.2	
Additional Notes:	

6.4 Set HTTPS Function

Command Structure SET HTTPS < ON OFF >	Parameters: ON = Enable HTTPS
Response Structure HTTPS < ON OFF >	
Command Example SET HTTPS ON	
Response Example HTTPS ON	
Additional Notes: Default value: ON	

6.5 Get HTTPS Switch Status

Command Structure GET HTTPS	Parameters:
Response Structure HTTPS < ON OFF >	
Command Example GET HTTPS	
Response Example HTTPS ON	
Additional Notes:	

6.6 Set Telnet over TLS Feature

Command Structure SET TELNETS < ON OFF >	Parameters: ON = Turn on Telnet over TLS
Response Structure TELNETS < ON OFF >	
Command Example SET TELNETTLS ON	
Response Example TELNETTLS ON	

6.7 Get Telnet over TLS Feature Switch Status

Command Structure GET TELNETS	Parameters:
Response Structure TELNETS < ON OFF >	
Command Example GET TELNETTLS	
Response Example TELNETTLS ON	
Additional Notes:	

7. NDI Function

7.1 Set NDI RX Group Name

Command Structure SET NDI_RX_GROUP <GroupName>	Parameters: GroupName = NDI RXgroup name, case sensitive.
Response Structure NDI_RX_GROUP <GroupName>	
Command Example SET NDI_RX_GROUP MeetingRoom1	
Response Example NDI_RX_GROUP MeetingRoom1	
Additional Notes: Default value: Public	

7.2 Get NDI RX Group Name

Command Structure GET NDI_RX_GROUP	Parameters:
Response Structure NDI_RX_GROUP < GroupName >	
Command Example GET NDI_RX_GROUP	
Response Example NDI_RX_GROUP MeetingRoom1	
Additional Notes:	

7.3 Set NDI RX Device Name

Command Structure SET NDI_RX_DEV_NAME < DeviceName >	Parameters: DeviceName = NDI RXdevice name, case sensitive
Response Structure NDI_RX_DEV_NAME < DeviceName >	
Command Example SET NDI_RX_DEV_NAME CamMixer	
Response Example NDI_RX_DEV_NAME CamMixer	
Additional Notes: Default value:CAM-0402-XXXXis the last two digits of the MAC address in hexadecimal form	

7.4 Get NDI RX Device Name

Command Structure GET NDI_RX_DEV_NAME	Parameters:
Response Structure NDI_RX_DEV_NAME < DeviceName >	
Command Example GET NDI_RX_DEV_NAME	
Response Example NDI_RX_DEV_NAME CamMixer	
Additional Notes:	

7.5 Get NDI Device List

Get a list of NDI devices scanned on the network. You can choose to get a list of TX devices, RX devices, or both TX and RX devices.

Command Structure GET NDI_SCAN_DEV_LIST < TX RX ALL >	Parameters: ALL = Get a scanned list of both TX and RX devices. Each line in the response message corresponds to one device, with fields for device type (TX or RX), device name, and IP address.
Response Structure NDI_SCAN_DEV_LIST < TX RX > < DeviceName1 > < IPAddress1 > > NDI_SCAN_DEV_LIST < TX RX > < DeviceName2 > < IPAddress2 > > ...	
Command Example GET NDI_SCAN_DEV_LIST TX	
Response Example NDI_SCAN_DEV_LIST TX Team1 169.254.34.71 NDI_SCAN_DEV_LIST TX Team2 169.254.179.80	
Additional Notes: The response message does not include the TX and RX of the device itself.	

7.6 Get NDI Channel List

Retrieve the list of NDI channels scanned on the network

You can specify to get the channel list for a particular device, or get the list for all TX, RX, and all devices

Command Structure GET NDI_SCAN_CHN_LIST < DeviceName TX RX ALL >	Parameters: ALL = Get the channel list for all devices Each line of the response message corresponds to a device, with fields in order as device name, device type (TX or RX), and all channel names.
Response Structure NDI_SCAN_CHN_LIST < DeviceName > < TX RX > < ChannelName1 > [ChannelName2 ...] or NDI_SCAN_CHN_LIST < DeviceName1 > < TX RX > < ChannelName11 > [ChannelName12 ...] NDI_SCAN_CHN_LIST < DeviceName2 > < TX RX > < ChannelName21 > [ChannelName22 ...]	
Command Example GET NDI_SCAN_CHN_LIST Team1	
Response Example NDI_SCAN_CHN_LIST Team1 TX Team1TX	
Additional Notes: Theoretically, a device can have multiple channels, but in practice, a device usually has only one channel.	

7.7 Set NDI RX Video Source

Set the NDI RX decoder to receive and decode NDI stream

The video output from the NDI decoder will be used as input for the next video switching module, known as NDI IN

Command Structure SET NDI_IN_SRC < 1 2 3 4 > TXDeviceName [ChannelName]	Parameters: The first parameter is the NDI decoder number; there are 4 NDI decoders, so the range is 1~4 TXDeviceName = NDI TX device name ChannelName = NDI TX channel name If the parameter ChannelName is omitted, the first channel of NDI TX is used. Most times, an NDI TX device has only one channel, so this parameter can be omitted.
Response Structure NDI_IN_SRC < 1 2 3 4 > < TXDeviceName > [ChannelName]	
Command Example SET NDI_IN_SRC 1 Team1	
Response Example NDI_IN_SRC 1 Team1	
Additional Notes:	

7.8 Remove NDI RX Video Source

Remove the video source from the NDI RX decoder

Command Structure SET NDI_IN_SRC < 1 2 3 4 >	Parameters: none
Response Structure NDI_IN_SRC < 1 2 3 4 >	
Command Example SET NDI_IN_SRC 1	
Response Example NDI_IN_SRC 1	
Additional Notes: none	

7.9 Get NDI RX Video Source

Get information about the NDI stream received by the NDI RX decoder

Command Structure GET NDI_IN_SRC < 1 2 3 4 ALL >	Parameters: ALL = Get video sources for all NDI decoders If the response message only has the decoder number without a TX device name and channel name, it means the decoder has no video source set.
Response Structure NDI_IN_SRC < 1 2 3 4 > [< TXDeviceName > < ChannelName >] or NDI_IN_SRC 1 [< TXDeviceName1 > < ChannelName1 >] NDI_IN_SRC 2 [< TXDeviceName2 > < ChannelName2 >] NDI_IN_SRC 3 [< TXDeviceName3 > < ChannelName3 >] NDI_IN_SRC 4 [< TXDeviceName4 > < ChannelName4 >]	
Command Example GET NDI_IN_SRC 1	
Response Example NDI_IN_SRC 1 Team1 Team1TX	
Additional Notes:	

7.10 Set NDI TX Group Name

none

Command Structure SET NDI_TX_GROUP < GroupName >	Parameters: GroupName = NDI TX group name, case sensitive. Can be the same as NDI RXgroup name or different.
Response Structure NDI_TX_GROUP < GroupName >	
Command Example SET NDI_TX_GROUP Classroom	
Response Example NDI_RX_GROUP Classroom	
Additional Notes: Default value: Public	

7.11 Get NDI TX Group Name

Command Structure GET NDI_TX_GROUP	Parameters:
Response Structure NDI_TX_GROUP < GroupName >	
Command Example GET NDI_TX_GROUP	
Response Example NDI_RX_GROUP Classroom	
Additional Notes:	

7.12 Set NDI TX Device Name

Command Structure SET NDI_TX_DEV_NAME < DeviceName >	Parameters: DeviceName = NDI TX device name, case-sensitive Must not be the same as NDI RX device name.
Response Structure NDI_TX_DEV_NAME < DeviceName >	
Command Example SET NDI_TX_DEV_NAME Teacher	
Response Example NDI_RX_DEV_NAME Teacher	
Additional Notes: Default value:CAM-0402- -TXXXXXis the last two digits of the MAC address in hexadecimal form.	

7.13 Get NDI TX Device Name

Command Structure GET NDI_TX_DEV_NAME	Parameters:
Response Structure NDI_TX_DEV_NAME < DeviceName >	
Command Example GET NDI_TX_DEV_NAME	
Response Example NDI_RX_DEV_NAME Teacher	
Additional Notes:	

7.14 Set NDI TX Channel Name

Command Structure SET NDI_TX_CHN_NAME < ChannelName >	Parameters: ChannelName = NDI TX channel name, case-sensitive
Response Structure NDI_TX_CHN_NAME < ChannelName >	
Command Example SET NDI_TX_CHN_NAME NDI0ut1	
Response Example NDI_RX_CHN_NAME NDI0ut1	
Additional Notes: Default value:NDI	

7.15 Get NDI TX Channel Name

Command Structure GET NDI_TX_CHN_NAME	Parameters:
Response Structure NDI_TX_CHN_NAME < ChannelName >	
Command Example GET NDI_TX_CHN_NAME	
Response Example NDI_RX_CHN_NAME NDIOut1	
Additional Notes:	

7.16 Set NDI Output Video Encoding Parameters

Command Structure SET NDI_TX_VENC_CFG < NDI11 NDI12 > < EncodeMode > < Resolution > < FrameRate > < BitRateCtl > < BitRate > < GopSize >	Parameters: The first parameter indicates which stream to set, with available values NDI11 and NDI12, formatted as 'NDI' followed by two numbers: The first number indicates the NDI output number; currently, the device only supports one NDI output, so the first number is always 1. The second number distinguishes between main stream and preview stream, 1 for main stream, 2 for preview stream. EncodeMode = Encoding method, available values are H.264, H.265 Resolution = Resolution, available range: Main stream: 1280X720 1920X1080 3840X2160 Preview stream: 320X240 640X360 FrameRate = Encoding frame rate, range 1~60 BitRateCtl = Bitrate control method, available values are CBR, VBR BitRate = Encoding bitrate in kbps, range Main stream: 64~16384 Preview stream: 64~4096 GopSize = Group of pictures size, i.e., I-frame interval, range 1~150
Response Structure NDI_TX_VENC_CFG < NDI11 NDI12 > < EncodeMode > < Resolution > < FrameRate > < BitRateCtl > < BitRate > < GopSize >	
Command Example SET NDI_TX_VENC_CFG NDI11 H.264 1920X1080 30 CBR 8192 60	
Response Example NDI_TX_VENC_CFG NDI11 H.264 1920X1080 30 CBR 8192 60	
Additional Notes: 1. Default values: Main stream H.264 1920X1080 30 CBR4096 30 Preview stream H.264 320X240 30 CBR1024 30 2. The device currently determines the encoding frame rate by itself, the frame rate set by this API will be ignored.	

7.17 Get NDI Output Video Encoding Parameters

Command Structure GET NDI_TX_VENC_CFG < NDI11 NDI12 ALL >	Parameters: ALL = Get the encoding parameters for both the main stream and the preview stream
Response Structure NDI_TX_VENC_CFG < NDI11 NDI12 > < EncodeMode > < Resolution > < FrameRate > < BitRateCtl > < BitRate > < GopSize > or NDI_TX_VENC_CFG NDI11 < EncodeMode > < Resolution > < FrameRate > < BitRateCtl > < BitRate > < GopSize > NDI_TX_VENC_CFG NDI12 < EncodeMode > < Resolution > < FrameRate > < BitRateCtl > < BitRate > < GopSize >	
Command Example GET NDI_TX_VENC_CFG NDI11	
Response Example NDI_TX_VENC_CFG NDI11 H.264 1920X1080 30 CBR 8192 60	
Additional Notes: This API retrieves the actual video encoding frame rate	

7.18 Set NDI Output Feature

Start or stop the NDI TX encoding output feature

Command Structure SET NDI_TX_STREAM_FN < NDI11 NDI12 > < ON OFF >	Parameters:
Response Structure NDI_TX_STREAM_FN < NDI11 NDI12 > < ON OFF >	
Command Example SET NDI_TX_STREAM_FN NDI12 OFF	
Response Example NDI_TX_STREAM_FN NDI12 OFF	
Additional Notes: Default value: NDI main stream and preview stream encoding output features are both enabled, config value is ON.	

7.19 Get NDI Output Function

Command Structure GET NDI_TX_STREAM_FN < NDI11 NDI12 ALL >	Parameters: ALL = Get the status of the main stream and preview stream encoding output function.
Response Structure NDI_TX_STREAM_FN < NDI11 NDI12 > < ON OFF > or NDI_TX_STREAM_FN NDI11 < ON OFF > NDI_TX_STREAM_FN NDI12 < ON OFF >	
Command Example GET NDI_TX_STREAM_FN NDI12	
Response Example NDI_TX_STREAM_FN NDI12 OFF	
Additional Notes:	

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