

H.264/265 Video over IP Controller



User Manual

VER 1.2

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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1. Introduction

This H.264/265 Video over IP Controller is used to control and manage IP products. It supports dual 1G network ports, which can realize dual-network isolation of Control network and video distribution network. The product supports Web GUI/TCP/RS-232/IR/GPIO controls and PoE function. Since the demand of IP products is daily increased in the current market, the IP Controller will be widely applied in more and more different scenarios.

2. Features

- ☆ ARM Cortex-A55 2GHz CPU
- ☆ Easy to create, control and manage the system
- ☆ HTTPS, SSH security compatible
- ☆ Support video AES256 security encryption
- ☆ Built-in Web GUI control interface for easily system setup and management
- ☆ Intuitive “drag & drop” source selection with video preview
- ☆ Powerful video wall function, supporting window roaming and marquee
- ☆ Support seamless switching for the distributed system
- ☆ Support collaboration management of computers via mouse roaming, allowing one operator manages multiple PCs
- ☆ Support video, audio, RS-232, KVM control and management of the distributed system
- ☆ Dual 1G network ports (VIDEO LAN port supports PoE function) to isolate Controls and video networks
- ☆ Support IP camera imported as source
- ☆ Support high definition background image (both video and picture are available), as well as multi-screen splicing display
- ☆ Dual RS-232 ports, capable of connecting to central control or controlling external devices
- ☆ Support IR signal receiving and loop output (3.5mm audio jack, 12V level)
- ☆ 4 channel GPIO control ports (5V/12V optional level) for external devices control
- ☆ Easy to integrate with the 3rd party major control system brands
- ☆ Multiple circuits protection, lightning protection and ESD design
- ☆ PoE (802.3af PD device) or local 12V power supply
- ☆ Reliable system design, ensuring 7*24 hours reliable and stable work
- ☆ Compatible with 1U/6U V2 rack installation

3. Package Contents

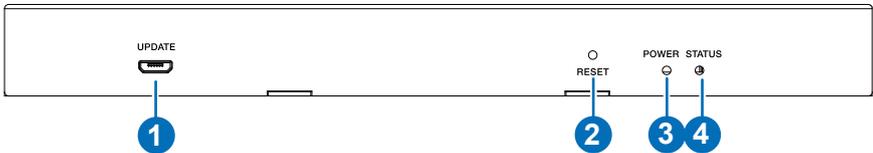
- ① 1x H.264/265 Video over IP Controller
- ② 1x 20kHz-60kHz 12V IR Receiver Cable (1.5 meters)
- ③ 1x IR Blaster Cable (1.5 meters)
- ④ 2x 3-pin 3.81mm Phoenix Connector (Male)
- ⑤ 1x 6-pin 3.81mm Phoenix Connector (Male)
- ⑥ 2x Mounting Ear
- ⑦ 4x Machine Screw (KM3*6)
- ⑧ 1x 12V/2.5A Locking Power Adaptor
- ⑨ 1x User Manual

4. Specifications

Technical	
Network Bandwidth	1G
Transmission Distance	100m (CAT5E/6/6A/7)
Control Ports	2 x 1G LAN [RJ45 connector] [VIDEO LAN supports PoE] 1 x IR IN [3.5mm audio jack, 12V level] 1 x IR OUT [3.5mm audio jack, 5V level] 1 x DIGITAL I/O [6-pin 3.81mm phoenix connector] 2 x RS-232 [3-pin 3.81mm phoenix connector] 1 x UPDATE [Micro USB, 5-pin female]
Dimensions	204mm (W) × 117.5mm (D) × 21.5mm (H)
Housing	Metal Enclosure
Color	Black
Weight	597g
Power Supply	12V/2.5A
Power Consumption	6.84W
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Operating Humidity	20% ~ 80% RH (relative humidity, non-condensing)
Storage Humidity	10% ~ 90% RH (relative humidity, non-condensing)

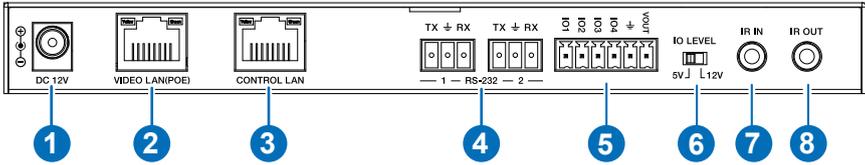
5. Operation Controls and Functions

5.1 Front Panel



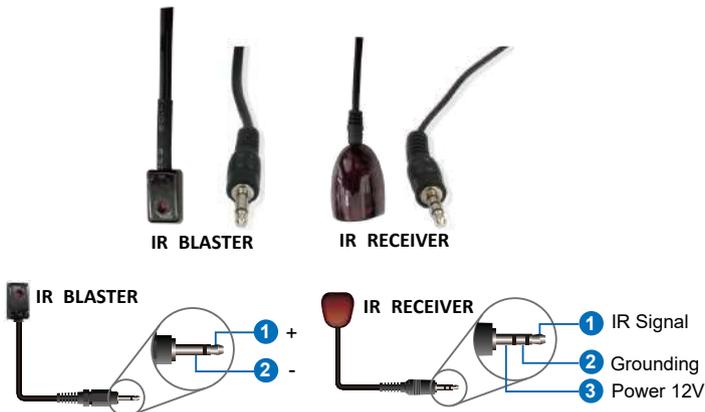
No.	Name	Function Description
1	UPDATE	Firmware update port. <i>Note: Must keep no connection on this port when Controller works in normal mode.</i>
2	RESET Button	Press and hold this button (about 10 seconds) until STATUS LED starts flashing, Controller will be reset automatically.
3	POWER LED	The red LED will light on when the Controller is powered on.
4	STATUS LED	The status LED will flash in yellowish-green every 1 second until Controller boots up completely and Control LAN is ready, then it becomes solid.

5.2 Rear Panel



No.	Name	Function Description
1	DC 12V	DC 12V/2.5A power input port.
2	VIDEO LAN (POE)	1G Video LAN port, supporting PoE function. Default settings: Static mode, IP address→169.254.8.100, subnet mask→255.255.0.0, gateway→169.254.8.1 <i>Note: When POE is enabled, DC 12V/2.5A power supply is not required.</i>
3	CONTROL LAN	The TCP/IP control network port. Default settings: DHCP mode, the IP address is assigned by the router; If no router is connected, the static IP address →192.168.6.100 is used, subnet mask→255.255.255.0, gateway→192.168.6.1
4	3-pin Phoenix Connectors	Two identical RS-232 serial communication ports. Default settings: Baud rate→57600, data bit→8bit, stop bit→1bit, check bit→none
5	6-pin Phoenix Connector	4 channel I/O level outputs, 1 channel grounding, 1 channel power supply (supports up to 12V/0.5A) to the outside.
6	IO LEVEL DIP Switch	Used to control I/O level output and VOUT voltage. Switch to left: 5V I/O level output, VOUT is 5V. Switch to right: 12V I/O level output, VOUT is 12V.
7	IR IN	12V IR signal input port.
8	IR OUT	5V IR signal output port.

5.3 IR Pin Definition

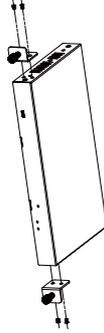


6. Rack Mounting Instruction

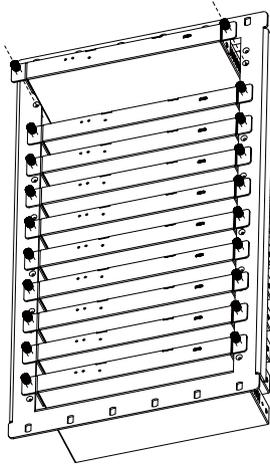
6.1 6U V2 Rack Mounting

This Controller can be mounted in a standard 6U V2 rack (Please contact your supplier for 6U V2 rack sale). The mounting steps are as follows:

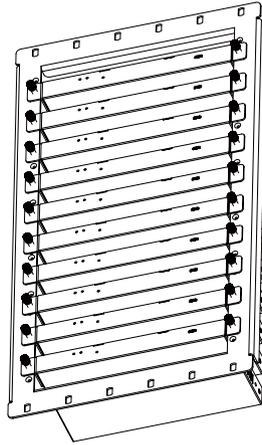
Step 1: Use included screws to fix two mounting ears on the Controller, as shown in the figure below:



Step 2: Insert the Controllers with mounting ears into a 6U V2 rack (three options of 6/8/10 units can be installed vertically), as shown in the figure below:



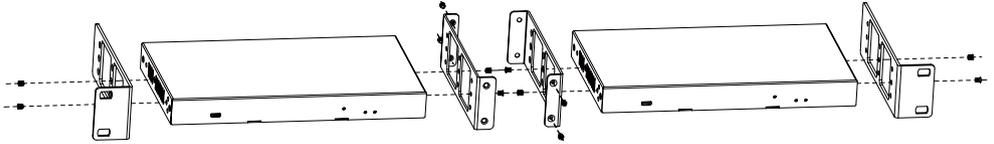
Step 3: Use screws to fix mounting ears on the rack to complete the mounting, as shown in the figure below:



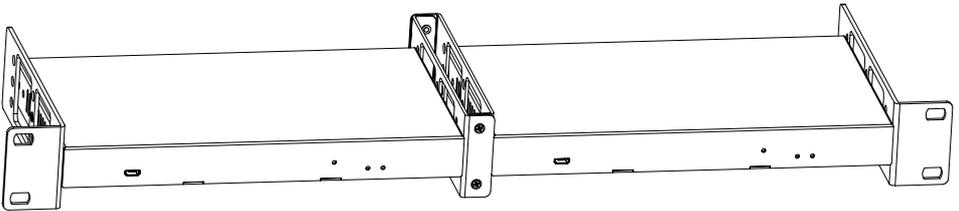
6.2 1U V2 Rack Mounting

This Controller also can be mounted in a standard 1U V2 rack. It is advised to install 2 units horizontally. The mounting steps are as follows:

Step 1: Use included screws to fix two 1U V2 rack panels on the Controller, and fix two rack panels on another Controller in the same way, as shown in the figure below:



Step 2: Fasten screws between two 1U V2 rack panels, so that two Controllers are mounted in a 1U V2 rack, as shown in the figure below:



7. Web GUI Operation Guide

7.1 Preparation before Entering the System

You can use Controller's Web GUI to control H.264/265 IP products at the Switch.

The operation method is shown as below:

Step 1: When the system is not connected to a router, directly input the Controller's default IP address (Control LAN port: 192.168.6.100; Video LAN port: 169.254.8.100) or the URL (http://controller.local) into the Web browser address bar on the PC to enter the Web GUI login interface.

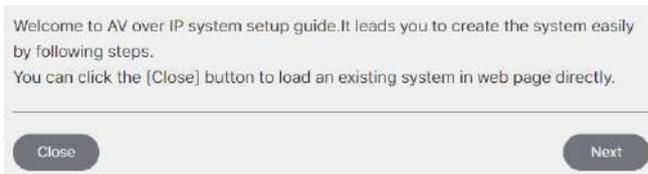


When logging in for the first time, please select the initial username (admin), and input the initial password (admin) on the above login interface. Then click "Login" to enter the password modification interface, as shown below.



Please set a eight-digit password using letters or numbers, then use the new password to login the Web GUI.

For the first time, you need to set up the system, as shown in the following figure:



Step 2: Click the "Close" button to load an existing system in web page directly, or click "Next" button to go to the next step.

To setup AV over IP system, you need to set the IP management mode of the Video LAN domain. The IP management modes are:

Automatically managed by Controller Box.

This is the mode as factory default. The IP address assignments to Controller Box Video LAN, Encoders and Decoders will be managed by Controller Box firmware automatically. In this mode, there is no need to add router in the system on Video LAN domain.

Static IP mode by manual settings.

This is the mode for system in case IP address resources can be assigned manually for Controller Box Video LAN, Encoders and Decoders. Reminders as below:

- a. The network settings of Controller Box Video LAN, Encoders and Decoders must be on the same subnet.
- b. It's recommended to set the net mask of Controller Box Video LAN, Encoders and Decoders to 255.255.0.0.

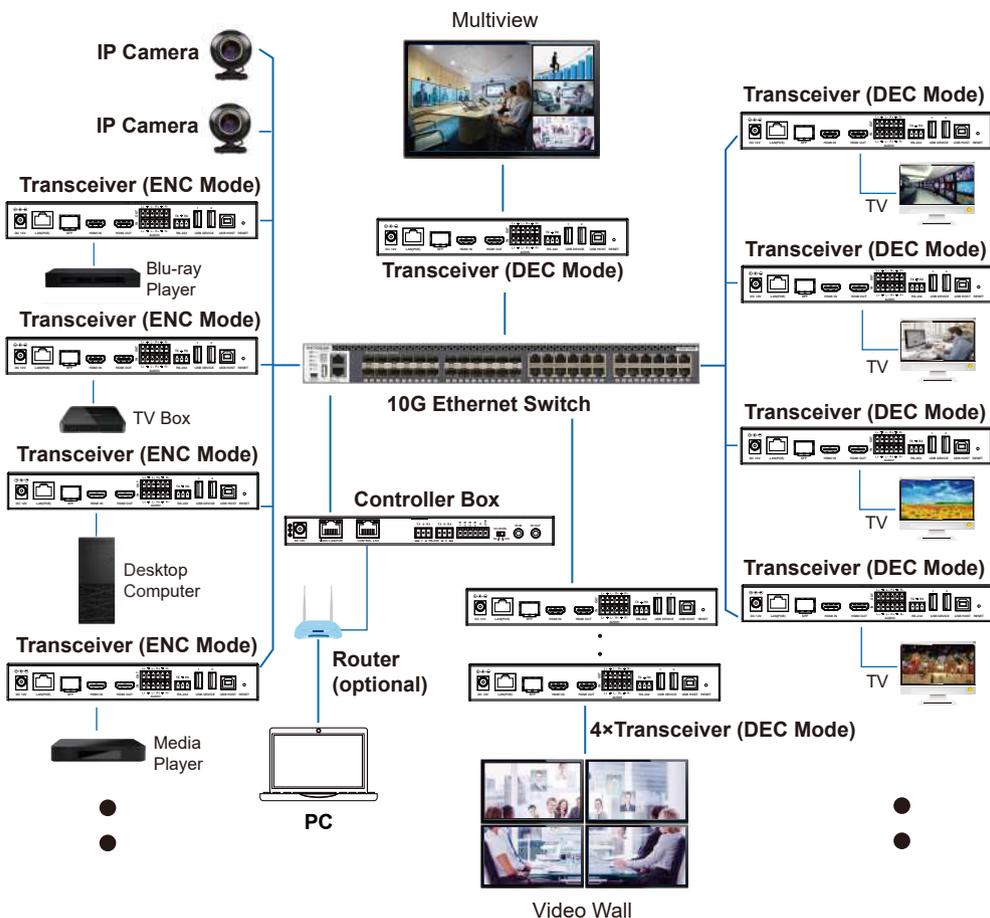
Close

Next

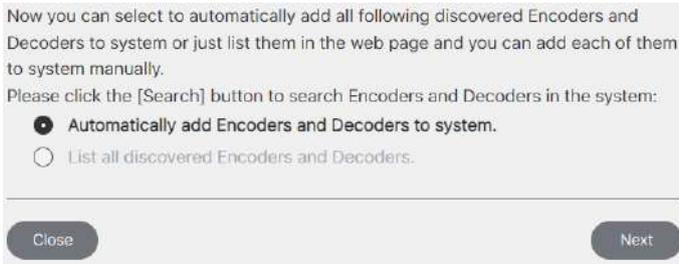
On this interface, you need to set the IP mode of Video LAN.

Mode 1: Automatically managed by Controller Box.

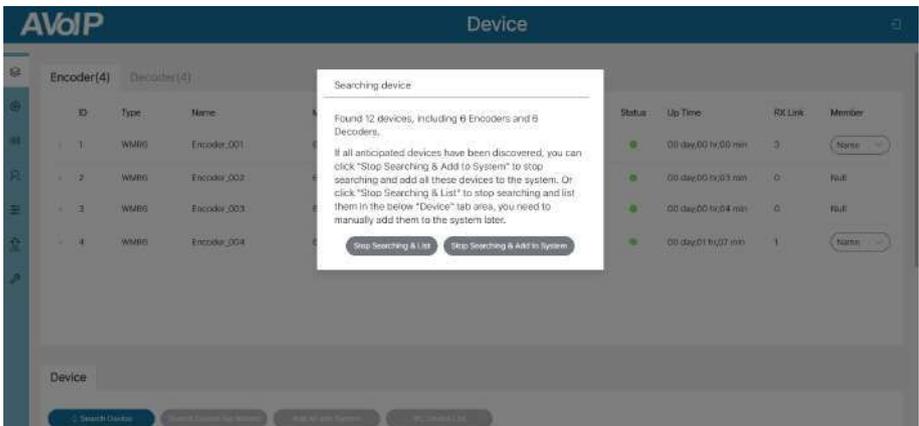
The IP addresses of the Video LAN port, Encoder and Decoder will be assigned by the Controller automatically, and the connection method is as following.



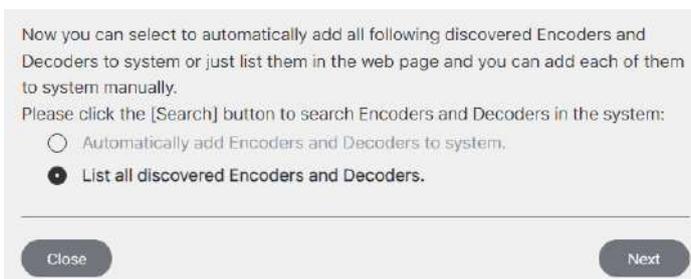
Step 4: Click the “Next” button and wait for the completion to enter the interface as shown in the figure below.



▪ If you select “Automatically add Encoders and Decoders to system”, and click the “Next” button to enter the Device page, the system starts to search for devices. After searching, an inquiry box will pop up. You can select “Stop Searching & Add to System” to stop searching and automatically add all searched devices to the system (presented in the Encoder/Decoder list), or select “Stop Searching & List” to stop searching and list the searched devices in the below “Device” tab area, then manually add them to the system, as shown below.



▪ If you select “List all discovered Encoders and Decoders”, and click the “Next” button to enter the Device page, the system starts to search for devices. After searching, an inquiry box will pop up. You can select “Stop Searching & Close” to stop searching and list searched devices in the below “Device” tab area, then manually add them to the system by clicking the “Add” button behind each device one by one or clicking “Add All Into System”.

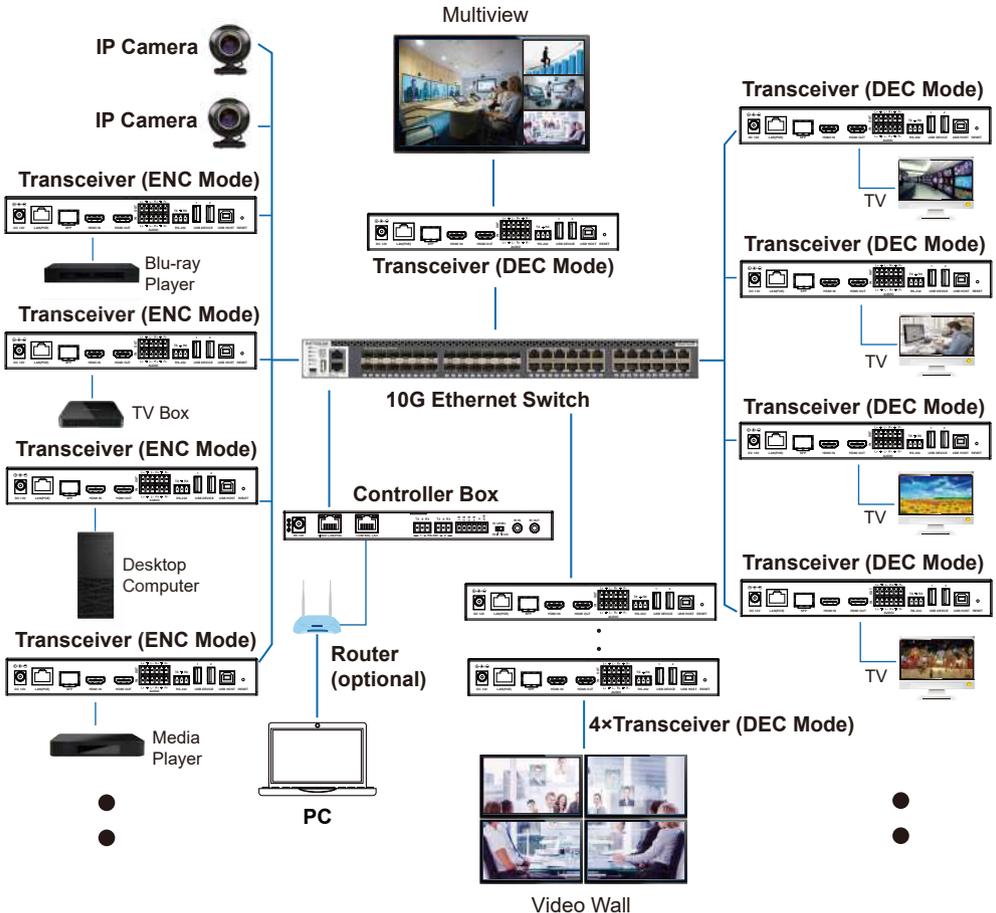




If you want to change the IP mode of Video LAN, you can click “Search Device Via Wizard” on the Device interface, and switch back to the IP mode select interface.

Mode 2: Static IP mode by manual settings.

The IP addresses of the Video LAN port, Encoders and Decoders are manually set by the user, and the connection method is as following.



Select “Static IP mode by manual settings” on the interface shown below, and click “Next”.

To setup AV over IP system, you need to set the IP management mode of the Video LAN domain. The IP management modes are:

Automatically managed by Controller Box.

This is the mode as factory default. The IP address assignments to Controller Box Video LAN, Encoders and Decoders will be managed by Controller Box firmware automatically. In this mode, there is no need to add router in the system on Video LAN domain.

Static IP mode by manual settings.

This is the mode for system in case IP address resources can be assigned manually for Controller Box Video LAN, Encoders and Decoders. Reminders as below:

- The network settings of Controller Box Video LAN, Encoders and Decoders must be on the same subnet.
- It's recommended to set the net mask of Controller Box Video LAN, Encoders and Decoders to 255.255.0.0.

Close

Next

After entering the interface shown in the figure below, manually set the IP address, subnet mask and gateway of the Video LAN.

Controller Box Video LAN port Network Settings:

IP Address

169 · 254 · 8 · 100

Note: The Video LAN port will occupy two IP addresses. One is set in the left edit-box, another one is the fourth octet of left IP address plus 1, which is: 169.254.8.101. Please avoid using gate-way or broadcast IP address for Video LAN two IP addresses.

Subnet Mask

255 · 255 · 0 · 0

Gateway

169 · 254 · 8 · 1

Reminder:

Once Controller Box Video LAN network is set, the IP addresses of following discovered Encoders and Decoders will be assigned to in the same domain as Controller Box Video LAN. Please click the [Next] button to set the IP address range of Encoders and Decoders.

Close

Next

Note: The IP network domain of the Video LAN port must be different from that of the Control LAN port.

For example, we set the Video LAN network as shown in the above figure, and click the "Next" button. After the progress reaches 100%, enter the interface as shown in the figure below.

Encoders and Decoders IP Addresses Range Settings:

Encoders IP Address From

169 · 254 · 10 · 1

To

169 · 254 · 19 · 254

Decoders IP Address From

169 · 254 · 20 · 1

To

169 · 254 · 29 · 254

Reminder:

To easily manage the IP addresses of Encoders and Decoders, it's strongly recommended that you can set the IP addresses of Encoders and Decoders to different segments correspondingly. For example:

Encoders IP address from 169.254.10.1 to 169.254.12.256

Decoders IP address from 169.254.20.1 to 169.254.22.256

Close

Next

On this interface, you can set the IP address range of Encoders and Decoders. After the setting is complete, click the “Next” button to enter the interface as shown in the figure below.

Now you can select to automatically add all following discovered Encoders and Decoders to system or just list them in the web page and you can add each of them to system manually.

Please click the [Search] button to search Encoders and Decoders in the system:

- Automatically add Encoders and Decoders to system.
- List all discovered Encoders and Decoders.

Close

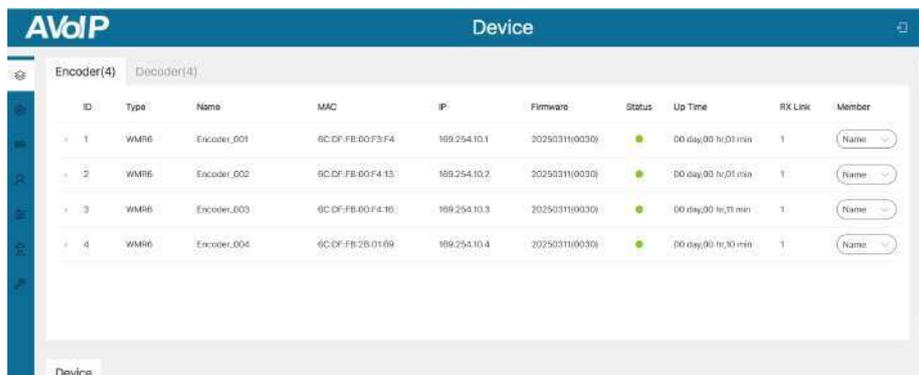
Next

The rest of the steps are the same as the Mode 1 operation.

7.2 Functions and Operation

7.2.1 Device

On this page, you can click the Encoder/Decoder tab to check the information of the Encoders and Decoders in the system, such as ID, Type, Name, MAC address, IP address, Firmware version, Online/Offline Status, Up Time, RX Link, Member/Source. Besides, you can configure each Encoder/Decoder after clicking the drop-down icon on the left side of ID.



The screenshot shows the AVoIP Device management interface. At the top, there are tabs for "Encoder(4)" and "Decoder(4)". Below the tabs is a table with the following columns: ID, Type, Name, MAC, IP, Firmware, Status, Up Time, RX Link, and Member. There are four rows of encoder data, each with a drop-down arrow on the left side of the ID column.

ID	Type	Name	MAC	IP	Firmware	Status	Up Time	RX Link	Member
1	WMR6	Encoder_001	6C:DF:FB:00:F3:F4	199.254.10.1	20250311(0030)	●	00 day/00 hr/01 min	1	Name
2	WMR6	Encoder_002	6C:DF:FB:00:F4:13	199.254.10.2	20250311(0030)	●	00 day/00 hr/01 min	1	Name
3	WMR6	Encoder_003	6C:DF:FB:00:F4:16	199.254.10.3	20250311(0030)	●	00 day/00 hr/11 min	1	Name
4	WMR6	Encoder_004	6C:DF:FB:2B:01:69	199.253.10.4	20250311(0030)	●	00 day/00 hr/30 min	1	Name



The screenshot shows the configuration page for a device. At the top, there are tabs for "Encoder(4)" and "Decoder(4)". Below the tabs is a table with the following columns: ID, Type, Name, MAC, IP, Firmware, Status, Up Time, RX Link, and Member. The table shows one row of encoder data with a drop-down arrow on the left side of the ID column. Below the table, there are sections for "Basic Settings" and "AV Settings".

ID	Type	Name	MAC	IP	Firmware	Status	Up Time	RX Link	Member
4	WMR6	Encoder_004	6C:DF:FB:0B:F3:F4	199.254.10.4	20250311(0030)	●	00 day/00 hr/08 min	6	Name

Basic Settings

Name: Encoder_004

Change ID: 4

ENC LED Flashing: Off

AV Settings

EDID: 6K2660_644 2.D.CH

Copy EDID: Select a decoder

Encoder Configuration

Basic Settings

- ① **Name:** The name of the Encoder can be changed. (Note: The maximum length is 16 characters. Special characters are not supported.)
- ② **Change ID:** The ID of the Encoder can be set. (ID range:1-762)
Note: Both ID and name can not be duplicated.
- ③ **ENC LED Flashing:** The “Show me” function of the Encoder, used to quickly find the corresponding device. Click the drop-down menu to select On/Off to turn on/off the ENC LED on the front panel of the Encoder.
- ④ **Preview:** The preview of the Encoder.

A/V Settings

- ① **EDID:** Click the drop-down menu to select the EDID for the Encoder. EDID options include 1080P 2.0 CH, 1080I 2.0 CH, 4K2K30_444 2.0 CH, 4K2K60_420 2.0 CH, 4K2K60_444 2.0 CH, DVI 1280_1024_60 No Audio, DVI 1920_1080_60 No Audio, DVI 1920_1200_60 No Audio. Please note that EDID options may be different for different models.
- ② **Copy EDID:** Click the drop-down menu to select a Decoder for EDID copy.

The screenshot displays the configuration interface for an AVoIP device. It is divided into three main sections: Video Advanced Settings, Audio Advanced Settings, and RS-232 Settings. The Video section includes settings for Encoder Format (YUV420), Encoder Delay (50), Video Stream (Main), Main Stream Type (H265), Main Stream Bitrate Type (Variable Bitrate), Main Stream Image Quality (65), Encoder Mode (Video), Main Stream Frame Rate (60), and Main Stream Bitrate (102400Kbps). The Audio section includes Encoder Audio Format (PCM) and Audio Selection (HDMI). The RS-232 section includes a 'None' button for RS-232 Settings, RS-232 Command Relay (On), Baud Rate (115200), Stop Bits (1 bit), Parity (None), and Data Bits (8 bit).

Video Advanced Settings

- ① **Encoder Format:** The video format of the Encoder.
- ② **Encoder Mode:** Click the drop-down menu to select the Encoder mode (Video/Text).
Note: This option relates to the transmission delay (latency). Set video mode, the delay time is determined by the “Encoder Delay” setting. The text mode is optimized for KVM use, the encoder will do automatic detection and collect signal content for internal analysis so that the delay time will be calculated internally in order to achieve the minimum delay. In text mode, “Encoder Delay” setting is ignored. Default setting is video mode.
- ③ **Encoder Delay[0-500]:** Input the value [0-500] to set the Encoder delay.
Note: This option is to set transmission delay time threshold. The default setting is 50 milliseconds which is meant to achieve the latency as low as possible. Tip: Change this setting plus “Main Stream Image Quality” setting to improve video fluency in case it is needed.
- ④ **Video Stream:** Click the drop-down menu to select the video stream (Main/Sub/KVM Preview/RTSP Main/RTSP Sub).

Note: To select different video stream and the following 5 items of “Stream Type, Stream Frame Rate, Stream Bitrate Type, Stream Bitrate and Stream Image Quality” can be configured for.

Video Stream options are respectively as shown blow.

1. Main: Main stream displays on a TV or video wall.

Video Advanced Settings

Encoder Format	YUV420	Encoder Mode	Video
Encoder Delay[0-500]	50		
Video Stream	Main		
Main Stream Type	H265	Main Stream Frame Rate[1-60]	60
Main Stream Bitrate Type	Variable Bitrate	Main Stream Bitrate[1-10240Kbps]	1024
Main Stream Image Quality[1-100]	65		

2. Sub: Sub stream displays on a TV or video wall, normally for window size equal or less than 1080p.

Video Advanced Settings

Encoder Format	YUV420	Encoder Mode	Video
Encoder Delay[0-500]	50		
Video Stream	Sub		
Sub Stream Frame Rate	H265	Sub Stream Frame Rate[1-60]	30
Sub Stream Bitrate Type	Variable Bitrate	Sub Stream Bitrate[1-40960Kbps]	1024
Sub Stream Image Quality[1-100]	65		

3. KVM Preview: Preview stream for KVM client.

Video Advanced Settings

Encoder Format	YUV420	Encoder Mode	Video
Encoder Delay[0-500]	50		
Video Stream	KVM Preview		
Preview Stream Type	H265	Preview Stream Frame Rate[1-60]	30
Preview Stream Bitrate Type	Variable Bitrate	Preview Stream Bitrate[1-40960Kbps]	1024
Preview Stream Image Quality[1-100]	65		

4. RTSP Main: Standard RTSP main stream can be subscribed by the 3rd party application, such as VLC. It's up to 1080p30Hz. The URL is: `rtsp://192.168.1.200:554/main`, IP address should be replaced by encoder real IP address.

Video Advanced Settings

Encoder Format	YUV420	Encoder Mode	Video
Encoder Delay[0-500]	50		
Video Stream	RTSP Main		
RTSP Main Stream Type	H264	RTSP Main Stream Frame Rate[1-60]	30
RTSP Main Stream Bitrate Type	Fix Bitrate	RTSP Main Stream Bitrate[1-40960Kbps]	4096
RTSP Main Stream Image Quality[1-100]	40		

5. **RTSP Sub:** Standard RTSP sub stream can be subscribed by the 3rd party application, such as VLC. It's up to 720p30Hz. The URL is: `rtsp://192.168.1.200:554/sub`, IP address should be replaced by encoder real IP address.

Video Advanced Settings

Encoder Format	YUV420	Encoder Mode	Video
Encoder Delay[0-500]	50		
Video Stream	RTSP Sub		
RTSP Sub Stream Type	H264	RTSP Sub Stream Frame Rate[1-60]	30
RTSP Sub Stream Bitrate Type	Fix Bitrate	RTSP Sub Stream Bitrate[1-20480Kbps]	2048
RTSP Sub Stream Image Quality[1-100]	65		

⑤ **Main Stream Type:** Click the drop-down menu to select the video encoding format (H264/H265) for the main stream.

⑥ **Main Stream Frame Rate[1-60]:** The main stream frame rate follows the frame rate of the input signal source.

Note: When "Main" is selected for Video Stream, the main stream frame rate setting will always follow the source frame rate and is not changeable. For other options of Video Stream, the default stream frame rate is 30(Hz), stream frame rate can be set in range of 1~60(Hz), but the real frame rate would not be higher than the source frame rate. For example, the source frame rate is 30Hz, even stream frame rate is set 60(Hz), the real frame rate will be 30Hz.

⑦ **Main Stream Bitrate Type:** Click the drop-down menu to select the main stream bitrate type (Fix Bitrate/Variable Bitrate). Variable Bitrate by default.

Note: When "Fix Bitrate" is selected, set stream bitrate item as the bitrate threshold in kbps for the corresponding stream selected in video stream item. Stream image quality item is not available. When "Variable Bitrate" is selected, stream bitrate item will be not available, stream image quality setting will be the key factor of video quality and transmission bitrate.

⑧ **Main Stream Bitrate[1-102400Kbps]:** The main stream bitrate (Variable by default).

⑨ **Main Stream Image Quality[1-100]:** Input the value [1-100] to set the main stream image quality (65 by default).

Audio Advanced Settings

① **Encode Audio Format:** Click the drop-down menu to select the audio encoding format (PCM/AAC).

② **Audio Selection:** Click the drop-down menu to select the audio source (HDMI/Analog).

(1) When HDMI is selected, Encoder HDMI input is the audio source for Decoder audio output.

(2) When Analog is selected, Encoder audio input is the audio source for Decoder audio output.

RS-232 Settings

① **RS-232 Command Relay:** Click the drop-down menu to select On/Off to turn on/off the RS-232 command relay function.

② **Parity:** Click the drop-down menu to set the parity (None/Odd/Even).

③ **Baud Rate:** Click the drop-down menu to set the baud rate (9600/19200/38400/57600/115200).

④ **Data Bits:** Click the drop-down menu to set the data bits (5 bit/6 bit/7 bit/8 bit).

⑤ **Stop Bits:** Click the drop-down menu to set the stop bits (1 bit/2 bit).

After setting, click “Apply” to take effect.



Info OSD Settings

① **Enable:** Select On/off to enable/disable the Info OSD display. If “On” is selected, the Info OSD (the content can be defined by the user) will by default display in the bottom right corner of all signal channels that capture this Encoder , as shown in the figures below.



Note: The position and color of the Encoder Info OSD can be modified, and the Info OSD will be overlaid on top of the video stream.

② **Content:** Input the content for OSD display.

③ **Size:** Click the drop-down menu to select the OSD size (Small/Middle/Large).

④ **Position X:** Click the drop-down menu to select the position x (Left/Middle/Right) of OSD.

⑤ **Position Y:** Click the drop-down menu to select the position y (Top/Middle/Bottom) of OSD.

⑥ **BG Color:** Click to set the background color of the OSD.

⑦ **FG Color:** Click to set the foreground color of the OSD.

⑧ **Transparency:** Click the drop-down menu to select the transparency type (Transparency/Opaque) of the OSD.

Other Settings

① **KVM OS select:** Click the drop-down menu to select the KVM operating system (Linux/Windows/Mac OS).

Note: This item is default with Windows which means the KVM works with Windows OS PC. The other two options "Linux" and "Mac OS" can be set when KVM works with corresponding OS. This setting requires device reboot to take effect, don't change it unless it's really necessary.

② **Transfer Type:** Select On/off to enable/disable the stream transfer mode.

Note: This item must set On which is default setting in normal work mode. The option Off is for debugging purpose only in case video fluency is not good showing in window when there are many windows/layers created for a TV or video wall. Set this item to Off to see if the symptom disappears or improves to know if the bitrate setting of the stream showing in that window is too high. This setting requires device reboot to take effect, don't change it unless it's really necessary.

Network Settings

① **IP Mode:** Click the drop-down menu to set the IP mode (Static/DHCP).

② **IP Address:** The IP address of the Encoder.

③ **Subnet Mask:** The Subnet Mask of the Encoder.

④ **Gateway:** The Gateway of the Encoder.

Note:

(1) If the IP mode is set to "Static", you can manually set the IP Address, Subnet Mask and Gateway as required. Then click "Apply" to take effect.

(2) If the IP mode is set to "DHCP", it will search and be filled with the IP Address assigned by the router automatically.

(3) If the Encoder is actually alive in the system but with incorrect network segment settings, even though the Encoder is offline, its network settings including IP address can be changed and set to make it being discovered again.

Reboot: Click the Reboot button to reboot the Encoder.

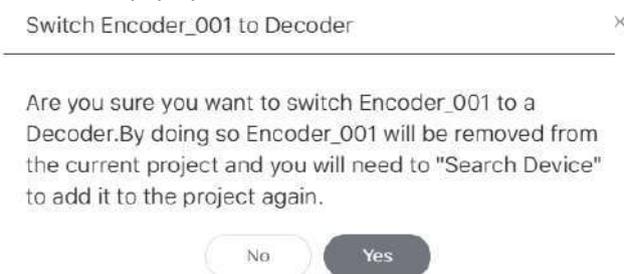
Replace: Reserved button for device replacement.

Remove: Click the Remove button to remove the Encoder from the system.

Remove All: Click this button to remove all Encoders from the system.

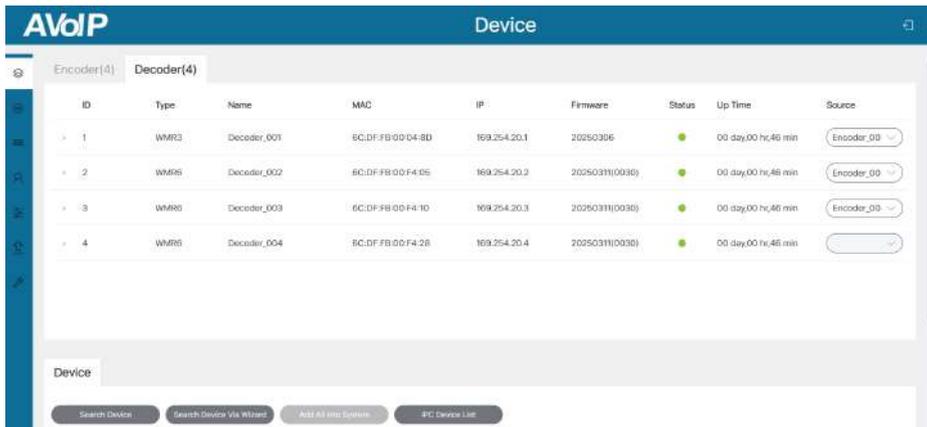
Factory Reset: Click this button to restore the Encoder to factory settings.

Switch to Decoder: Click this button to switch the current Encoder to Decoder mode. The following prompt window will pop up.



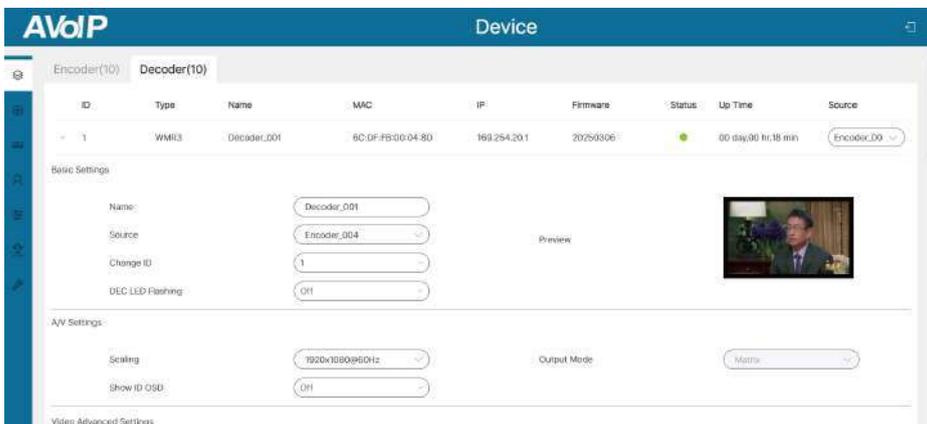
If you select "Yes", the Encoder will be removed from the current system and you will need to "scan" to add it to the system again.

Decoder Configuration



The screenshot shows the AVoIP Device configuration interface. At the top, there are tabs for 'Encoder(4)' and 'Decoder(4)'. Below the tabs is a table listing four decoders. Each row includes columns for ID, Type, Name, MAC, IP, Firmware, Status, Up Time, and Source. The decoders are numbered 1 through 4, all of type WMR3, with names Decoder_001 through Decoder_004. The MAC addresses are 6C:DF:FB:00:04:8D, 6C:DF:FB:00:F4:05, 6C:DF:FB:00:F4:1D, and 6C:DF:FB:00:F4:2B respectively. The IP addresses are 169.254.20.1 through 169.254.20.4. The firmware version is 20250306 for all. The status is 'On' (green dot) for all. The up time is 00 day,00 hr,46 min for all. The source is 'Encoder_00' for all. Below the table, there are buttons for 'Search Decoder', 'Search Device Via Wizard', 'Add All Into System', and 'PC Device List'.

ID	Type	Name	MAC	IP	Firmware	Status	Up Time	Source
1	WMR3	Decoder_001	6C:DF:FB:00:04:8D	169.254.20.1	20250306	On	00 day,00 hr,46 min	Encoder_00
2	WMR3	Decoder_002	6C:DF:FB:00:F4:05	169.254.20.2	20250311(0030)	On	00 day,00 hr,46 min	Encoder_00
3	WMR3	Decoder_003	6C:DF:FB:00:F4:1D	169.254.20.3	20250311(0030)	On	00 day,00 hr,46 min	Encoder_00
4	WMR3	Decoder_004	6C:DF:FB:00:F4:2B	169.254.20.4	20250311(0030)	On	00 day,00 hr,46 min	Encoder_00



The screenshot shows the AVoIP Device configuration interface for a specific decoder. At the top, there are tabs for 'Encoder(10)' and 'Decoder(10)'. Below the tabs is a table listing one decoder. The table has columns for ID, Type, Name, MAC, IP, Firmware, Status, Up Time, and Source. The decoder is numbered 1, of type WMR3, with name Decoder_001, MAC 6C:DF:FB:00:04:8D, IP 169.254.20.1, and firmware 20250306. The status is 'On' (green dot) and the up time is 00 day,00 hr,18 min. The source is 'Encoder_D0'. Below the table, there are sections for 'Basic Settings' and 'A/V Settings'. The 'Basic Settings' section includes fields for Name (Decoder_001), Source (Encoder_004), Change ID (1), and DEC LED Flashing (Off). There is a 'Preview' button and a video preview window showing a man in a suit. The 'A/V Settings' section includes fields for Scaling (1920x1080@60Hz) and Output Mode (Matrix). There is also a 'Show ID OSD' field set to Off. At the bottom, there is a link for 'Video Advanced Settings'.

ID	Type	Name	MAC	IP	Firmware	Status	Up Time	Source
1	WMR3	Decoder_001	6C:DF:FB:00:04:8D	169.254.20.1	20250306	On	00 day,00 hr,18 min	Encoder_D0

Basic Settings

① **Name:** The name of the Decoder can be changed. (Note: The maximum length is 16 characters. Special characters are not supported.)

② **Source:** Click the drop-down menu to select signal source for the Decoder.

③ **Change ID:** The ID of the Decoder can be set. (ID range:1-762)

Note: Both ID and name can not be duplicated.

④ **DEC LED Flashing:** The "Show me" function of the Decoder, used to quickly find the corresponding device. Click the drop-down menu to select On/Off to turn on/off the DEC LED on the front panel of the Decoder.

⑤ **Preview:** The preview of the Decoder.

A/V Settings

① **Scaling:** Click the drop-down menu to select the video output resolution (1280x720@50Hz/1280x720@60Hz/1360x768@60Hz/1680x1050@60Hz/1920x1080@24Hz/1920x1080@25Hz/1920x1080@30Hz/1920x1080@50Hz/1920x1080@60Hz/1920x1200@60Hz/3840x2160@24Hz/3840x2160@25Hz/3840x2160@30Hz/3840x2160@50Hz/3840x2160@60Hz/4096x2160@24Hz/4096x2160@25Hz/4096x2160@30Hz/4096x2160@50Hz/4096x2160@60Hz). Please note that the video output resolution may be different for different models.

- ② **Output Mode:** Display the current video output mode (Matrix/Video Wall).
- ③ **Show ID OSD:** Select On/off to enable/disable the ID OSD display. If “On” is selected, the ID OSD (with Decoder's IP address and name) will display in the upper left corner of the TV connected to the Decoder. The position, color and content cannot be modified, and the Decoder ID OSD will be overlaid on top of the video stream, as shown in the figure below.



Video Advanced Settings

- ① **Decoder Delay[0-500]:** Input the value [0-500] to set the Decoder delay (0 by default). *Note: This option is to set data buffering in millisecond time before the data transfers to display, especially for LED array display wall. It's to change video line scanning mode, the value is normally set as times of one-frame period relevant to the decoder HDMI output frame rate. Normally there is no need to adjust this setting.*



Audio Advanced Settings

- ① **Audio Output Type:** Click the drop-down menu to select the audio signal output type (HDMI + Analog/DVI + Analog).
- ② **Audio Volume[0-100]:** Input the value [0-100] to set the audio volume.

RS-232 Settings

- ① **RS-232 Command Relay:** Click the drop-down menu to select On/Off to turn on/off the RS-232 command relay function.
 - ② **Parity:** Click the drop-down menu to set the parity (None/Odd/Even).
 - ③ **Baud Rate:** Click the drop-down menu to set the baud rate (9600/19200/38400/57600/115200).
 - ④ **Data Bits:** Click the drop-down menu to set the data bits (5 bit/6 bit/7 bit/8 bit).
 - ⑤ **Stop Bits:** Click the drop-down menu to set the stop bits (1 bit/2 bit).
- After setting, click “Apply” to take effect.

Info OSD Settings

- ① **Color:** Click to set the color (White/Black) of the OSD.
- ② **Position:** Click the drop-down menu to select the position (Left Top/Right Top/Left Bottom/Right Bottom) of OSD.

The Info OSD (with the Decoder's IP address and name) displays in the bottom right corner of the TV connected to the Decoder by default, as shown in the figure below. The position and color can be modified, but the Decoder Info OSD will be obscured by the video stream.



ID	Model	Name	MAC	IP	Port	Status	Uptime	Encoder
2	WMR6	Decoder_002	6C:DF:FB:00:F4:05	169.254.20.2	20250311(0030)	●	00 day,00 hr,19 min	Encoder_06
3	WMR6	Decoder_003	6C:DF:FB:00:F4:10	169.254.20.3	20250311(0030)	●	00 day,00 hr,19 min	Encoder_06

Other Settings

① **Decode Test Mode:** Click the drop-down menu to set the decoder to output test pattern (Off/Gray/Color/Geo/Message/White/Red/Green).

② **Decoder Sync Level:** Click the drop-down menu to select the decoder sync level (Low/High).

Note: This item is default with setting Low. It's for debugging system installation to improve the video synchronization performance in certain case, especially in a LED array display wall system installation.

Normally there is no need to adjust this setting. There are two options "Low" and "High" can be set. Once it's set to "High", the device previously set "High" will automatically go back to "Low" as only one device can be set "High" at a time.

This setting requires device reboot to take effect, don't change it unless it's really necessary.

③ **KVM Turn Around:** Select On/off to enable/disable the KVM Turn Around to open/close KVM menu on decoder client side by moving mouse clockwise/counterclockwise three times.

④ **KVM Mouse:** Select On/off to enable/disable the KVM virtual mouse cursor.

Note: The default setting is "Off". When user try to align PC system mouse cursor with KVM Mouse virtual cursor in KVM mode, it needs to set "On", After the alignment is complete, then close the KVM Mouse virtual cursor by setting "Off".

Network Settings

① **IP Mode:** Click the drop-down menu to set the IP mode (Static/DHCP).

② **IP Address:** The IP address of the Decoder.

③ **Subnet Mask:** The Subnet Mask of the Decoder.

④ **Gateway:** The Gateway of the Decoder.

Notes:

(1) If the IP mode is set to "Static", you can manually set the IP Address, Subnet Mask and Gateway as required. Then click "Apply" to take effect.

(2) If the IP mode is set to "DHCP", it will search and be filled with the IP Address assigned by the router automatically.

(3) If the Decoder is actually alive in the system but with incorrect network segment settings, even though the Decoder is offline, its network settings including IP address can be changed and set to make it being discovered again.

Reboot: Click the Reboot button to reboot the Decoder.

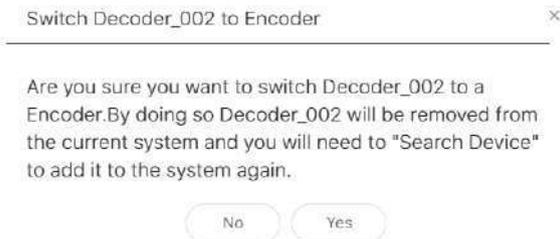
Replace: Reserved button for device replacement.

Remove: Click the Remove button to remove the Decoder from the system.

Remove All: Click this button to remove all Decoders from the system.

Factory Reset: Click this button to restore the Decoder to factory settings.

Switch to Encoder: Click this button to switch the current Decoder to Encoder mode. The following prompt window will pop up.



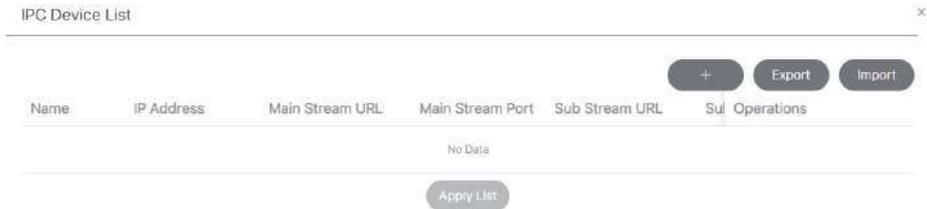
If you select "Yes", the Decoder will be removed from the current system and you will need to "scan" to add it to the system again.



Device

- ① **Search Device:** Click this button to search devices which are not in the system.
 - ② **Search Device Via Wizard:** Click this button to switch back to the IP mode select interface and follow the Wizard to set up the system.
 - ③ **Add All Into System:** Click this button to add all searched devices into the system, then the devices will be listed in the Encoder/Decoder list.
 - ④ **IPC Device List:** Click this button to add IPC devices into the system.
- Follow the steps below to add IPC devices into the system.

Step 1. Click the IPC Device List button to pop up the IPC Device List dialog box.



Step 2. Click the + button to pop up the Add IPC dialog box.

Add IPC
✕

Name

Note: Set a Name for the IPC device.

Authentication Required

User Name

User Password

Note: Refer to IPC user manual to fill these items.

IP Address

Main Stream URL

Main Stream Port

Sub Stream URL

Sub Stream Port

Note: Refer to IPC user manual to fill these items. IPC IP Address should be in same network segment.

Clear All Settings
Add To List

Step 3. Fill in the information, then click the Add To List button to import the IPC device. Import more IPC devices one by one in the same way. The imported devices will be listed on the IPC Device List dialog box as shown in the following figure.

Name	IP Address	Main Stream URL	Main Stream Port	Sub Stream URL	Sul	Operations
Test	169.254.3.1	rtsp://169.254.3.1/main	554	rtsp://169.254.3.1/s ub	55	<button>Edit</button> <button>Remove</button>
Test2	169.254.3.2	rtsp://169.254.3.2/main	554	rtsp://169.254.3.2/s ub	55	<button>Edit</button> <button>Remove</button>
Test3	169.254.3.3	rtsp://169.254.3.3/main	554	rtsp://169.254.3.3/s ub	55	<button>Edit</button> <button>Remove</button>
Test4	169.254.3.4	rtsp://169.254.3.4/main	554	rtsp://169.254.3.4/s ub	55	<button>Edit</button> <button>Remove</button>

Apply List

Furthermore, you can click the Import button to import multiple IPC devices (in the form of TXT file). The import file should include the data length (which is the IPC device quantity number), device name, IP address, authentication information, mainstream & substream address and port, as shown in the figure below.

Data Length: 3

```

name: IPC1
ip: 169.254.3.10
authReq: yes
username: admin
userpassword: admin
mainStreamUrl: rtsp://169.254.3.10/live/main/av_stream
mainStreamPort: 554
subStreamUrl: rtsp://169.254.3.10/live/sub/av_stream
subStreamPort: 554

```

```

name: IPC1
ip: 169.254.3.11
authReq: yes
username: admin
userpassword: admin
mainStreamUrl: rtsp://169.254.3.11/live/main/av_stream
mainStreamPort: 554
subStreamUrl: rtsp://169.254.3.11/live/sub/av_stream
subStreamPort: 554

```

```

name: IPC1
ip: 169.254.3.12
authReq: yes
username: admin
userpassword: admin
mainStreamUrl: rtsp://169.254.3.12/live/main/av_stream
mainStreamPort: 554
subStreamUrl: rtsp://169.254.3.12/live/sub/av_stream
subStreamPort: 554

```

Step 4. Click the Edit button to edit the information of IPC device, or click the Remove button to delete the device as required. After setting, click Apply List to add the imported devices into the system. Then the devices will list in the Encoder list, as shown in the figure below.

ID	Type	Name	MAC	IP	Firmware	Status	Up Time	RX Link	Member
1	WMR6	Encoder_001	8C:DF:FB:00:F3:F4	169.254.10.1	20250311(9036)	●	00 day,00 hr,10 min	0	Null
2	WMR6	Encoder_002	8C:DF:FB:00:F4:13	169.254.10.2	20250311(9036)	●	00 day,00 hr,10 min	0	Null
3	WMR6	Encoder_003	8C:DF:FB:00:F4:16	169.254.10.3	20250311(9036)	●	00 day,00 hr,10 min	0	Null
4	WMR6	Encoder_004	8C:DF:FB:20:01:09	169.254.10.4	20250311(9036)	●	00 day,00 hr,10 min	4	Name
11	IPC	IPC	01:00:FB:00:D9:28	169.254.0.212	1.0.0	●	00 day,00 hr,02 min	0	Null

On this page, you can check the information of the IPC devices, such as ID, Type, Name, MAC address, IP address, Online/Offline Status, Up Time, RX Link, Member. Besides, you can check more details after clicking the drop-down icon on the left side of ID, as shown in the figures below.

Basic Settings

Name:

Change ID:

Preview: 

Authentication Required

User Name:

User Password:

Stream Settings

IP Address:

Main Stream URL:

Sub Stream URL:

Main Stream Port:

Sub Stream Port:

Network Settings

IP Mode:

Subnet Mask:

IP Address:

Gateway:

Device

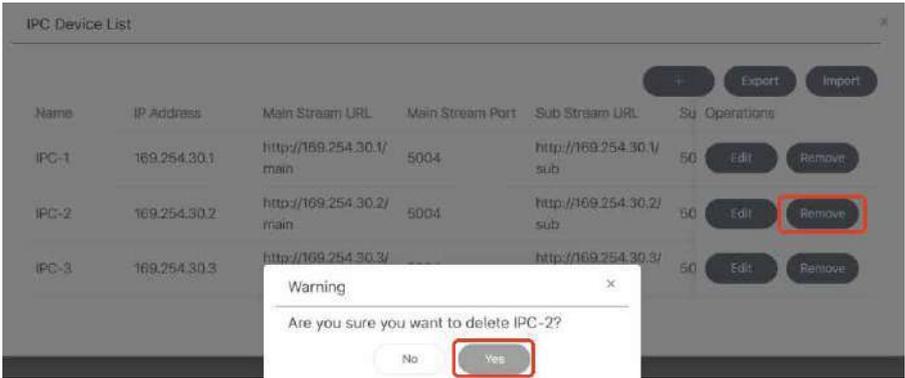
Clicking Remove All will remove all IPC devices and reboot the controller. Please operate with caution.

Remove all IPC, sure to continue? x

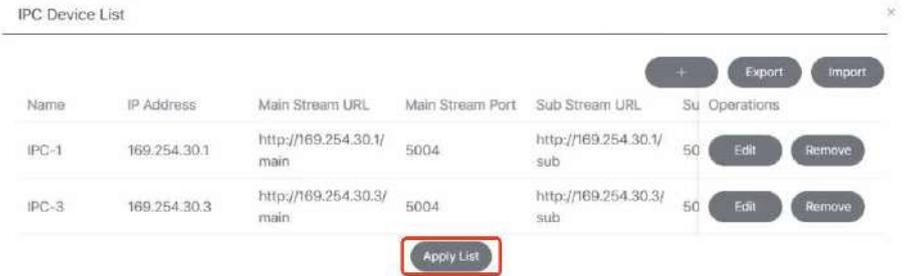
It takes about one minute to remove all IPC devices, remove all IPC devices will reboot the controller. Are you sure you want to continue?

To remove a single IPC device, the steps are as follows.

Step 1. Click the IPC Device List button to pop up the IPC Device List dialog box, then click the Remove button on the right side of the IPC device and click the Yes button to confirm the remove operation.



Step 2. Click the Apply List button to apply the new IPC device list to the system.

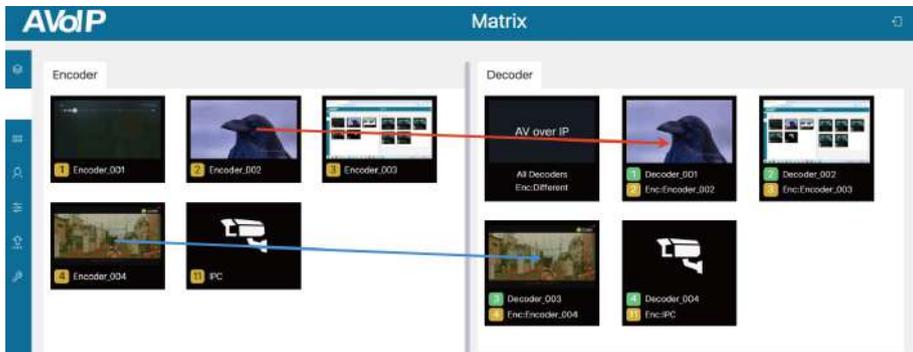


In addition, clicking the Export button in the IPC Device List dialog box can export the IPC devices in the system to the local PC in the form of TXT file (similar to the import file).

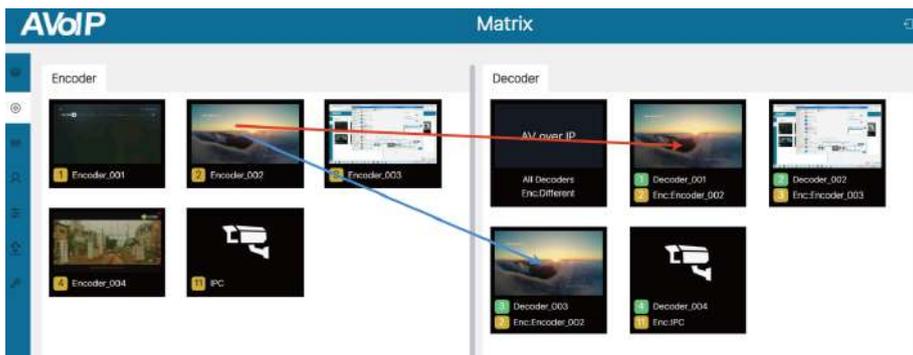
7.2.2 Matrix

Matrix Switching Function

① Left-click the Encoder/IPC device preview picture and drag it to Decoder, then release the mouse to realize one-to-one switching.



② Left-click the Encoder/IPC device preview picture and drag it to multiple Decoders, then release the mouse to realize one-to-many switching.



③ Left-click the Encoder/IPC device preview picture and drag it to All Decoders, then release the mouse to realize one-to-all switching.



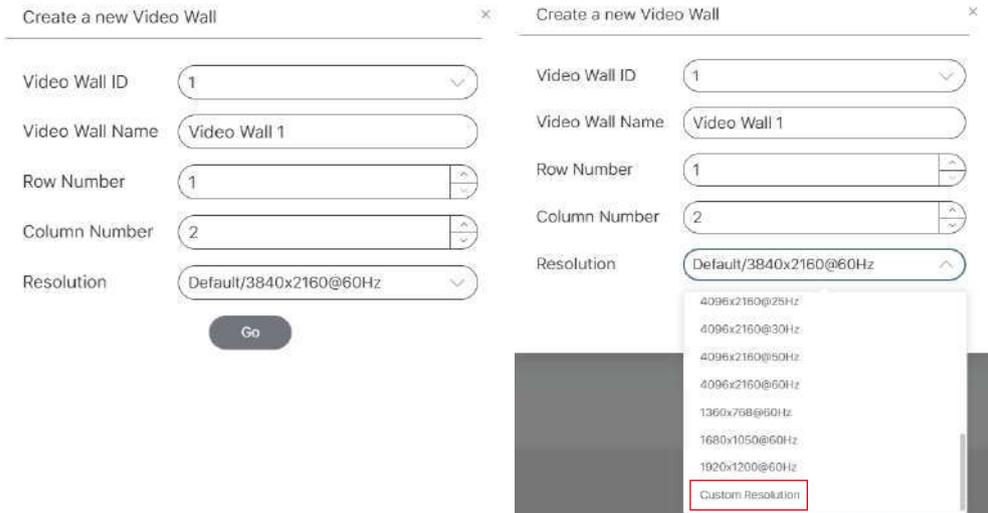
7.2.3 Video Wall



Video Wall Creation

On the Video Wall List interface of this page, you can create and configure video wall as required. Please follow below steps to create and configure a video wall.

Step 1: Click “Create”, a pop-up dialog box will be shown as below.



You can set the Video Wall ID, Video Wall Name, Row Number, Column Number and Resolution. Then click “Go” to create the video wall. If the “Custom Resolution” is selected as the resolution, more detailed customization can be set, as shown in the following figure.

Create a new Video Wall
✕

Video Wall ID

Video Wall Name

Row Number

Column Number

Resolution

Total Horizontal Pixel

Total Vertical Pixel

Driver Card H-Pixel

Driver Card V-Pixel

Refresh Rate

Horizontal Cut

Left Side

Right Side

Vertical Cut

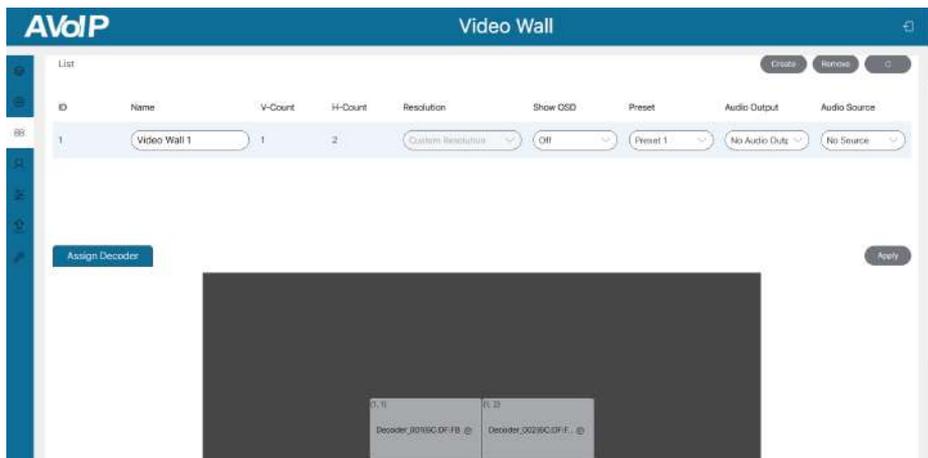
Top Side

Bottom Side

Go

Note: The video wall name can be changed after the video wall is created.

Step 2: Select the video wall that you want to configure, then click “Assign Decoder” at the bottom of the Video Wall List interface to enter the Decoder assignment interface. Click each screen to select the corresponding Decoder device, then click “Apply” to take effect.

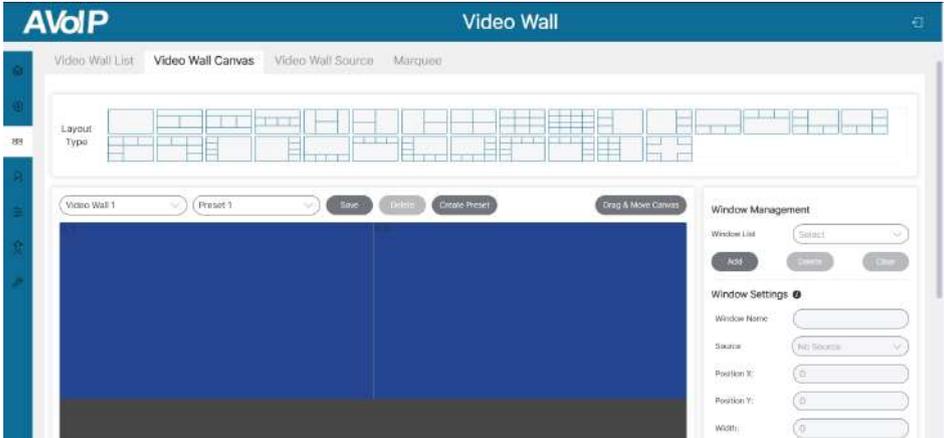


Notes:

- (1) A decoder can only be assigned to one video wall.
- (2) If a decoder doesn't support the selected video resolution, it will display in gray and unselectable. Please replace a new decoder, or adjust the resolution of the video wall so that the decoder can be used in the video wall.

Video Wall Canvas

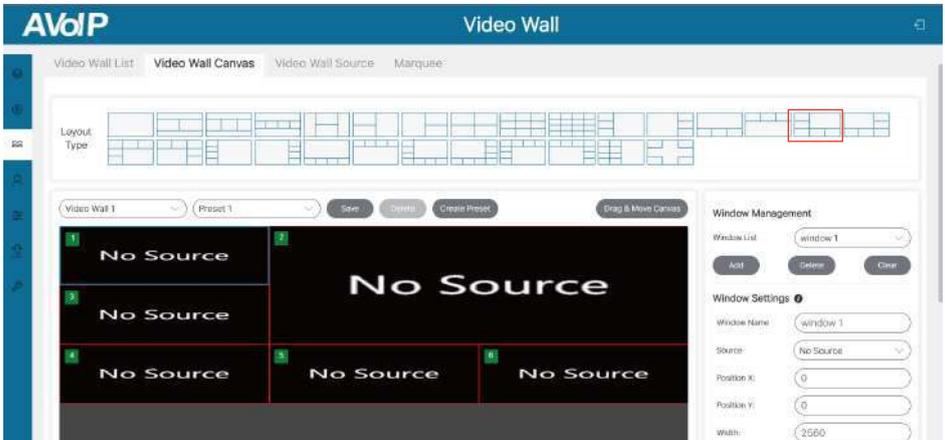
After the video wall is created and configured, you can click the Video Wall Canvas tab to set the video wall layout, create and configure presets, or perform windowing.



(1) Video Wall Layout

Follow the steps to set the video wall layout.

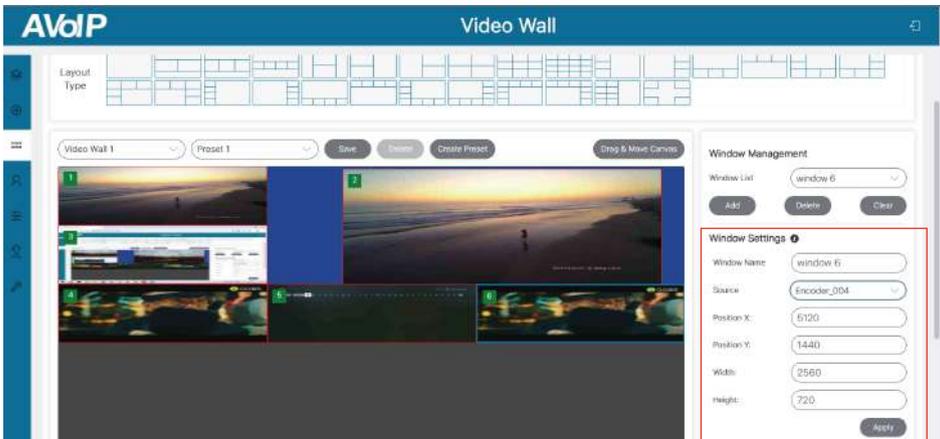
Step 1: Click to select the desired layout in the Layout Type area, which will be displayed in the video wall canvas, as shown in the figure below.



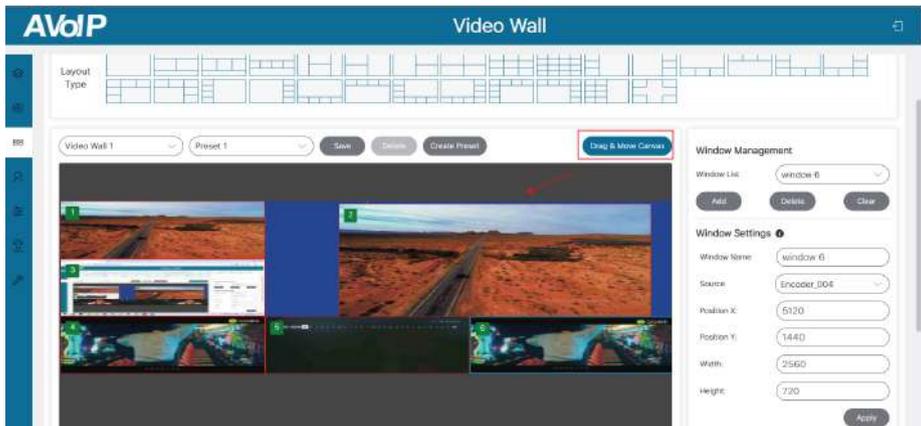
Step 2: Click to select a window in the layout, then you can rename, select a source, or set the position/width/height for the window in the Window Settings area. In addition, you can directly drag the window to set its position and size. After setting, click "Save" to confirm and save the settings.



Step 3: Select signal source and set the position/size for each window as required in the same way. Then, click “Save” above the video wall canvas to save the current settings as Preset 1 and take effect, as shown in the figures below.



Furthermore, after clicking “Drag & Move Canvas” above the video wall canvas, you can drag the video wall to other position of the canvas as required for better preview.



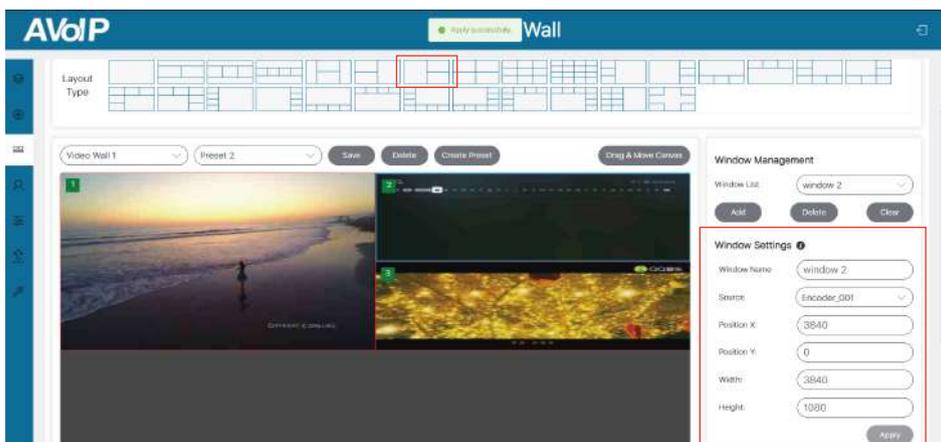
(2) Preset Creation

Follow the steps to create and configure a video wall preset.

Step 1: Click “Create Preset”, a pop-up dialog box will be shown as below. You can set the Preset ID and name, then click “Go” to create the video wall preset.



Step 2: Click to select the desired layout in the Layout Type area, and set windows, then click “Save” above the video wall canvas to save the preset.

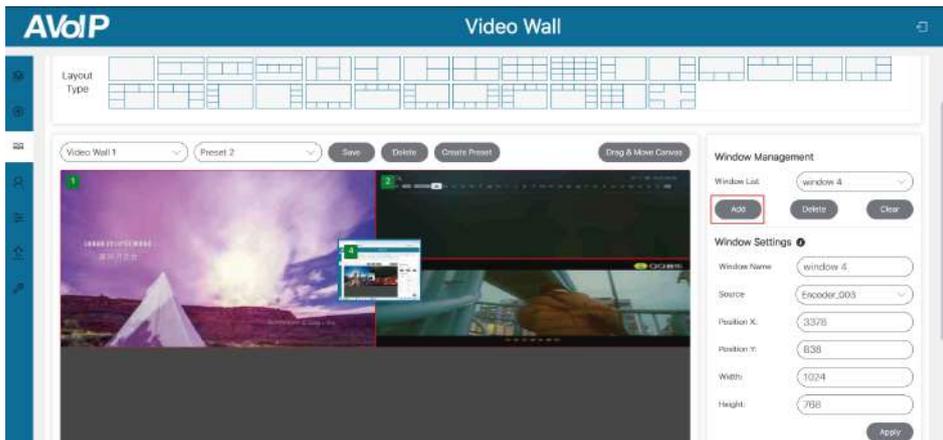


(3) Windowing Configuration

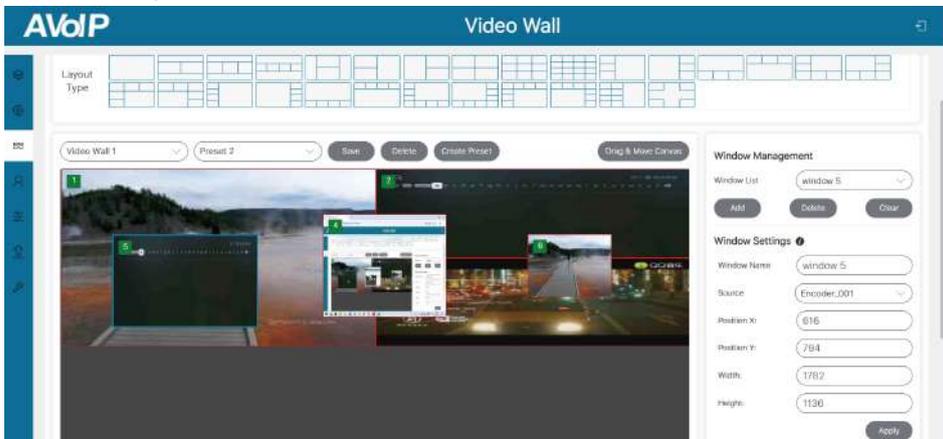
Follow the steps to create and configure windowing on the video wall.

Step 1: Click “Add” in the Window Management area, a pop-up dialog box will be shown as below. You can set the ID, name, source, position and size, then click “Go”. The new created window will be laid above the video wall.

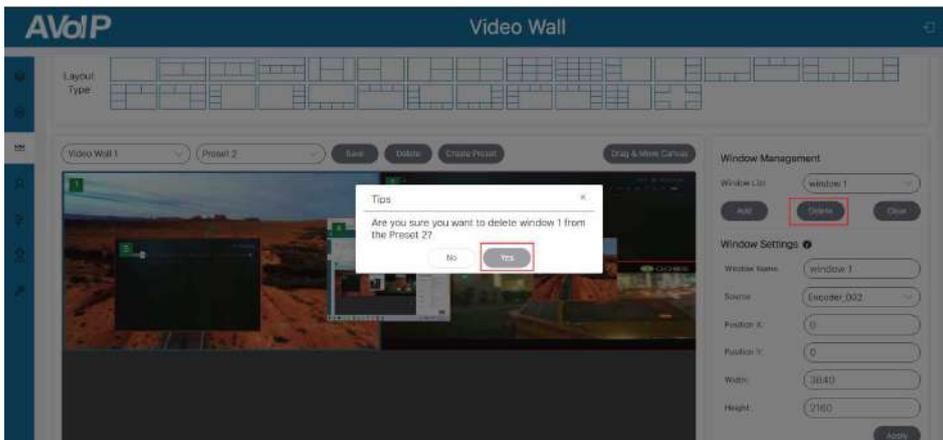




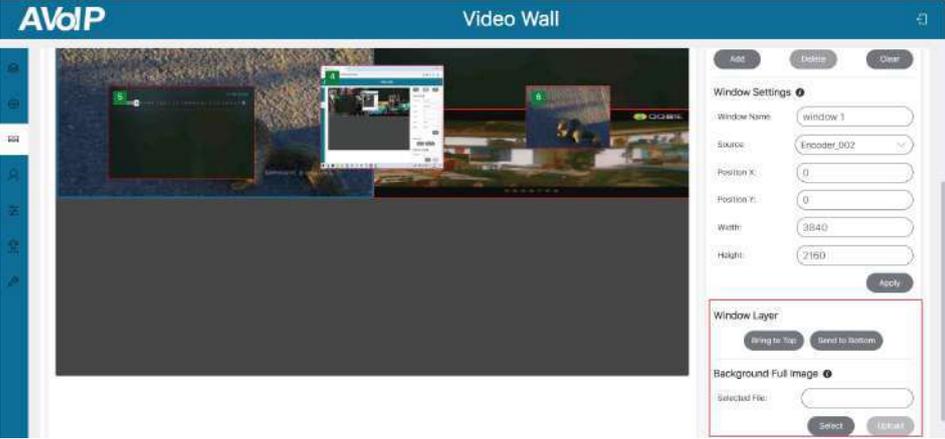
Step 2: Add more windows in the same way. Besides, you can directly click to select one window and drag it to set its position and size.



If you want to delete one of the window, just select the window in Window List, then click "Delete". A dialog box will pop up and you can delete it after clicking "Yes".



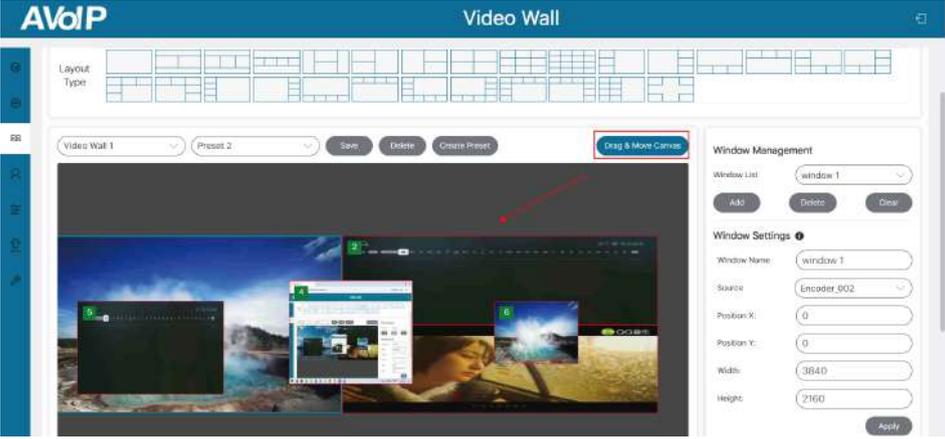
Clicking “Clear” will clear all the windows on the canvas, please operate with caution. In addition, you can set the layer for windows by clicking “Bring to Top” or “Bring to Bottom” in Window Layer area, or upload background full image in the Background Full Image area, as shown in the following figure.



Notes:

- (1) Please use correct PNG format image file with the same resolution of the current video wall.
- (2) Please re-import the background image if the decoder is reset to factory settings.

Furthermore, after clicking “Drag & Move Canvas” above the video wall canvas, you can drag the video wall to other position of the canvas as required for better preview.

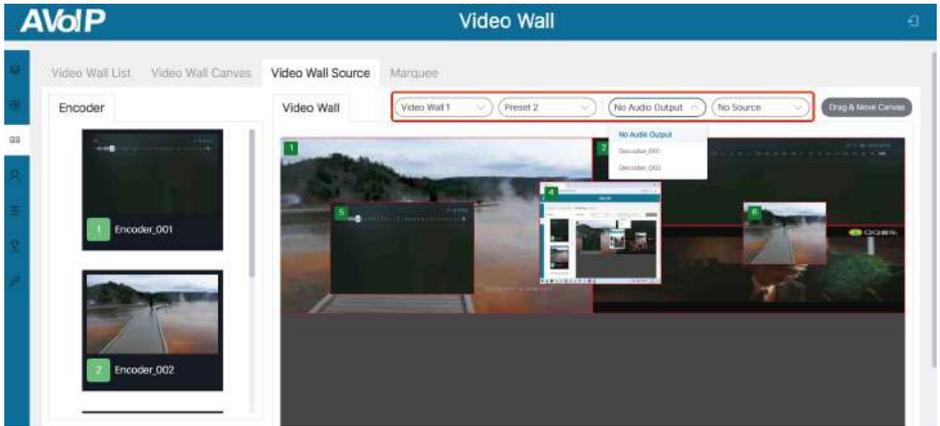


Video Wall Source

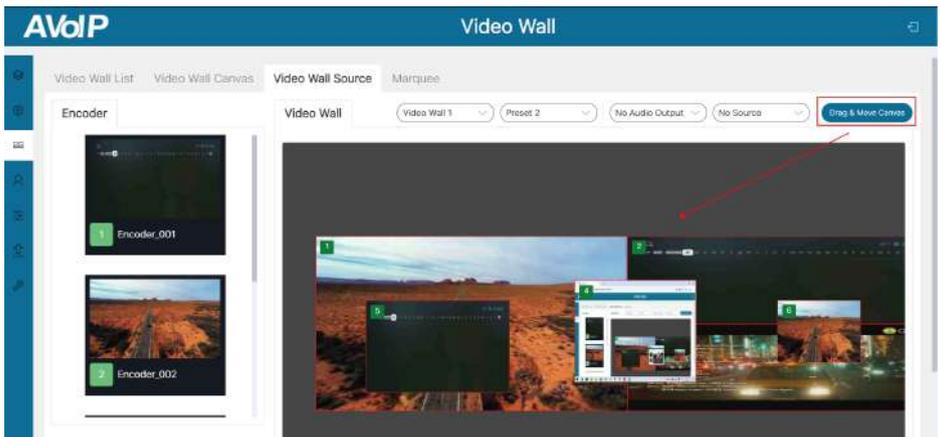
After the video wall and windowing are created and configured, you can click the Video Wall Source tab to check the video wall preview.

On this interface, you can click the drop-down menu to select the signal source for each window, or directly drag Encoders to the video wall to change signal sources; Click the drop-down menu to select the audio output channel; Click the drop-down menu to switch different

video walls; Click the drop-down menu to switch different video wall presets.
Note: If the Encoder is offline, it can't be dragged to the matrix of video wall.



Moreover, after clicking “Drag & Move Canvas” , you can drag the video wall to other position of the canvas as required for better preview.

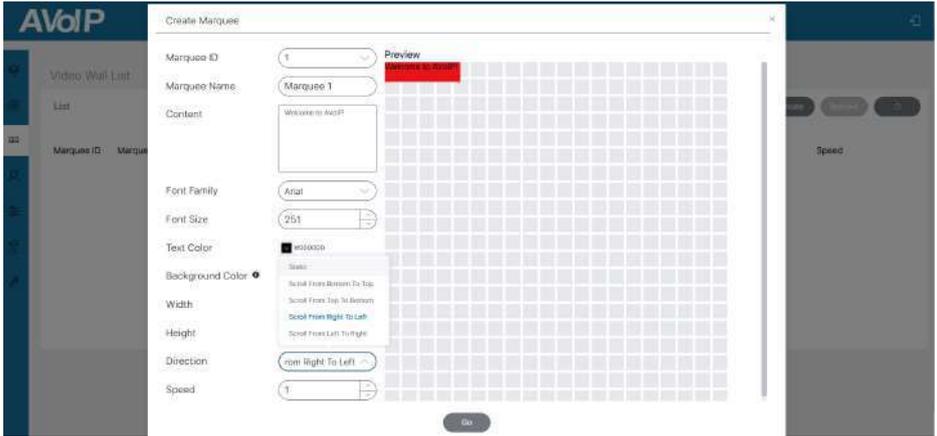


Marquee

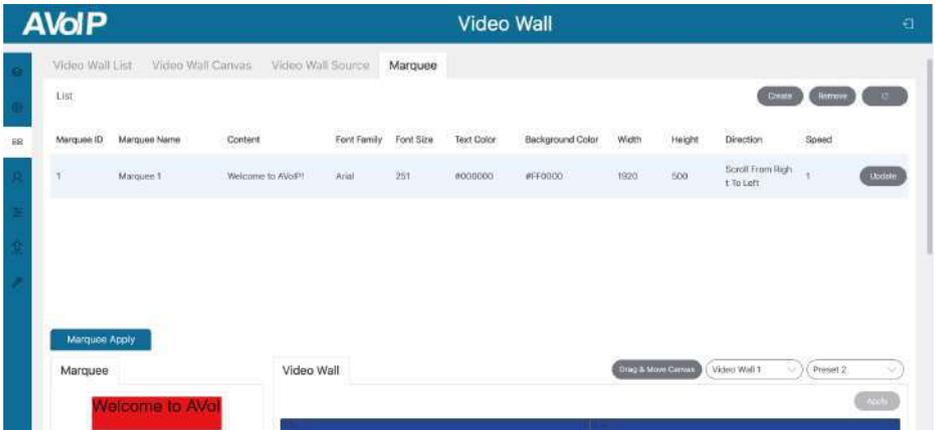
The matrix supports marquee function. Click the Marquee tab to set a marquee for the video wall.



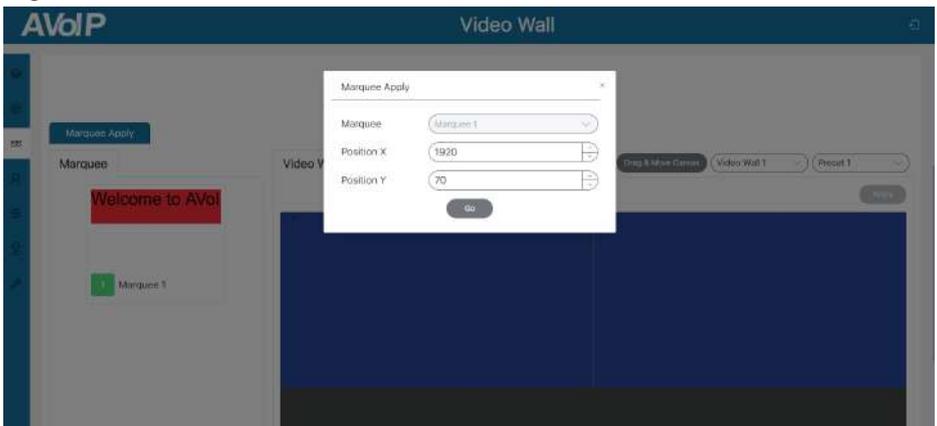
Step 1: Click “Create”, a pop-up dialog box will be shown as below.



Set the Marquee ID, name, content, font, font size, text color, background color, width, height, direction and speed. Then click “Go” to create the marquee.



Step 2: Drag the new created Marquee in Marquee area to the Video Wall area, a pop-up dialog box will be shown as below.



Step 3: Set the Position X/Y for the marquee, then click “Go” to take effect. The marquee will be displayed on the canvas, as shown in the figure below.

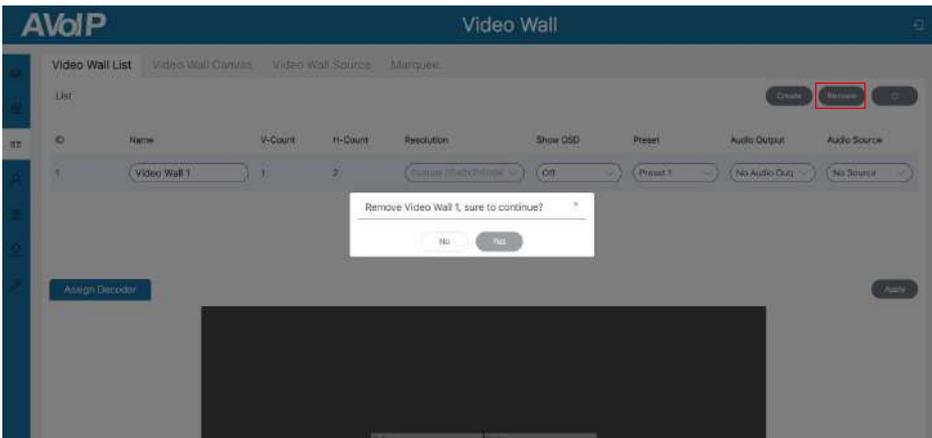


If multiple marquees are set, you can click the drop-down menu to switch different marquees, or input the value in the input box to modify the Position X/Y of the marquee. If you want to delete the marquee, just click “Remove”, and then click “Yes” in the pop-up dialog box. Moreover, after clicking “Drag & Move Canvas”, you can drag the video wall to other position of the canvas as required for better preview.

Step 4: Click the drop-down menu to switch different video walls, and click the drop-down menu to switch different video wall presets. Then click “Apply” to apply the marquee on the video wall.

Video Wall Remove

If you want to delete a video wall, just select the video wall on the “Video Wall List”, then click “Remove”. A prompt window will pop up and you can delete it after clicking “Yes”.

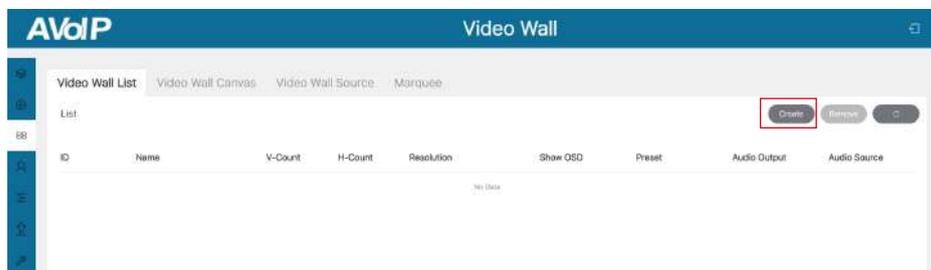


Notes:

- (1) Each Decoder can be set into a part of a video wall array. Each system can contain multiple video walls with different sizes. Each video wall can be assigned to different screens and different layouts that range from 1x2 up to 9x9.
- (2) The Controller creates and manages the video wall configurations and provides a simplified control interface and API commands to third party control system.

7.2.4 Multiview

The multiview function also can be performed on the Video Wall page. You just need to create a 1x1 video wall to be the multiview canvas, as shown in the following figures.



Create a new Video Wall ×

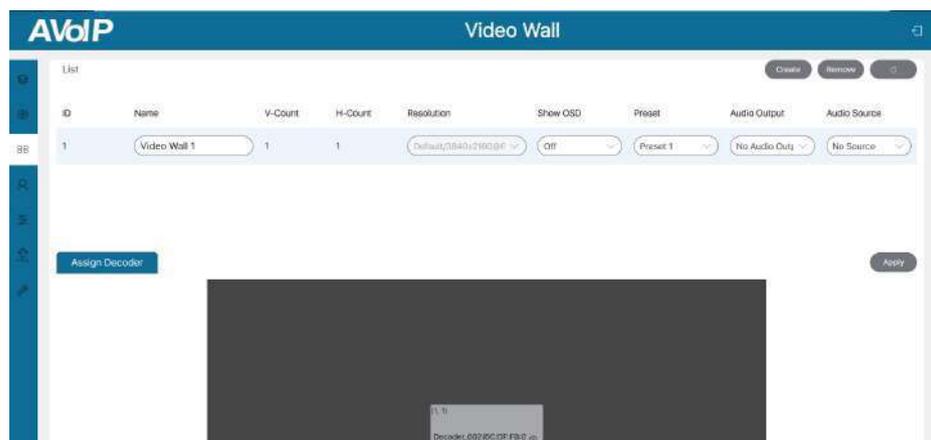
Video Wall ID:

Video Wall Name:

Row Number:

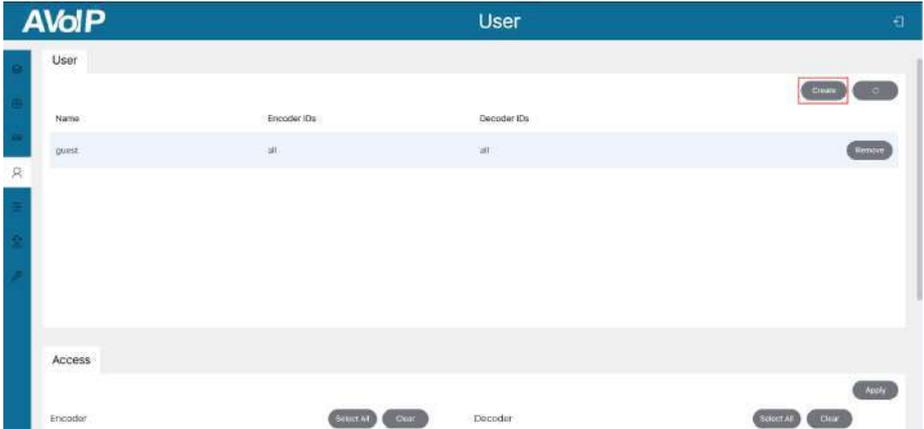
Column Number:

Resolution:



Then you can configure the multiview layout, create new preset, check multiview preview, or set windowing/Marquee on the multiview using the same method as video wall.

7.2.5 User



On this page, you can add new user accounts with their own control privileges. This will allow you to create a unique login and limit features such as inputs and outputs that each person has access to. Follow steps below to create a new User.

Step 1: Click “Create”, a pop-up dialog box will be shown as below.

Create User ✕

User Name:

User Password:

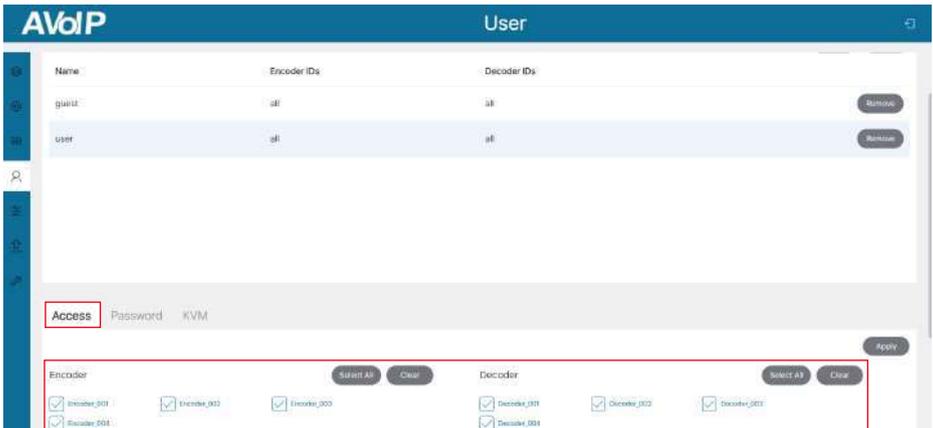
Confirm Password:

Step 2: Input the User Name, User Password and Confirm Password. Then click “Go” to create the User.

Notes:

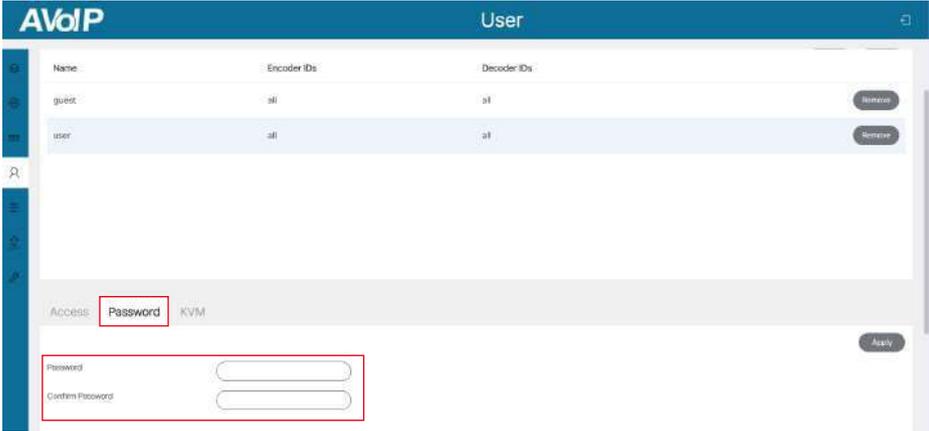
(1) The user name requires a minimum of 6 characters and a maximum length of 12 characters. Special characters are not supported; The password has a minimum of 6 characters and a maximum of 8 characters.

(2) The Password and Confirm Password must be the same.

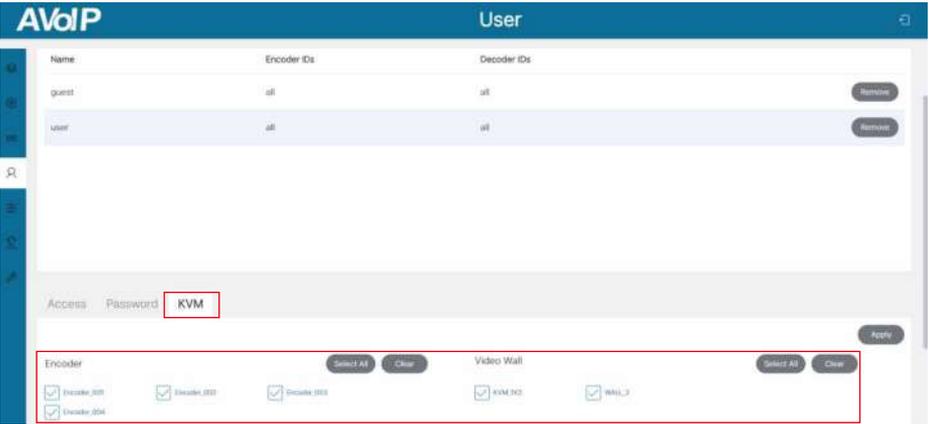


After the new User is created, you can select Encoders and Decoders as required by checking the devices on the bottom of the User page one by one, or directly click “Select All” to select all devices in the system. Then click “Apply” to take effect. The selected devices can be accessed by the User.

Besides, you can click “Password” to change the User’s password, or click “Remove” to delete the User. If you want to login with the new User, just click the logout icon at the upper right corner of this page to log out, and then login with the new user name and password.



Click “KVM” to set the KVM permission. KVM permission settings are used to set the resources that the user can access after logging into the KVM OSD menu. By default, this user can access all video walls and encoders, as shown in the following figure.



You can also set access to only part of Video Wall and encoders. For example, set the user to only operate Encoder 001, Encoder 002, Encoder 003 and Video Wall KVM_1X2. After selecting the corresponding options, click Apply to take effect, as shown in the following figure.



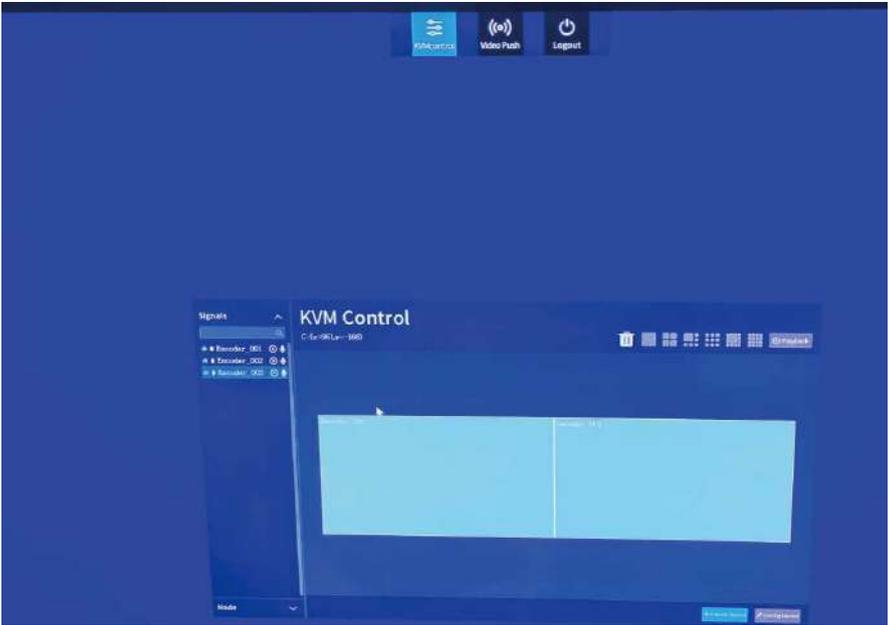
To test KVM access permissions, please plug the mouse and keyboard into the USB Device port of any decoder on the Video Wall KVM_1X2 used for KVM operations. The screen of the decoder will immediately pop up the KVM login menu, as shown in the following figure.



Enter the username and password, then click Login.

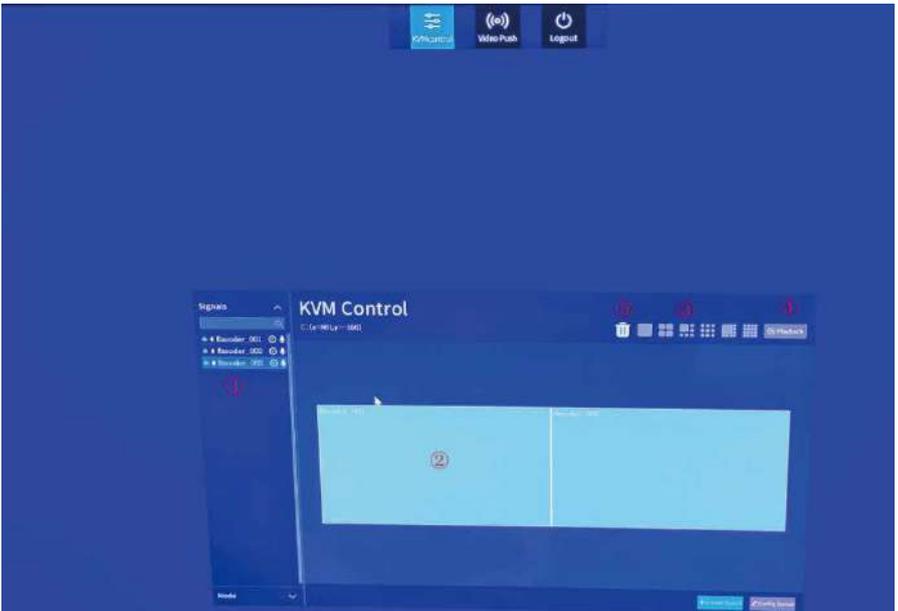


After successful login, the login interface will disappear. Rotate the mouse clockwise 3 times on the screen to display the KVM menu (rotate the mouse counterclockwise 3 times to hide the KVM menu, or press Ctrl+Win on the keyboard to display the KVM menu, or press Esc on the keyboard to hide the KVM menu), as shown in the following figure.



The KVM menu includes KVM Control, Video Push and Logout.

KVM Control is used to control the Video Wall (KVM seat) where the keyboard and mouse are located, as shown in the following figure.



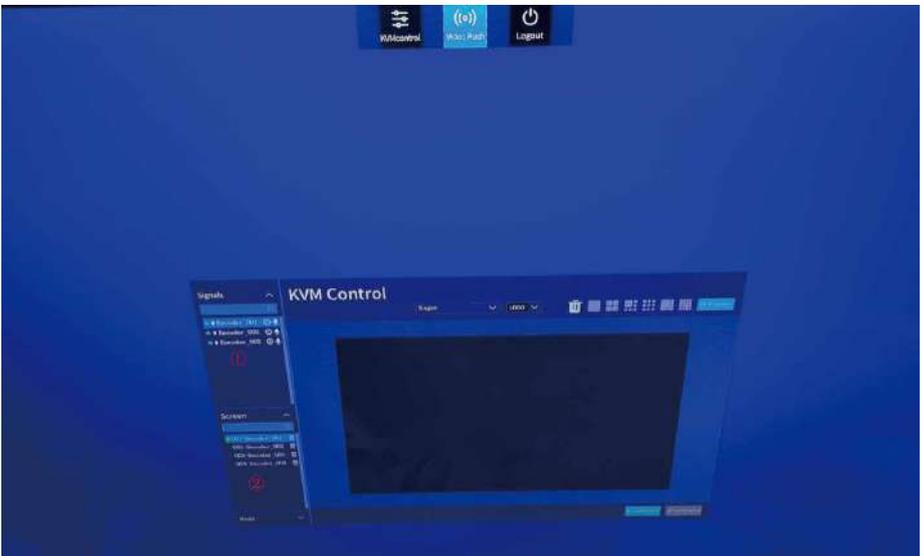
- ① **Signals:** The list of signal sources, only displaying the encoders that the user can access.
- ② **Large Screen Area:** Drag the signal source from the signal source list to the large screen area to switch the signal source.
- ③ **Grid Settings:** You can set the grid of each screen in Video Wall, including 1 split screen, 4 split screen, 6 split screen, 9 split screen, 8 split screen, and 16 split screen. Clicking on the corresponding icon will highlight it, as shown in the figure below.



Click on the 4 split screen icon, then drag the signal source to the 1/4 grid of the screen. Dragging and adjusting the size and position of the signal source window will adapt to the grid automatically. Clicking on the highlighted grid icon again will cancel the grid, allowing you to drag and adjust the signal source window to any size and position.

- ④ **Preview:** Click to open the preview of the window, click again to close the preview.
- ⑤ **Delete window:** Clicking on it will delete all windows.

Video Push is used to control matrix and other accessible video walls in the system, as shown in the following figure.



- ① **Signals:** The list of signal sources, only displaying the encoders that the user can access.
- ② **Screen:** The list of all matrix decoders and video walls for which this user has permissions. Clicking on an item in the list will display the matrix decoder or video wall in the large screen area. Switching signal sources and other operations are the same as KVM Control.

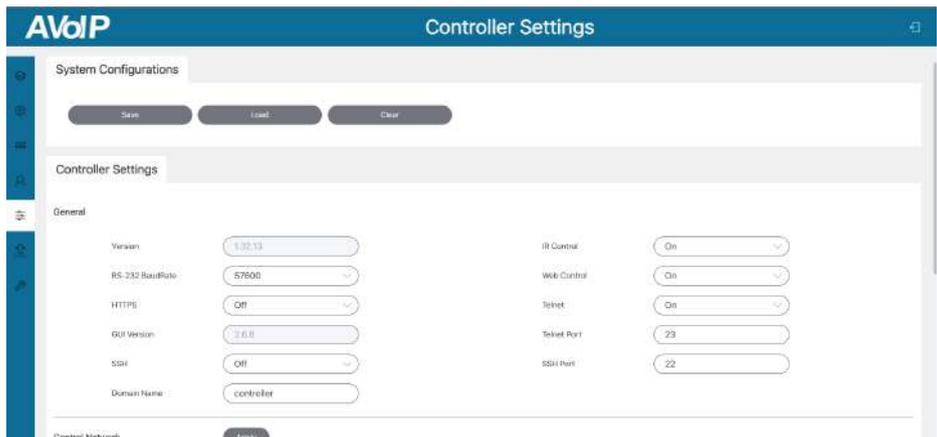


Note: If the decoder is assigned to the Video Wall of the KVM seat that is currently logged in, Video Push cannot push the encoder signal source to it anymore. As shown in the above figure, 001-Doder_001 and 002-Doder_002 have been assigned to Video Wall KVM1X2, so other encoder signal sources cannot be pushed to them anymore.

Logout is used to log out of the current account and return to the login interface.

Note: When logging out, all windows in the video wall (KVM seat) where the keyboard and mouse are located will be deleted as for the security purpose.

7.2.6 Controller Settings



System Configurations: Click “Save” to save the current configuration; click “Load” to load the system configuration file and replace the current system configurations (It’s strongly recommended to save the current configurations before loading); click “Clear” to clear system configurations already created and configured in the controller, and you need to set up the system again.

Controller Settings

① **General:** The general settings of the Controller. You can check the Controller Version, GUI Version, Telnet Port, SSH Port and Domain Name.

In addition, you can click the drop-down menu to set IR Control, RS-232 BaudRate, Web Control, HTTPS, Telnet and SSH.

The screenshot shows the 'AVoIP Controller Settings' web interface. The interface has a blue header with the 'AVoIP' logo and the title 'Controller Settings'. On the left, there is a vertical navigation menu with icons for Home, Settings, and a plus sign. The main content area is divided into sections: 'SSH' with 'SSH' set to 'Off' and 'SSH Port' set to '22'; 'Domain Name' set to 'controller'; 'Control Network' with an 'Apply' button; 'DHCP' set to 'On', 'Subnet Mask' set to '255.255.255.0', 'IP Address' set to '192.168.6.100', and 'Gateway' set to '192.168.6.1'; 'Video Network' with an 'Apply' button; 'DHCP' set to 'Off', 'Subnet Mask' set to '255.255.0.0', 'IP Address' set to '192.254.8.100', and 'Gateway' set to '192.254.8.1'. At the bottom, there are three buttons: 'Settings Reset', 'Network Reset', and 'Reset All'.

② **Control Network:** The network port configuration of the Controller connected to the router, PC directly or network Switch in where the PC for control is. When DHCP is set to “Off”, you can manually set the IP Address, Subnet Mask and Gateway as required, then click “Apply” to take effect. When DHCP is set to “On”, the system will search and fill the IP Address with the one assigned by the router automatically.

③ **Video Network:** The network port configuration of the Controller connected to the network where the Encoders and Decoders stay. Currently modification is not supported.

④ **Controller Reset:** Click “Settings Reset” to reset Controller all settings except network settings; Click “Network Reset” to reset Controller network settings; Click “Reset All” to reset Controller all settings including network settings.

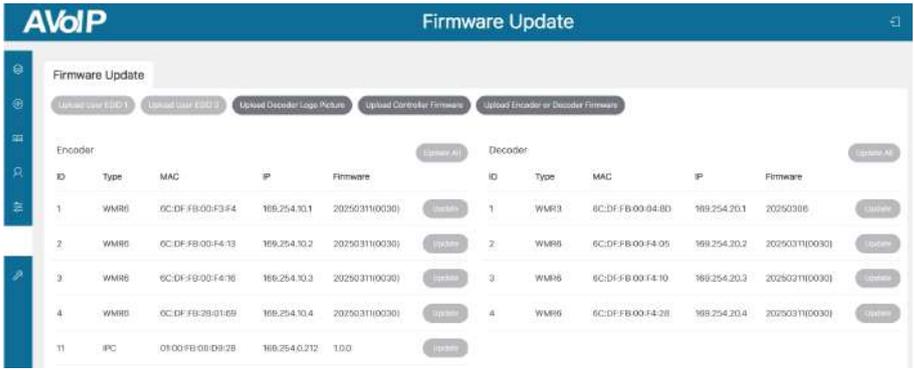
Note: After any setting to modify the Controller on this page, it will reboot to take effect automatically.

7.2.7 Firmware Update

① **Upload User EDID 1/2:** Click the button to open an EDID binary file and upload it to User EDID 1/2. This function will be supported in future.

② **Upload Decoder Logo Picture:** Click the button to open a bmp picture file and upload it as the Decoder Logo Picture. Then click “Update All” to apply the picture for all Decoders or click “Update” to apply the picture for a single Decoder.

Note: The bmp picture must be greater than 500kB, less than or equal to 25MB, and the image size must be greater than or equal to 960x360 and less than or equal to 3840x2160.



- ③ **Upload Controller Firmware:** Click the button to upload the Controller update firmware.
- ④ **Upload Encoder or Decoder Firmware:** Click the button to upload the Encoder/Decoder update firmware. After loading, you need to click “Update All” to update firmware for all Encoders/Decoders, or click “Update” to update firmware for a single Encoder/Decoder.
Note: After uploading the Encoder/Decoder firmware, the system will recognize the device model that the upgraded firmware is compatible with and light up the corresponding Update button to allow clicking. If the new device model is incompatible, the Update button will be grayed out and unselectable.

7.2.8 Password



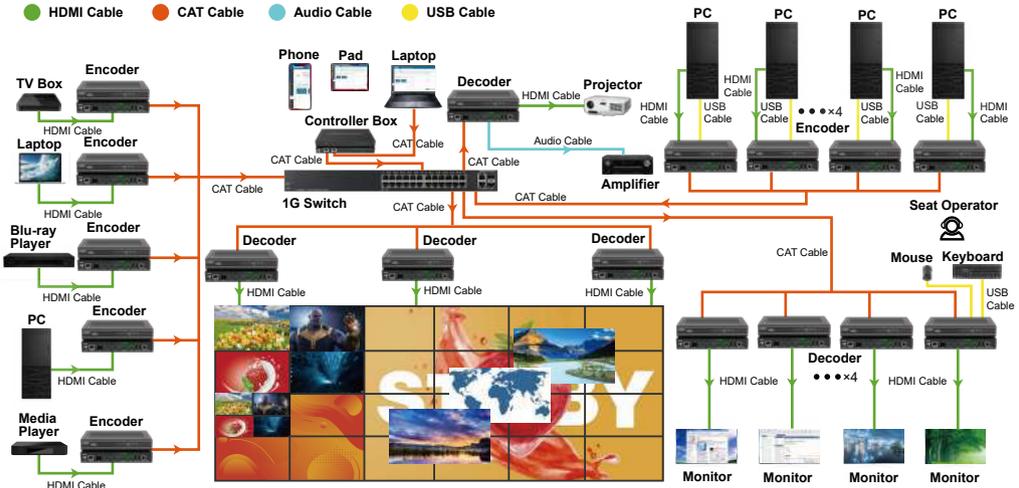
On this page, you can change the password by inputting the Old Password, New Password and Confirm Password, and then clicking “Apply” to take effect.

Notes:

- (1) The password requires a minimum length of 6 characters and a maximum of 8 characters. Special characters are not supported.
- (2) The New Password can't be the same as Old Password.
- (3) The New Password and Confirm Password must be the same.
- (4) After changing password, the system will skip to the Web GUI login interface automatically. You need to log in the Web GUI again with the new password.

In addition, there is a logout icon in the upper right corner of each page of the Web GUI. Clicking the icon will exit the Web GUI and automatically skip to the login interface.

8. Application Example



Notes:

(1) The Controller has two LAN ports, one is Video LAN and the other one is Control LAN. The purpose of designing Controller with two LAN ports is to isolate audio/video (AV) network from control network. So to make AV network as an independent network which can not be accessed from control network directly, it's for bringing network security and avoiding AV network traffic flowing into the network in which the controls and managements are for the IP system.

The strongly recommended system setup is connecting Video LAN and Encoders/Decoders in a network Switch, connecting Control LAN and PC in another network Switch. The controls from Control LAN can be achieved by Web GUI/Telnet or SSH login/API commands, all these controls can be bridged by the Controller and applied onto Video LAN. The two LANs are isolated.

For simple usage, you can only connect all Encoders/Decoders and Video LAN and PC RJ-45 port into a single network, and let the Control LAN port not-connected (floating), as Video LAN also supports Web GUI/Telnet or SSH login/API commands controls, this seems "convenient" for general use scenarios, but this is only suggested for system in which there is no network isolation requirement or network traffic non-sensitive.

Only Control LAN connected while Video LAN floating, this is not allowed.

(2) For the default IP mode of Control LAN port of the Controller Box is DHCP, the PC also needs to be set to "Obtain an IP address automatically" mode, and an optional DHCP server (e.g. network router) is recommended in the system.

(3) If there is no DHCP server in the system, 192.168.6.100 will be used as the IP address of Control LAN port. You need to set the IP address of the PC to be in the same network segment. For example, set PC's IP address as 192.168.6.88.

(4) You can access the Web GUI by inputting URL "http://controller.local" or the Control LAN port IP address 192.168.6.100 (in case of no optional router) on your computer's browser.

(5) No need to care about settings of Video LAN port of the Controller Box, as they are managed by Controller automatically (Default).

(6) When the Network Switch does not support PoE, the Encoder, Decoder and Controller Box should be powered by DC power adapter.