ANGUSTOS

AHVE-CBHK265
Video over IP Controller

User Manual

VER L.25

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, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Table of Contents

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

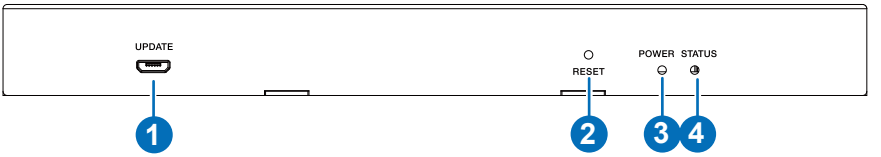
① 1x H.264/265 Video over IP Controller
② 1x 20kHz-60kHz 12V IR Receiver Cable (1.5 meters)
③ 1x IR Blaster Cable (1.5 meters)
④ 2x 3-pin 3.81mm Phoenix Connector (Male)
⑤ 1x 6-pin 3.81mm Phoenix Connector (Male)
⑥ 2x Mounting Ear
⑦ 4x Machine Screw (KM3*6)
⑧ 1x 12V/2.5A Locking Power Adaptor
⑨ 1x User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

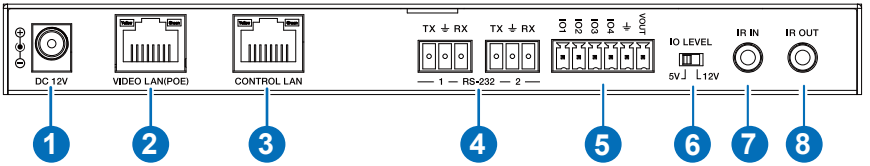
5. Operation Controls and Functions

5.1 Front Panel



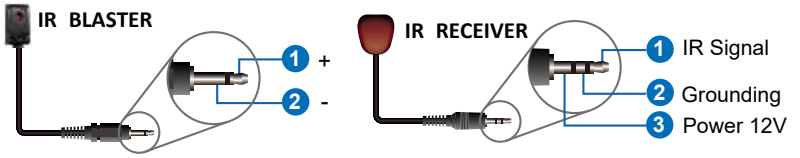
No.	Name	Function Description
1	UPDATE	Firmware update port. *Note: Must keep no connection on this port when Controller works in normal mode.*
2	RESET Button	Press and hold this button (about 10 seconds) until STATUS LED starts flashing, Controller will be reset automatically.
3	POWER LED	The red LED 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. *Note: When POE is enabled, DC 12V/2.5A power supply is not required.*
3	CONTROL LAN	The TCP/IP control network port.
4	3-pin Phoenix Connectors	Two identical RS-232 serial communication ports.
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

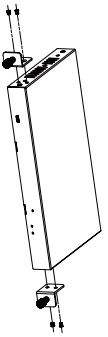


6. Rack Mounting Instruction

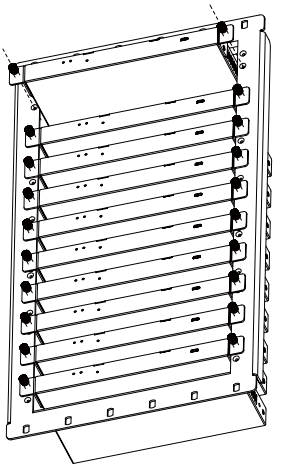
6.1 6U V2 Rack Mounting

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:

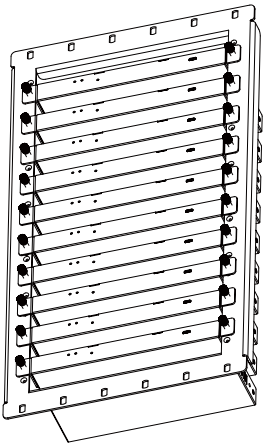
Step 1: Use included screws to fix two mounting ears on the Controller, as shown in the figure below:



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



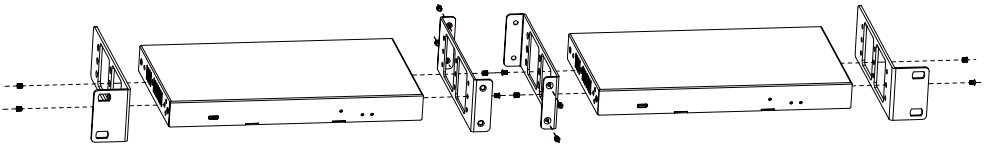
Step 3: Use screws to fix mounting ears on the rack to complete the mounting, as shown in the figure below:



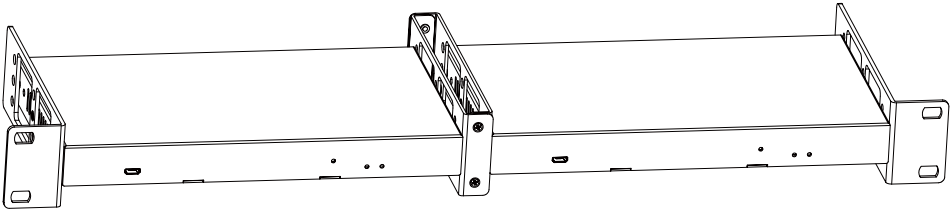
6.2 1U V2 Rack Mounting

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:



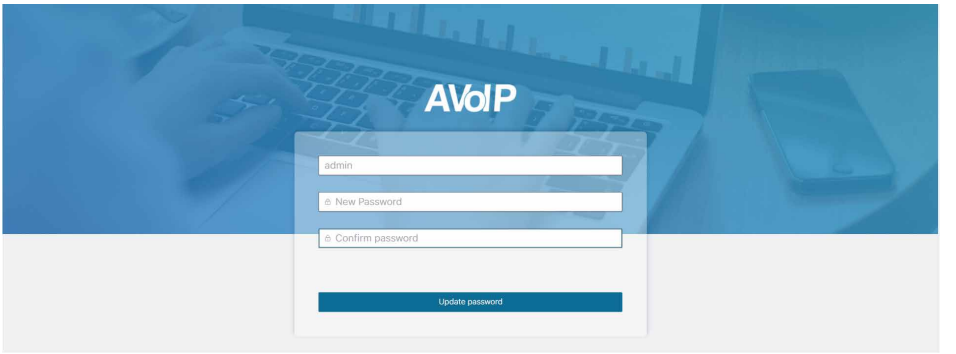
7. Web GUI Operation Guide

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:

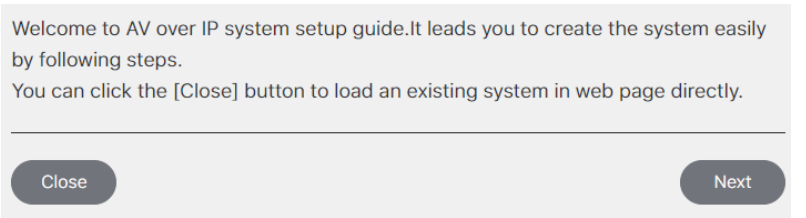
Step 1: Input the Controller's default IP address (Control LAN port: 192.168.6.100; Video LAN port: 169.254.8.100) or the URL (http://controller.local) into the Web browser address bar on the PC to enter the Web GUI login interface.

When logging in for the first time, please select the initial username (admin), input the initial password (1234), and select the desired language on the above login interface. Then click "Login" to enter the password modification interface, as shown below.

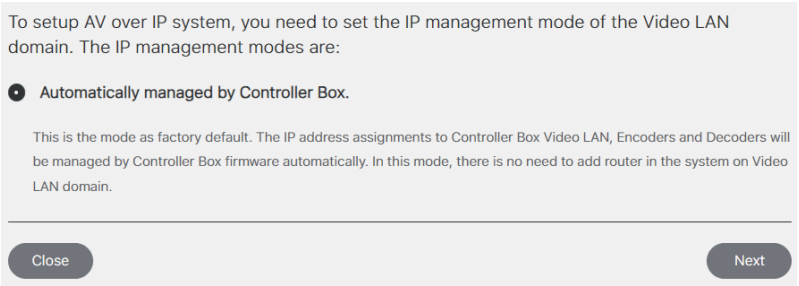


Please set a six-digit password using letters or numbers, then use the new password to login the Web GUI.

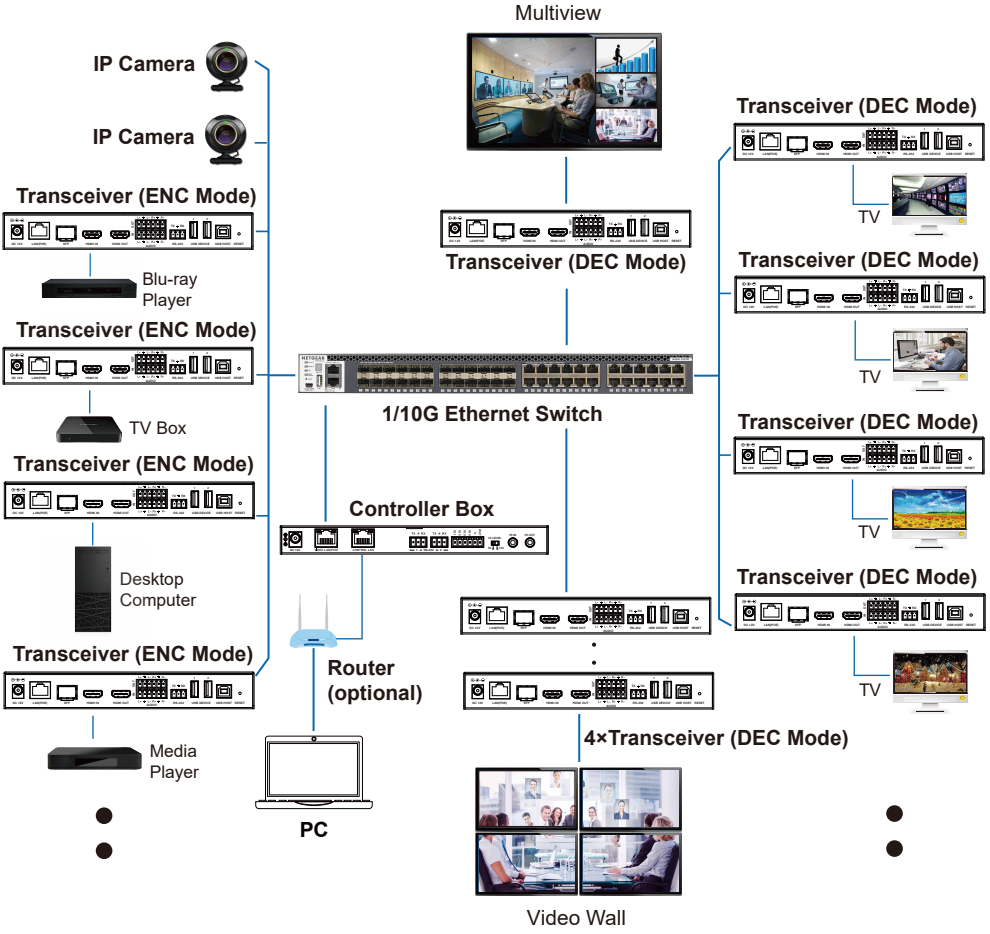
For the first time, you need to set up the system, as shown in the following figure:



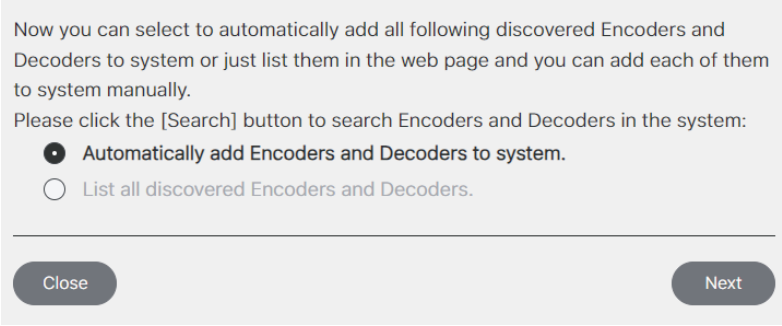
Step 2: Click the “Close” button to load an existing system in web page directly, or click “Next” button to go to the next step.



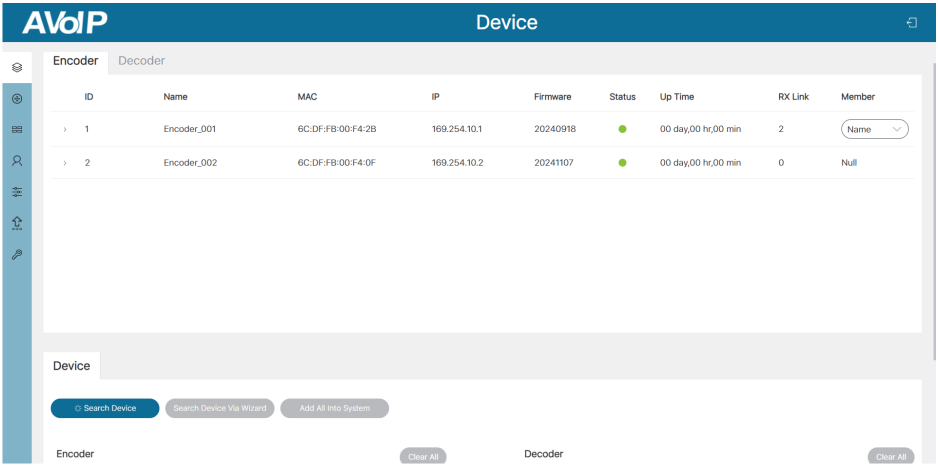
Step 3: Select “Automatically managed by Controller Box” as the IP mode of Video LAN. The IP addresses of the Video LAN port, Encoder and Decoder will be assigned by the Controller automatically, and the connection method is as following.



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



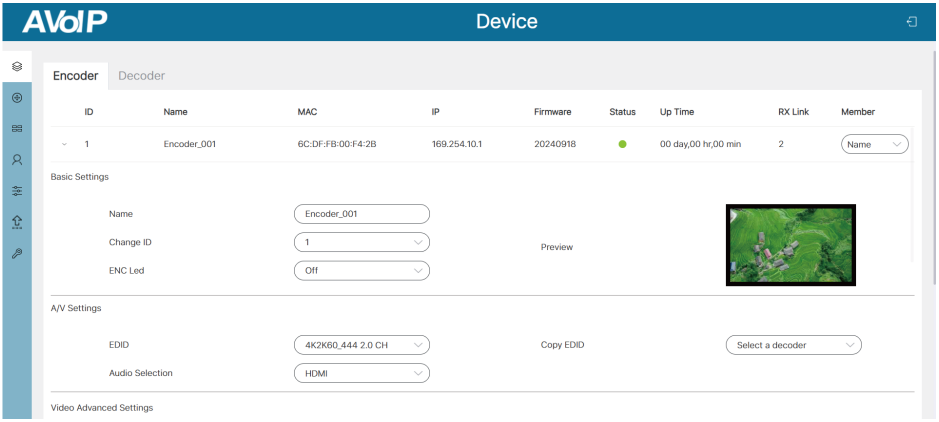
Select “Automatically add Encoders and Decoders to system” (Note: The other option is temporarily unavailable), and click the “Next” button to enter the Device page, the system starts to search for devices. All the connected devices will be searched and added into the system (presented in the Encoder/Decoder list) automatically, as shown below.



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, 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.



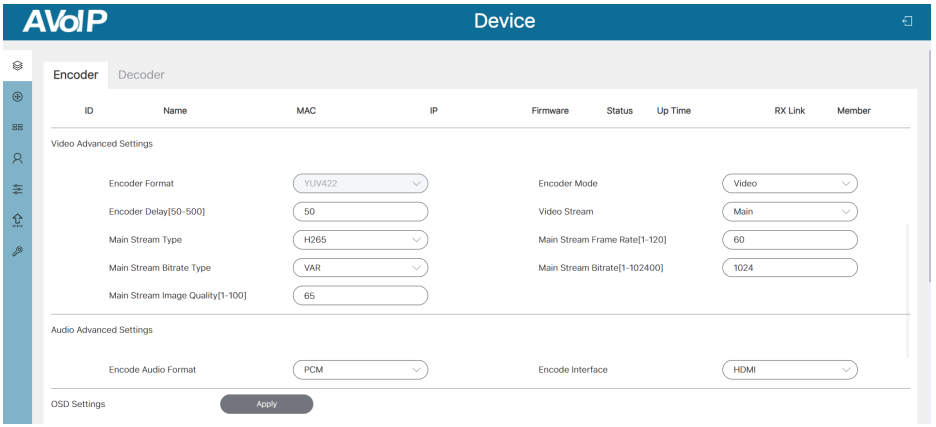
Encoder Configuration

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:** 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.
② **Copy EDID:** Click the drop-down menu to select a Decoder for EDID copy.
③ **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.

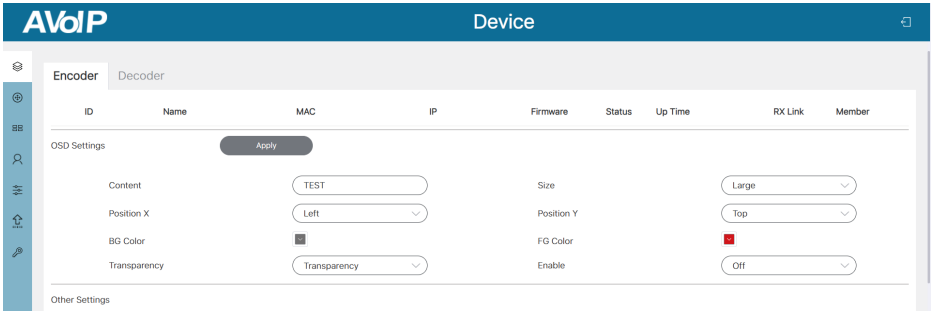


Video Advanced Settings

① **Encoder Format:** Click the drop-down menu to select the Encoder format.
② **Encoder Mode:** Click the drop-down menu to select the Encoder mode (Video/Text).
③ **Encoder Delay[50-500]:** Input the value [50-500] to set the Encoder delay.
④ **Video Stream:** Click the drop-down menu to select the video stream (Main/Sub/Preview/SDK/SDK Sub).
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[1-120]:** Input the value [1-120] to set the main stream frame rate.
⑦ **Main Stream Bitrate Type:** Click the drop-down menu to select the main stream bitrate type (FIX/VAR).
⑧ **Main Stream Bitrate[1-102400]:** Input the value [1-102400] to set the main stream bitrate.
⑨ **Main Stream Image Quality[1-100]:** Input the value [1-100] to set the main stream image quality.

Audio Advanced Settings

① **Encode Audio Format:** Click the drop-down menu to select the audio encoding format (PCM/AAC).
② **Encode Interface:** Click the drop-down menu to select the audio encoding interface (HDMI/Analog).

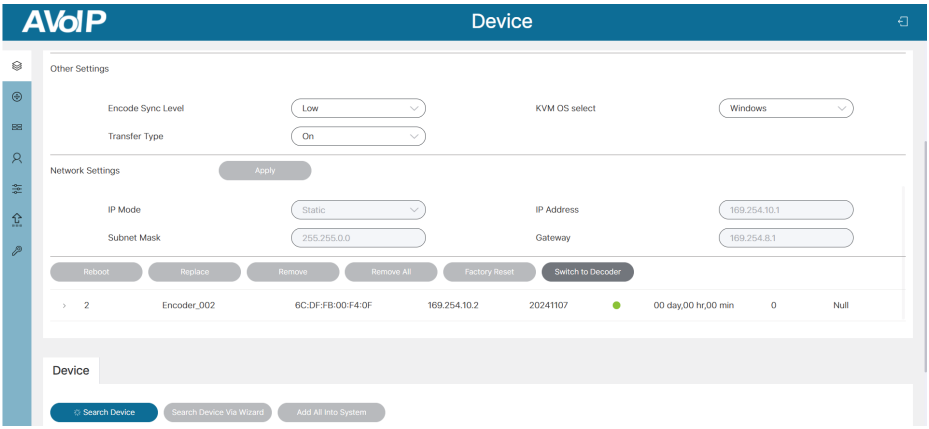


OSD Settings

① **Content:** Input the content for OSD display.
② **Size:** Click the drop-down menu to select the OSD size (Small/Middle/Large).
③ **Position X:** Click the drop-down menu to select the position x (Left/Middle/Right) of OSD.
④ **Position Y:** Click the drop-down menu to select the position y (Top/Middle/Bottom) of OSD.
⑤ **BG Color:** Click to set the background color of the OSD.
⑥ **FG Color:** Click to set the foreground color of the OSD.
⑦ **Transparency:** Click the drop-down menu to select the transparency type (Transparency/Opacification) of the OSD.
⑧ **Enable:** Select On/off to enable/disable the OSD display.

Other Settings

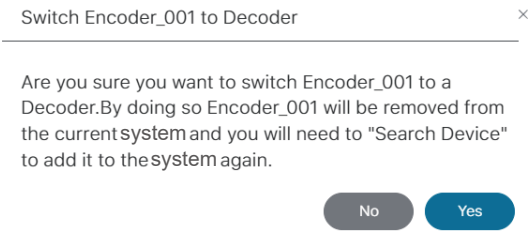
① **Encode Sync Level:** Click the drop-down menu to select the encode sync level (Low/Middle/High).
② **KVM OS select:** Click the drop-down menu to select the KVM operating system (Linux/Windows/Mac OS).
③ **Transfer Type:** Select On/off to enable/disable the multicast transfer.



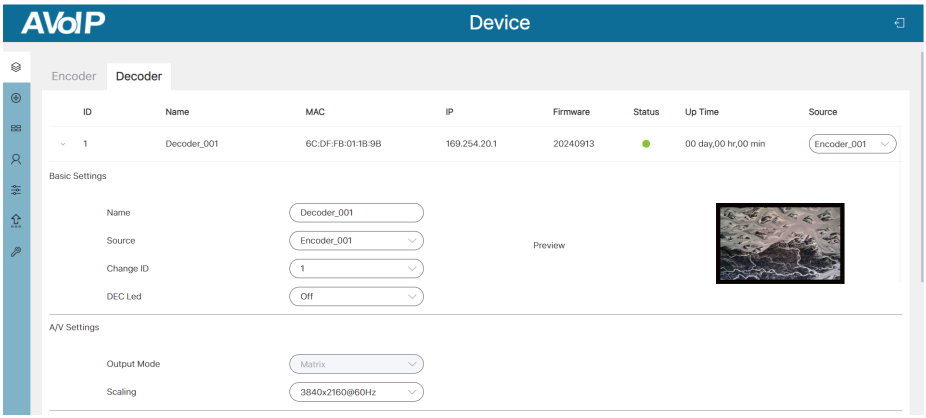
Network Settings
① **IP Mode:** Click the drop-down menu to set the IP mode (Static/DHCP).
② **IP Address:** The IP address of the Encoder.
③ **Subnet Mask:** The Subnet Mask of the Encoder.
④ **Gateway:** The Gateway of the Encoder.

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.

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.



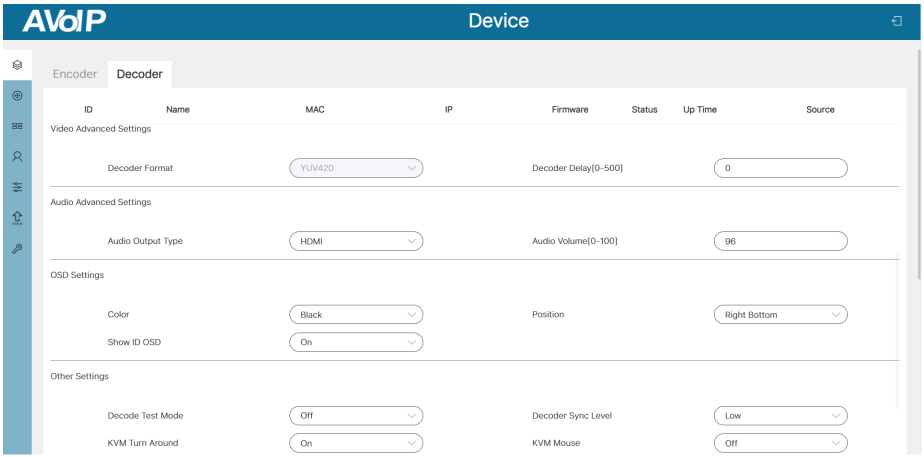
Decoder Configuration

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:** 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 **Output Mode:** Display the current video output mode (Matrix/Video Wall).
② **Scaling:** Click the drop-down menu to select the video output resolution.



Video Advanced Settings

① **Decoder Format:** Click the drop-down menu to select the Decoder format.
② **Decoder Delay[0-500]:** Input the value [0-500] to set the Decoder delay.

Audio Advanced Settings

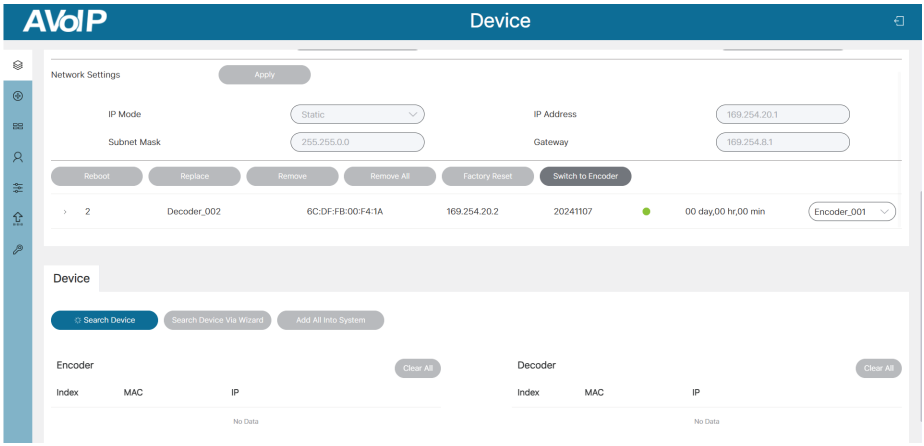
① **Audio Output Type:** Click the drop-down menu to select the audio signal output type (HDMI/DVI).
② **Audio Volume[0-100]:** Input the value [0-100] to set the audio volume.

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.
③ **Show ID OSD:** Select On/off to enable/disable the ID OSD display.

Other Settings

① **Decode Test Mode:** Click the drop-down menu to select the decode test mode (Off/Gray/ Color/Geo/Message/White/Red/Green).
② **Decoder Sync Level:** Click the drop-down menu to select the decoder sync level (Low/ Middle/High).
③ **KVM Turn Around:** Select On/off to enable/disable the KVM Turn Around.
④ **KVM Mouse:** Select On/off to enable/disable the KVM mouse.

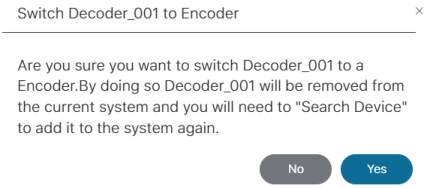


Network Settings

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.

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 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.

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.

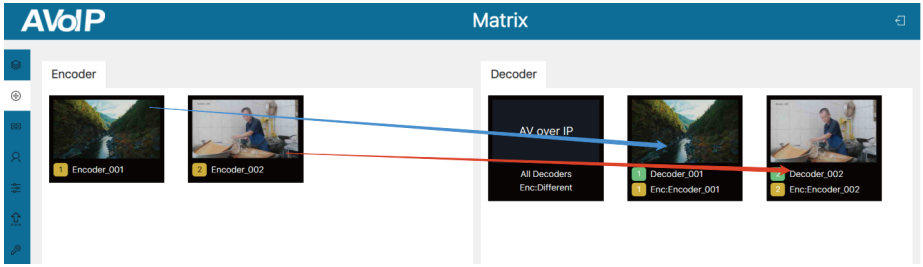
Device

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.

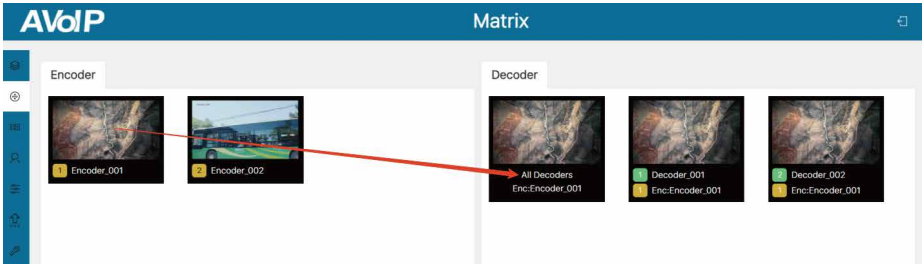
7.2.2 Matrix

Matrix Switching Function

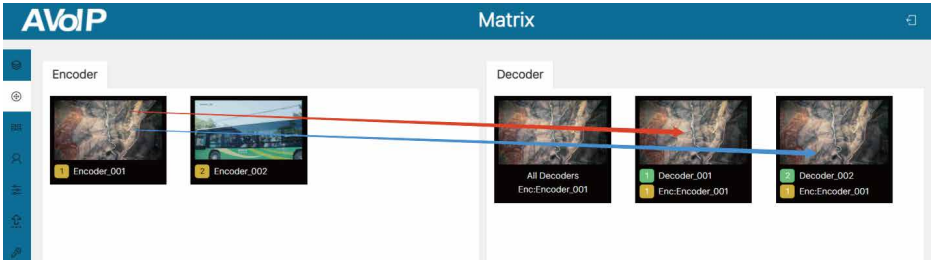
① Left-click the Encoder and drag it to Decoder, then release the mouse to realize one-to-one switching.



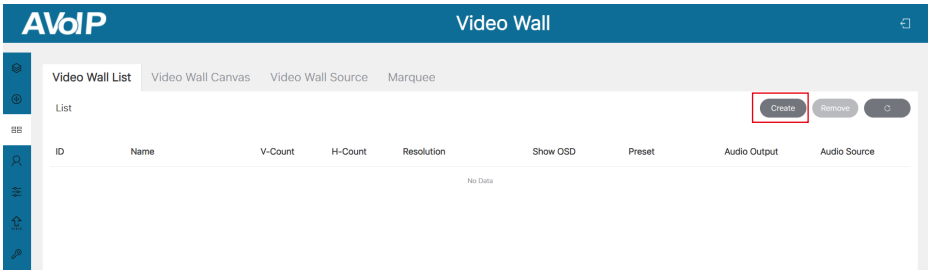
② Left-click the Encoder and drag it to All Decoders, then release the mouse to realize one-to-all switching.



③ Left-click the Encoder and drag it to multiple Decoders, then release the mouse to realize one-to-many switching.



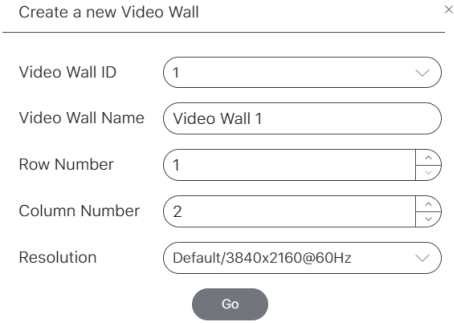
7.2.3 Video Wall

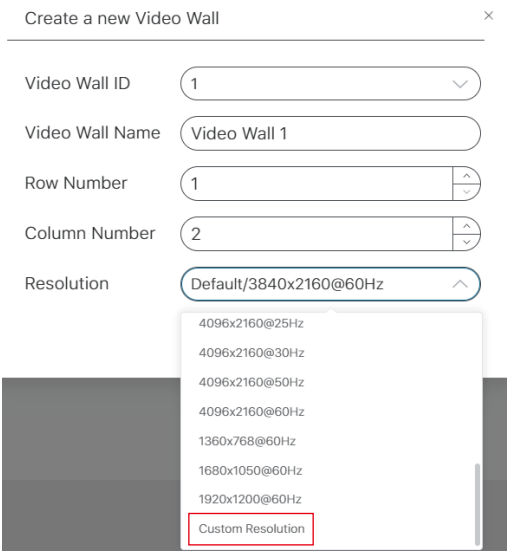


Video Wall Creation

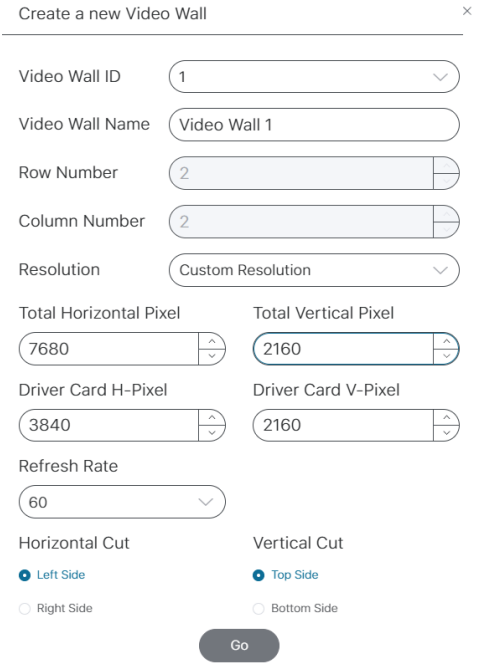
On the Video Wall List interface of this page, you can create and configure video wall as required. Please follow below steps to create and configure a video wall.

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



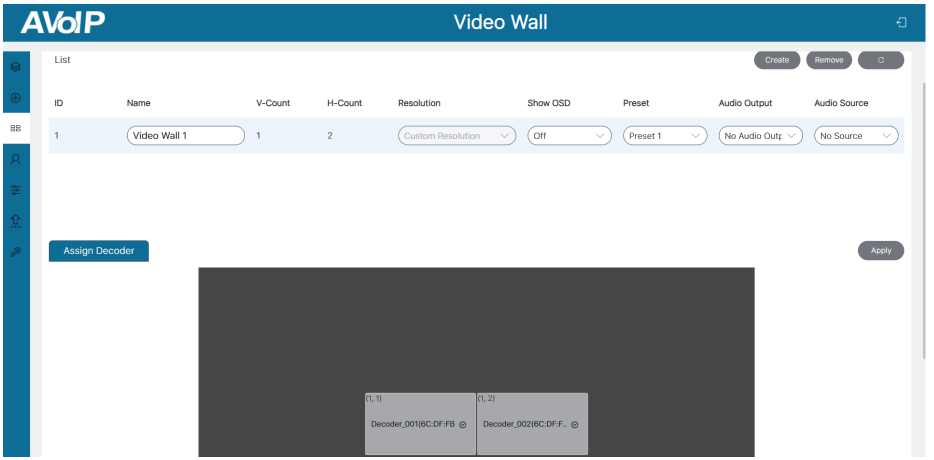


You can set the Video Wall ID, Video Wall Name, Row Number, Column Number and Resolution. Then click “Go” to create the video wall. If the “Custom Resolution” is selected as the resolution, more detailed customizations can be set, as shown in the following figure.



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

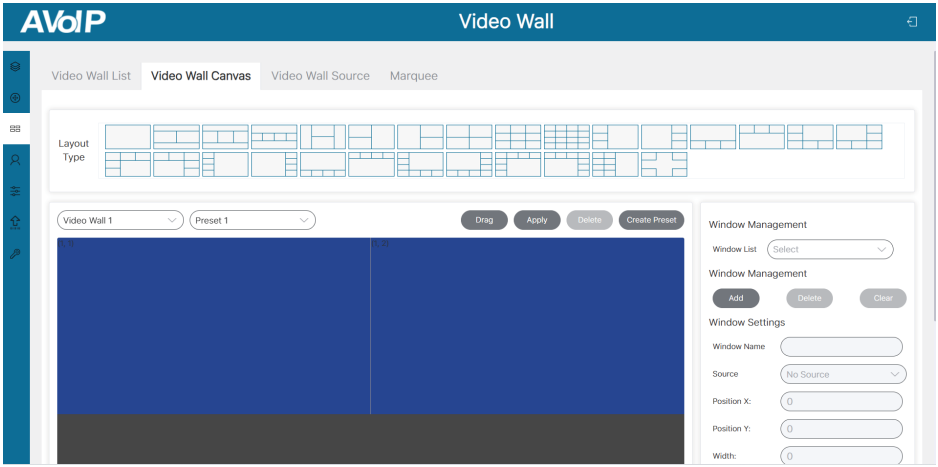
Step 2: Select the video wall that you want to configure, then click “Assign Decoder” at the bottom of the Video Wall List interface to enter the Decoder assignment interface. Click each screen to select the corresponding Decoder device, then click “Apply” to take effect.



Note: A Decoder can only be assigned to one video wall.

Video Wall Canvas

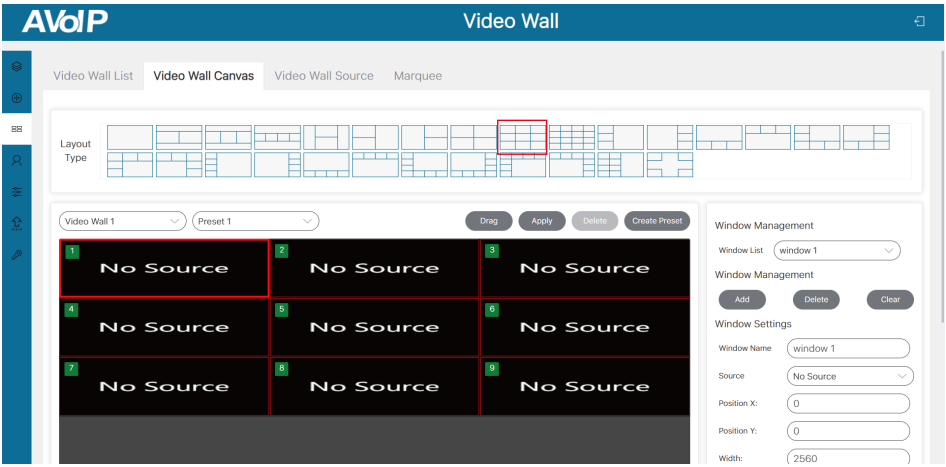
After the video wall is created and configured, you can click the Video Wall Canvas tab to set the video wall layout, create and configure presets, or perform windowing.



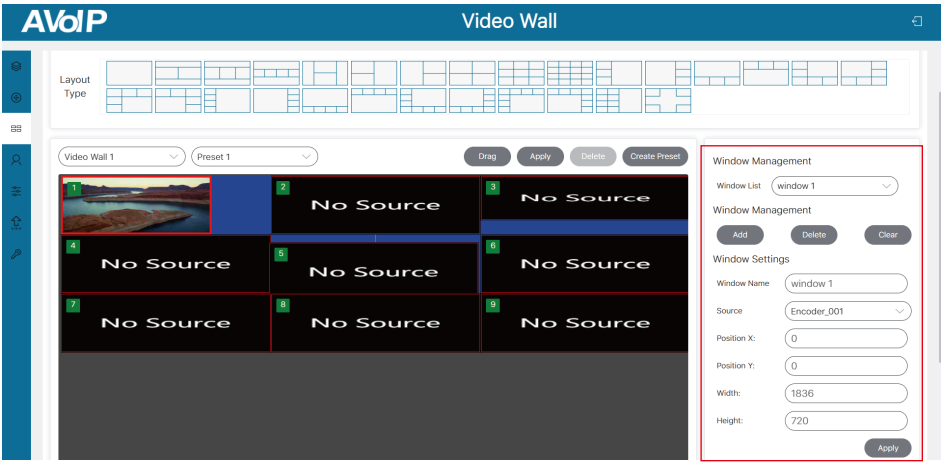
(1) Video Wall Layout

Follow the steps to set the video wall layout.

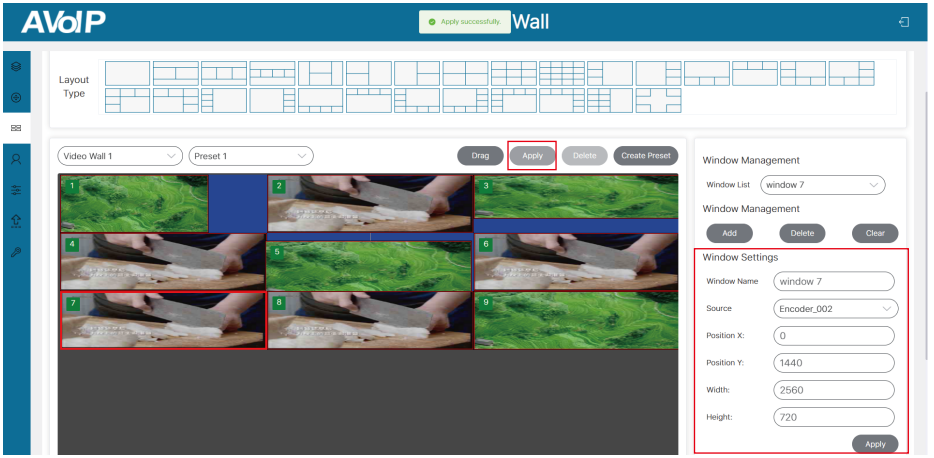
Step 1: Click to select the desired layout in the Layout Type area, which will be displayed in the video wall canvas, as shown in the figure below.



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 “Apply” to confirm and save the settings.



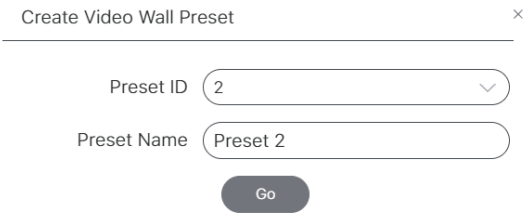
Step 3: Select signal source and set the position/size for each window as required in the same way. Then, click “Apply” above the video wall canvas to save the current settings as Preset 1 and take effect, as shown in the figures below.



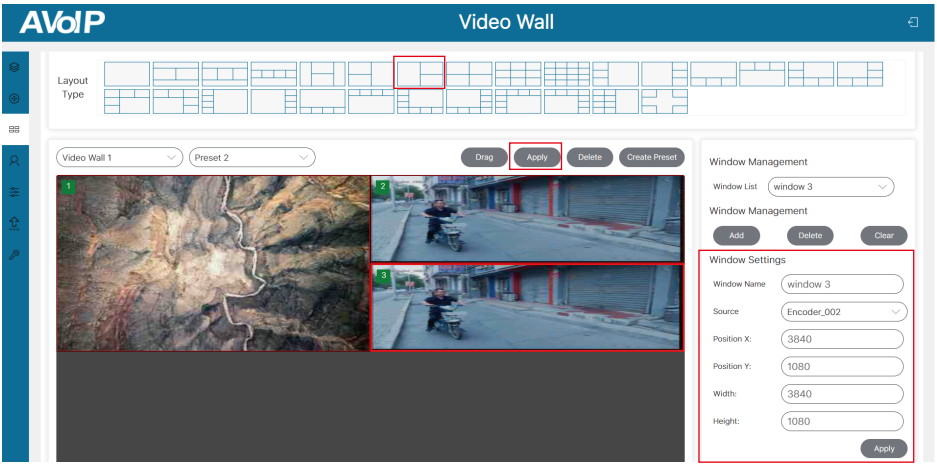
(2) Preset Creation

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.



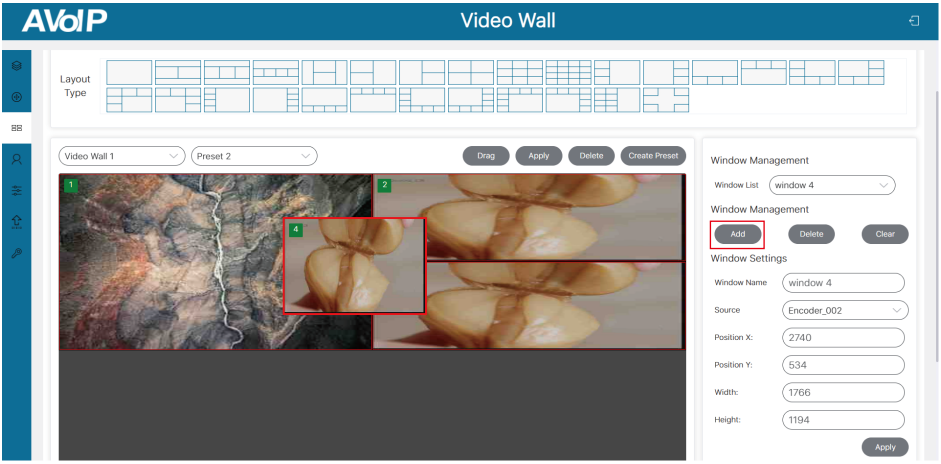
Step 2: Click to select the desired layout in the Layout Type area, and set windows, then click “Apply” above the video wall canvas to save the preset.



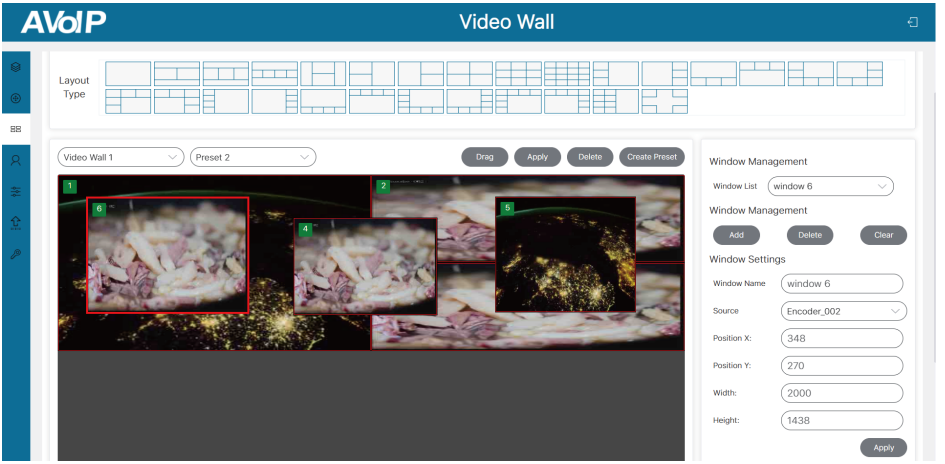
(3) Windowing Configuration

Follow the steps to create and configure windowing.

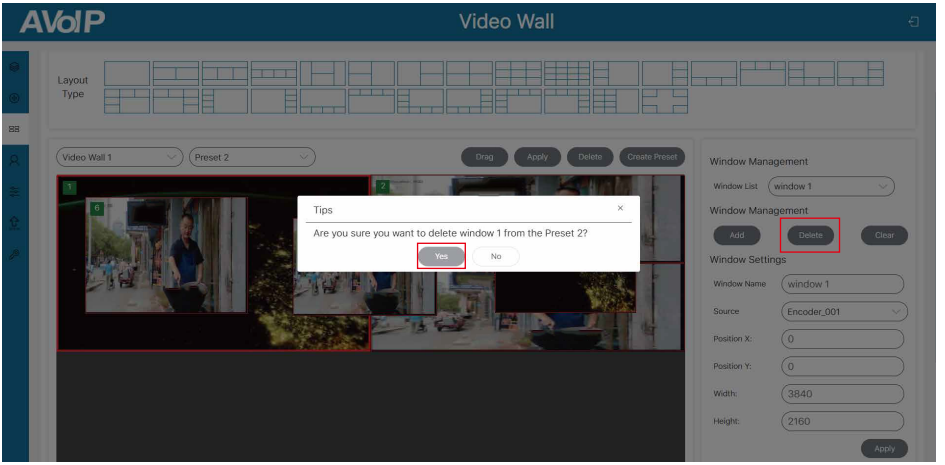
Step 1: Click “Add” in the Window Management area, a pop-up dialog box will be shown as below. You can set the ID, name, source, position and size, then click “Go”. The new created window will be layed above the video wall.



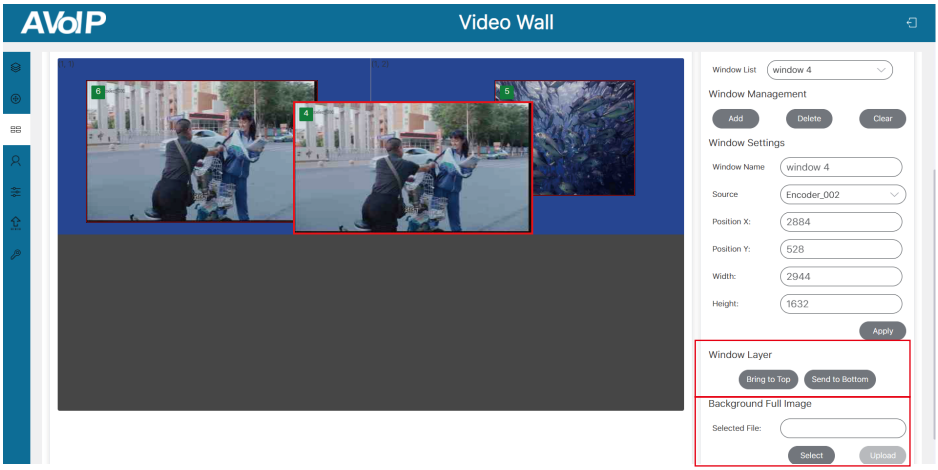
Step 2: Add more windows in the same way. You can directly click to select one window and drag it to set its position and size.



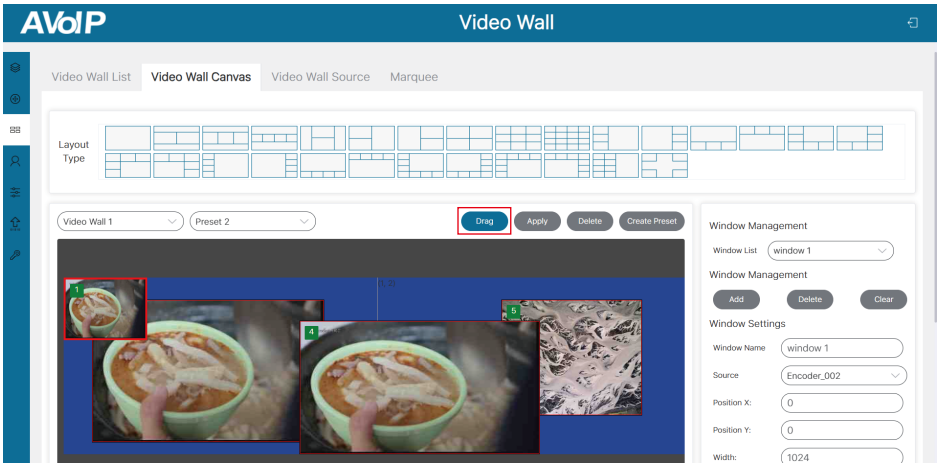
If you want to delete one of the window, just select the window in Window List, then click “Delete”. A dialog box will pop up and you can delete it after clicking “Yes”.



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.



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

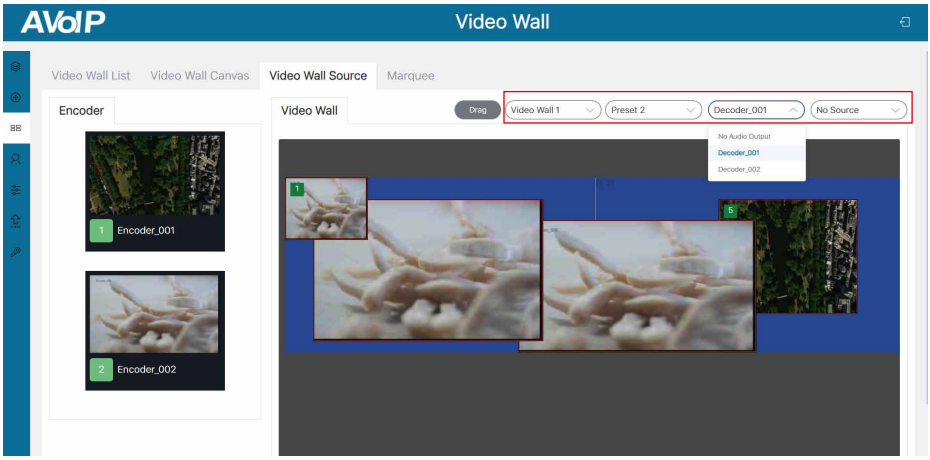


Video Wall Source

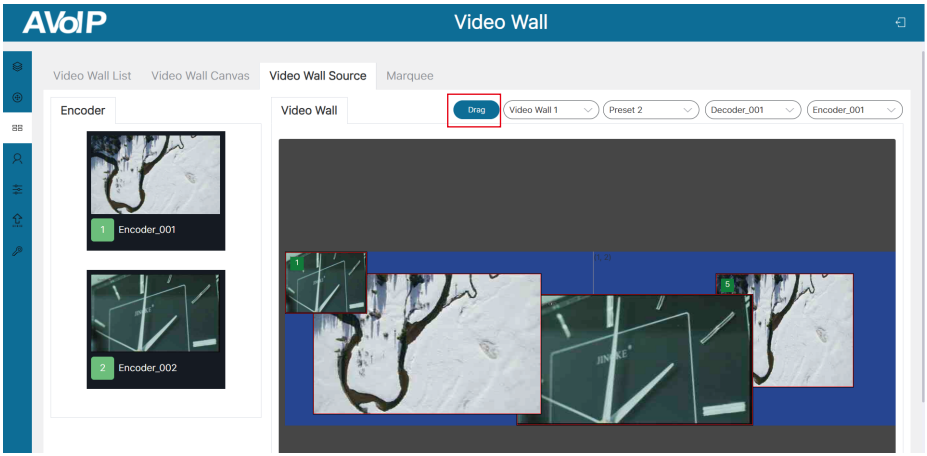
After the video wall and windowing are created and configured, you can click the Video Wall Source tab to check the video wall preview.

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-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.

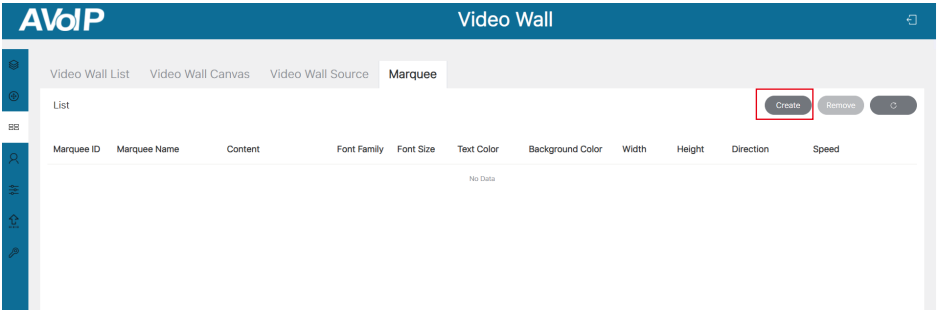


Moreover, after clicking “Drag” , you can drag the video wall to other position of the canvas as required for better preview.

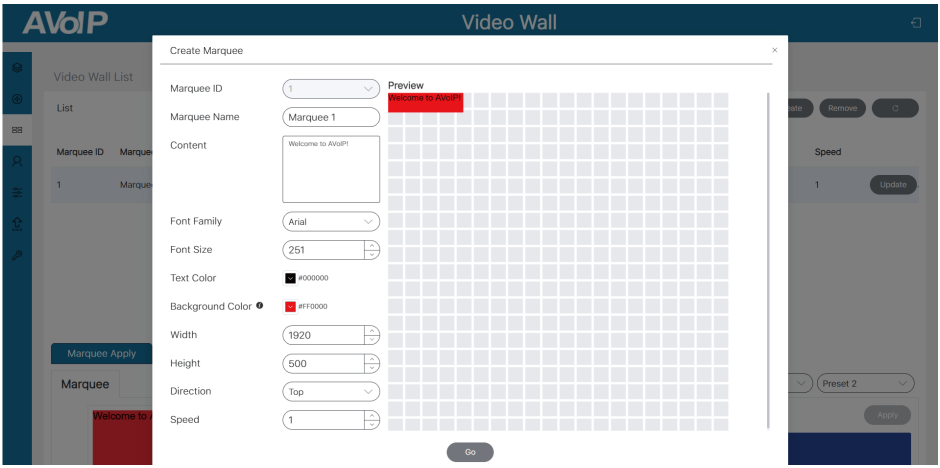


Marquee

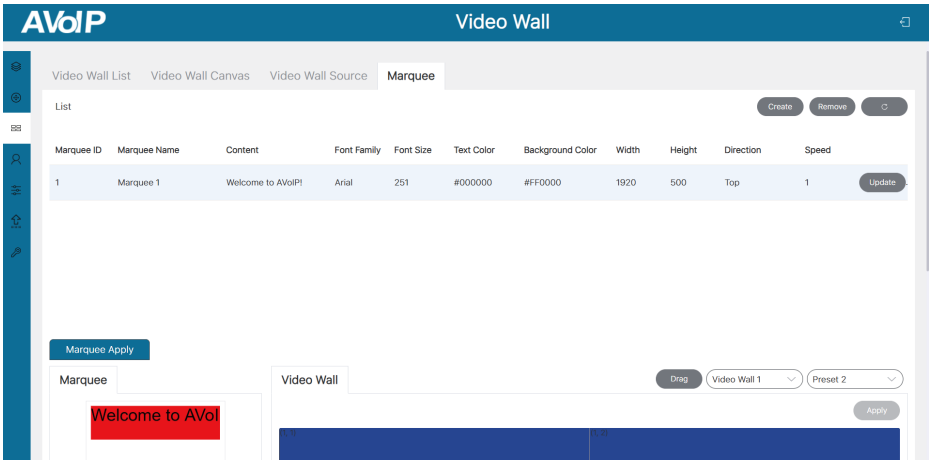
The matrix supports marquee function. Click the Marquee tab to set a marquee for the video wall.



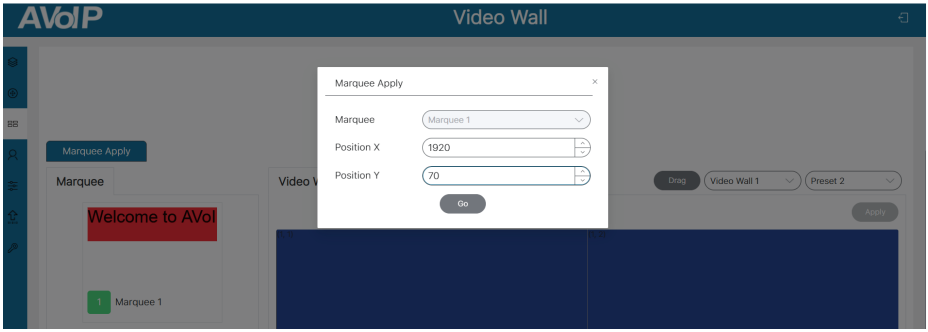
Step 1: Click “Create”, a pop-up dialog box will be shown as below.



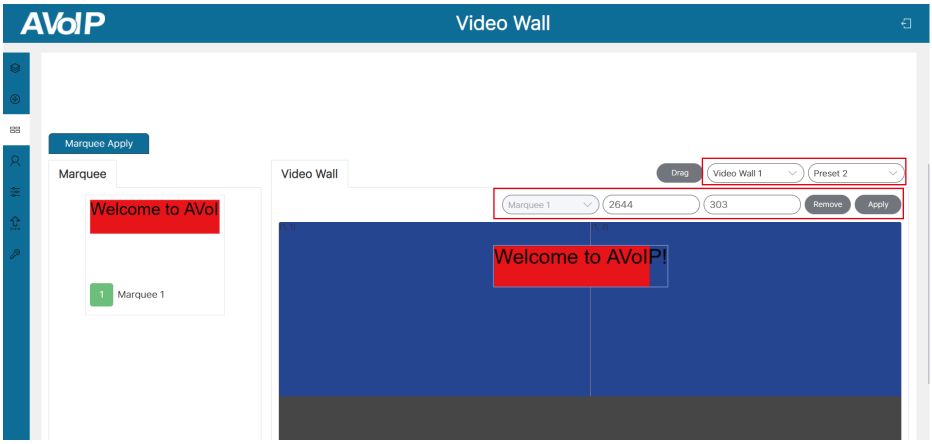
Set the Marquee ID, name, content, font, font size, text color, background color, width, height, direction and speed. Then click “Go” to create the marquee.



Step 2: Click “Marquee Apply”, 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.

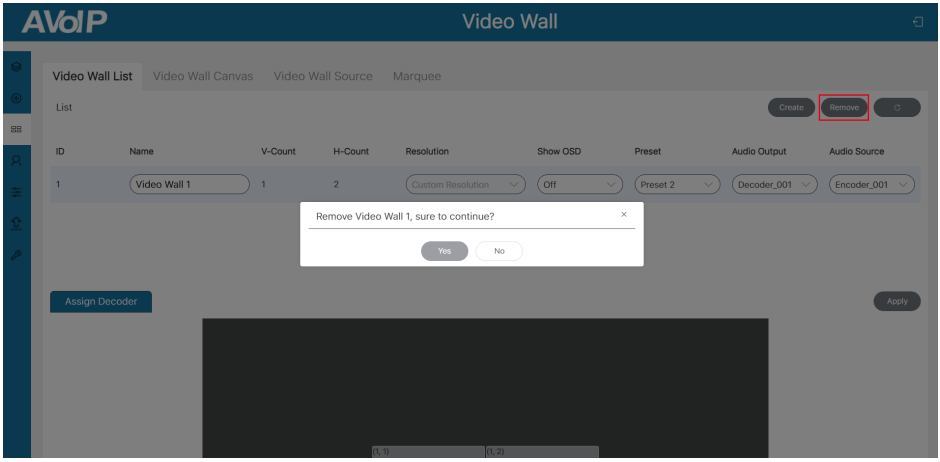


If multiple marquees are set, you can click the drop-down menu to switch different marquees, or input the value in the input box to modify the Position X/Y of the marquee. If you want to delete the marquee, just click “Remove”, and then click “Yes” in the pop-up dialog box.

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”.

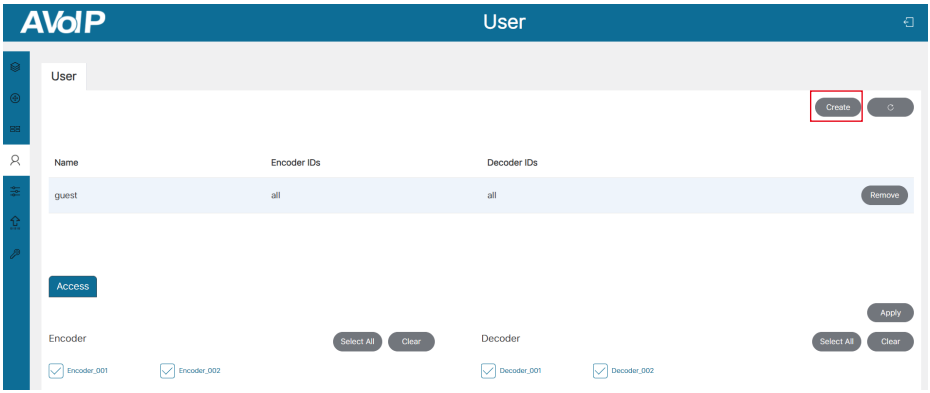


Notes:

(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.

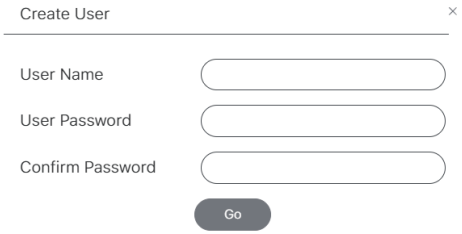
(2) The Controller creates and manages the video wall configurations and provides a simplified control interface and API commands to third party control system.

7.2.4 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.

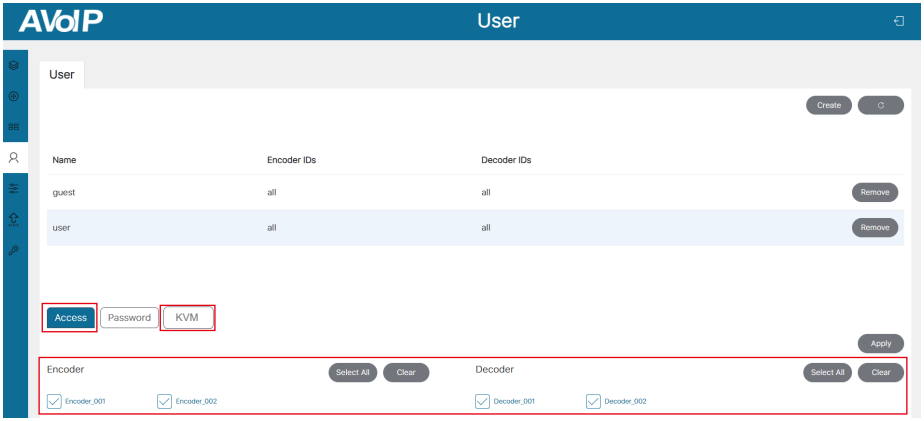


Step 2: Input the User Name, User Password and Confirm Password. Then click “Go” to create the User.

Notes:

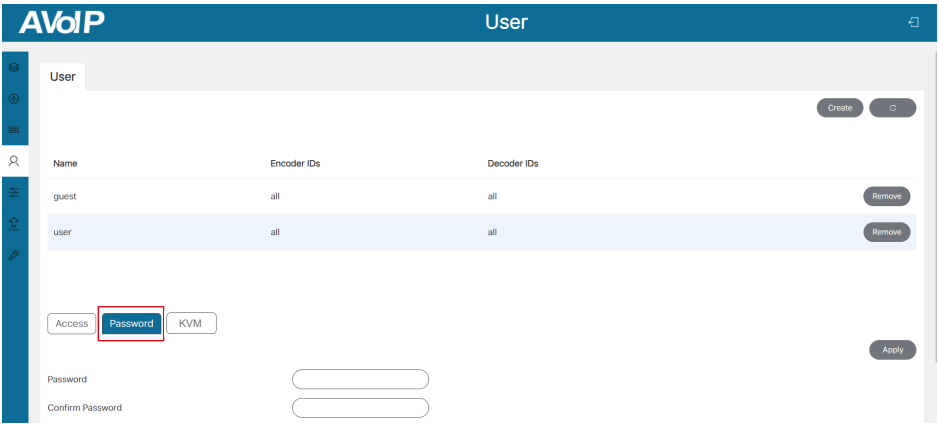
(1) The user name requires a minimum of 6 characters and a maximum length of 12 characters. Special characters are not supported; The password has a minimum of 6 characters and a maximum of 8 characters.

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

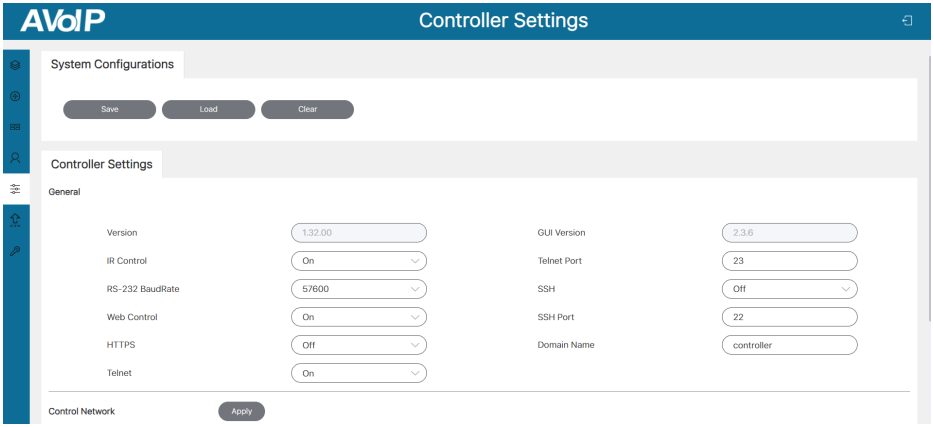


After the new User is created, you can select Encoders and Decoders as required by checking the devices on the bottom of the User page one by one, or directly click “Select All” to select all devices in the system. Then click “Apply” to take effect. The selected devices can be accessed by the User. Click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

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.



7.2.5 Controller Settings

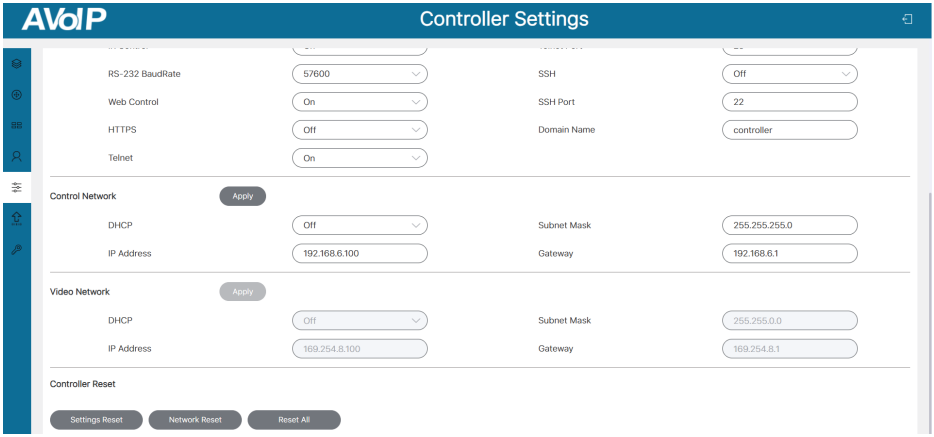


System Configurations: Click “Save” to save the current configuration; click “Load” to load the system configuration file and replace the current system configurations (It’s strongly recommended to save the current configurations before loading); click “Clear” to clear system configurations already created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

Controller Settings

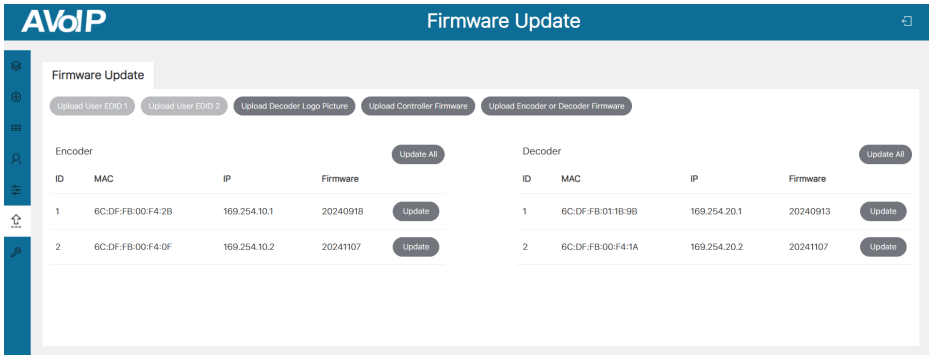
① **General:** The general settings of the Controller. You can check the Controller Version, GUI Version, Telnet Port, SSH Port and Domain Name.

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



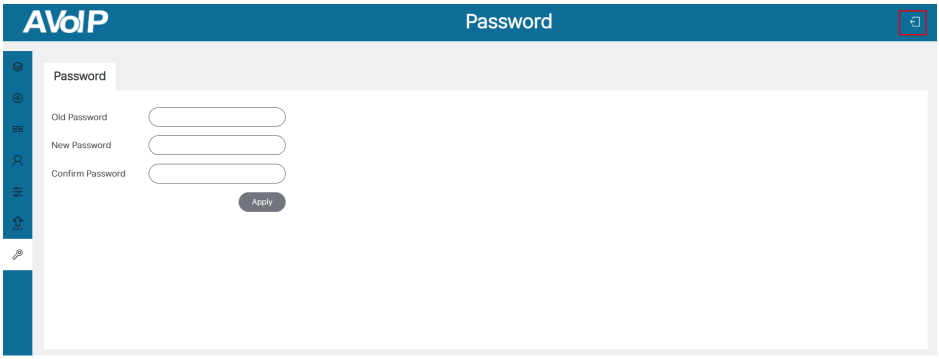
② **Control Network:** The network port configuration of the Controller connected to the router, PC directly or network Switch in where the PC for control is. When DHCP is set to “Off”, you can manually set the IP Address, Subnet Mask and Gateway as required, then click “Apply” to take effect. When DHCP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

7.2.6 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. But this function is temporarily unavailable.
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.

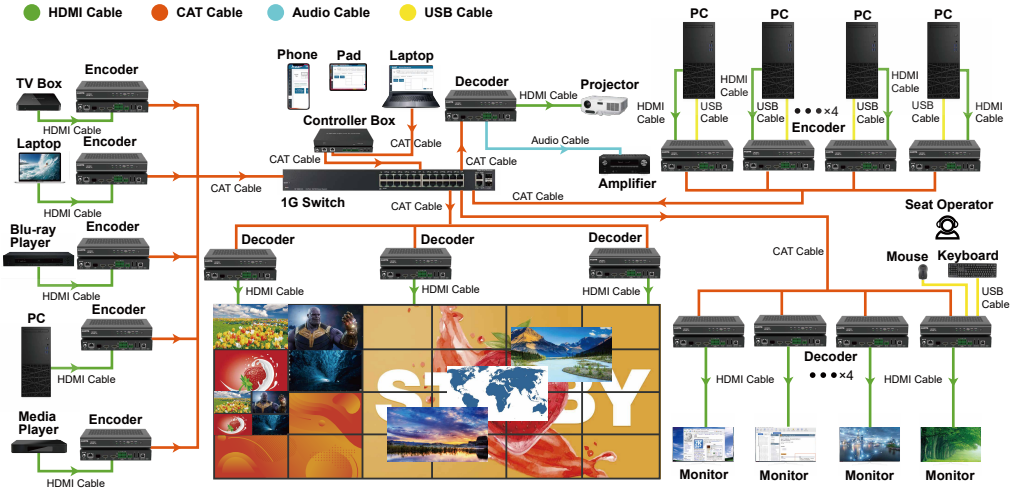
7.2.7 Password



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.