

EVO-IP

AV Over IP Solution



AVoIP Solution with eARC and KVM

EVO-IP 2.0 User Interface Manual



Setting Up the System

There are 3 ways to setup EVO-IP 2.0 devices depending on the needs and wants of the application. Each requires a slightly different way to connect hardware, setup through a network, and control the functionality of the transmitters and receivers. In the following sections we will go through each method of setup, along with the benefits and capabilities of each setup.

Before connecting and setting up the EVO-IP System, please enable settings within your ethernet switch that will allow you get the best performance possible. For additional information on which ethernet switches are compatible, please visit the product page at www.vanco1.com.

Note: Product data sheet, quick start guide, and more available at www.vanco1.com

EVO-IP AV

Allows for full native setup and functionality of EVO-IP 2.0 within the EVO-IP UI

- independent routing of audio, video, control, and USB
- video walls, OSD, scheduling, and more
- Cloud connectivity through vanco.io

Dante AV

Allows for setup and routing of audio, video, USB, and control

- no control box needed
- interoperable with other Dante audio and video products

Hybrid: EVO-IP (AV and features) and Dante (audio only)

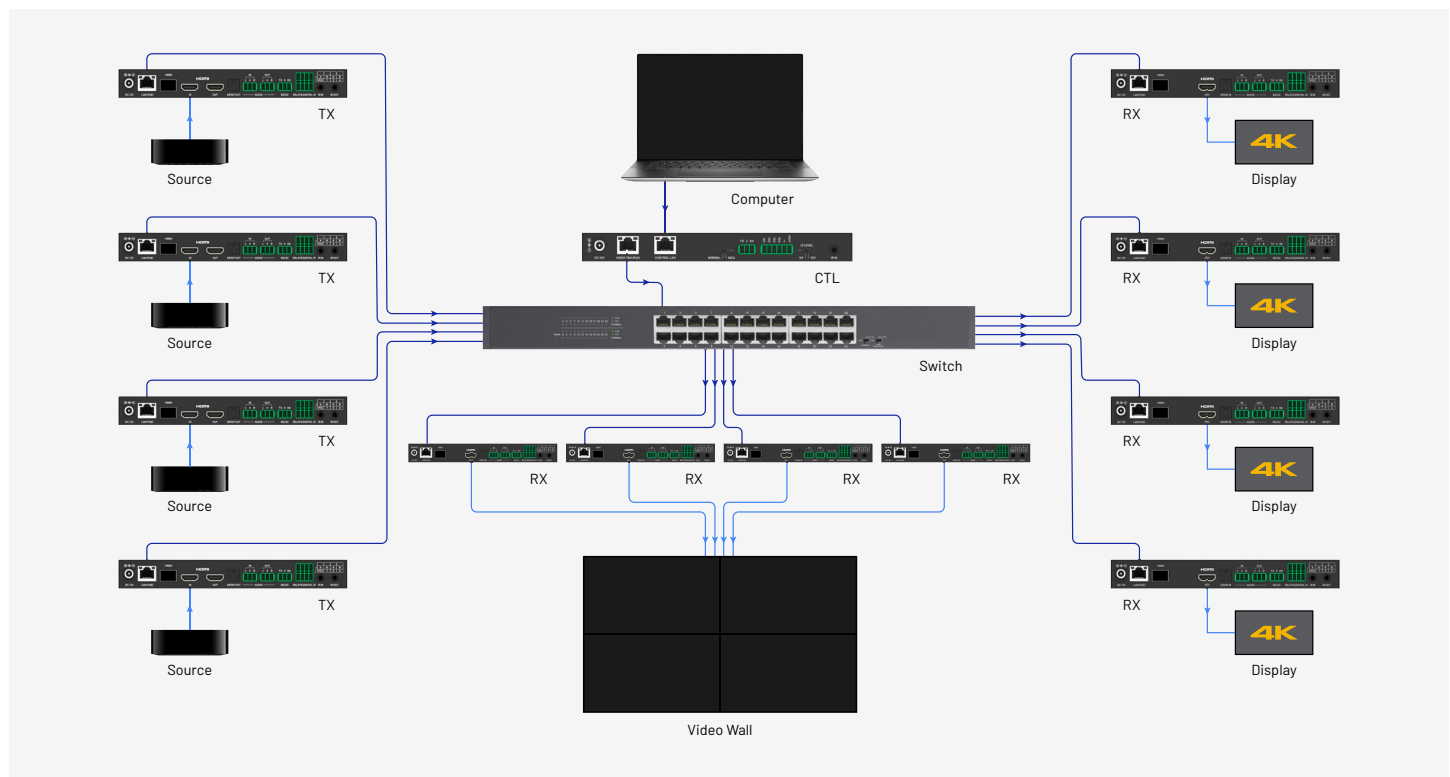
Allows for setup and full routing and functionality of video, control and USB within the EVO-IP UI

- allows for setup and routing of audio
- interoperable with other Dante audio products
- videos, OSD, scheduling

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EVO-IP 2.0 Setup

Section 1.0



1.1 Setup

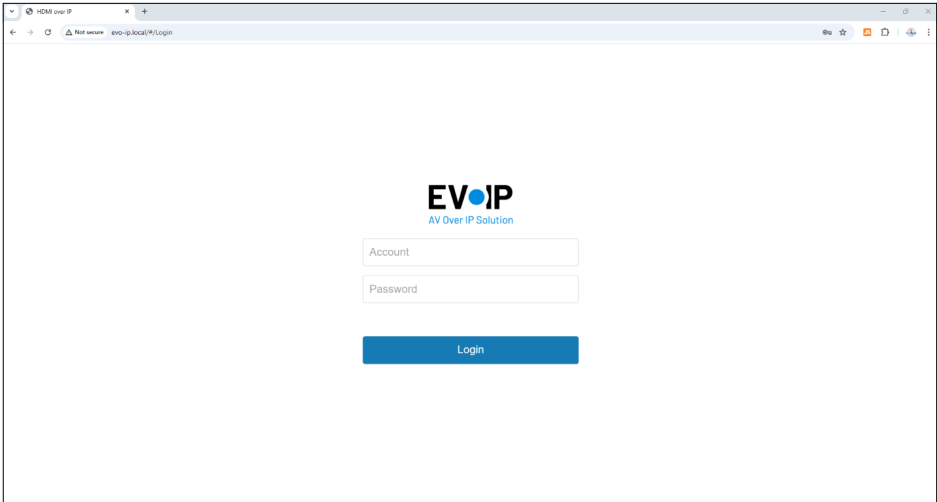
1.1.1 Connection Diagram

Utilizing the EVOIPCTL2 control box, this will get the provide the most native features and functions of the system. When a new transmitter or receiver is connected, the EVO-IP user interface will automatically pick up the new device once it has completely powered on within 10 seconds.

1. Connect the EVOIPTX1 and EVOIPRX1 transmitters and receivers to the network switch with a well terminated Cat5e/6. Ensure there is 1 transmitter being used for every source/input and 1 receiver being used for every display/output in the system. Note: Vanco recommends using Cat6 for any 4K applications and to use one of the ethernet switches recommended on the product webpage found at www.vanco1.com.
2. Connect the VIDEO LAN port of the EVOIPCTL2 to the same network, and connect the CONTROL LAN port to an external network, control system, or computer.

1.1.2 Login

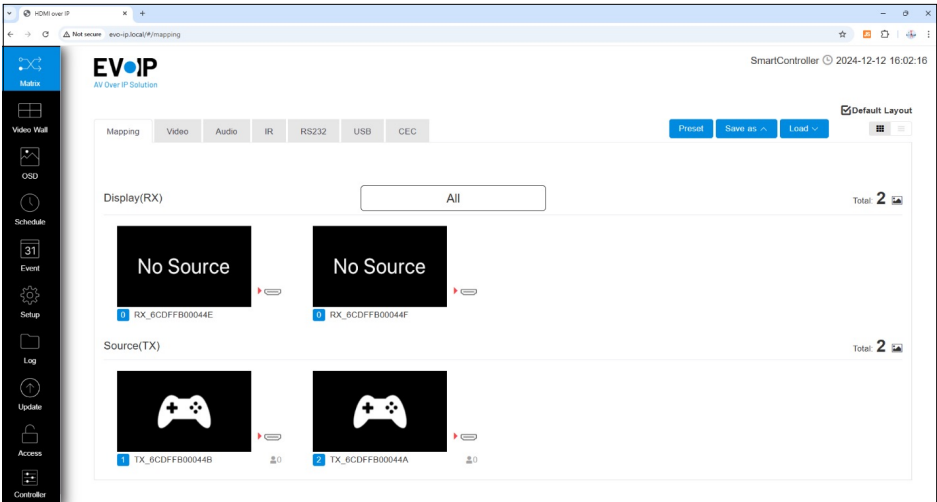
With a computer or device with access to a browser on the same network, enter the IP address of the control box, or evo-ip.local into your browser. The default username and password is **admin** but can later be changed, and other logins can be added.



1.2 Matrix Mode

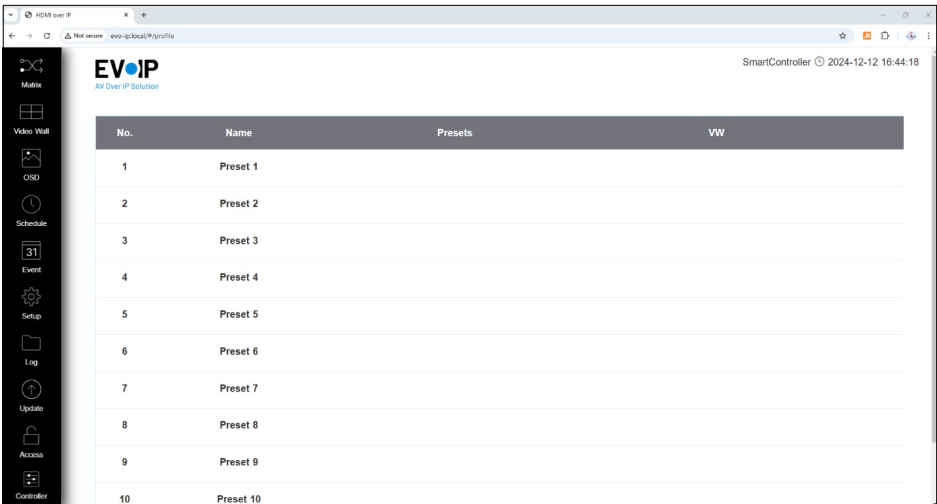
1.2.1 Icon Layout

Once logged in, the interface opens up into **Matrix Mode**. By default, the layout is in **Icon** mode which allows a preview what is being shown on the receiver displays, as well as an icon or preview image of what is being output by the transmitters. This allows sources to be dragged and dropped to receiver(s). While audio, video, control, and KVM functions are setup up by default to follow the source mapping, these can be individually routed for further options and customization.



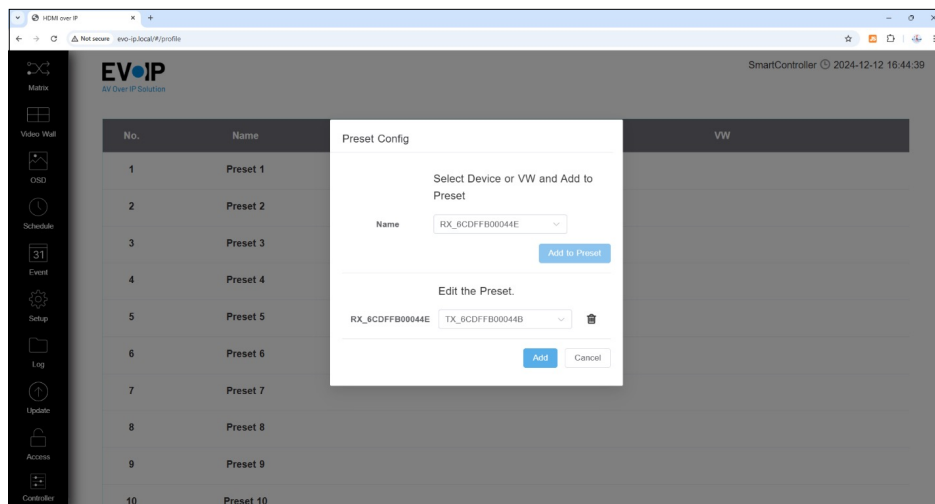
1.2.2 Preset

Allows for further customization of presets. Any receiver can be setup to be on any transmitter, and you can add video walls to presets as well.



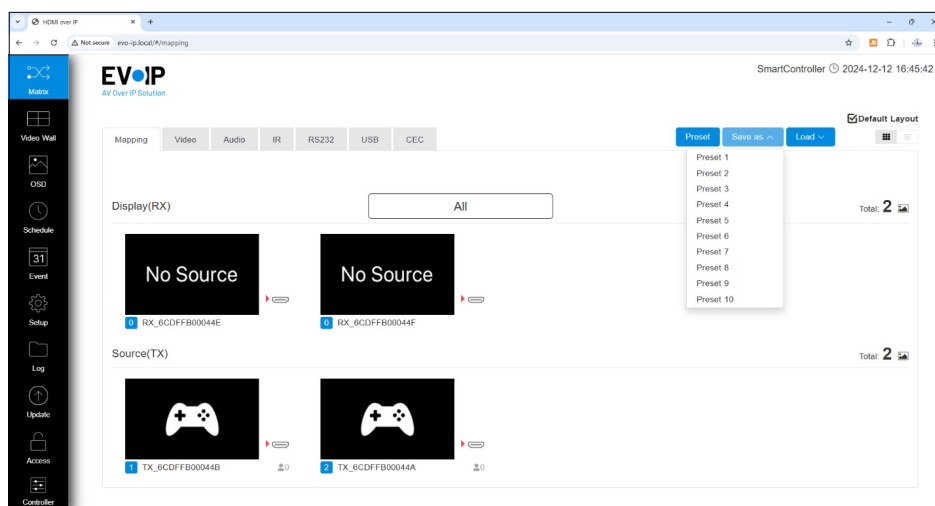
1.2.3 Preset - Edit

Select a video wall or receiver to be on a specific transmitter source.



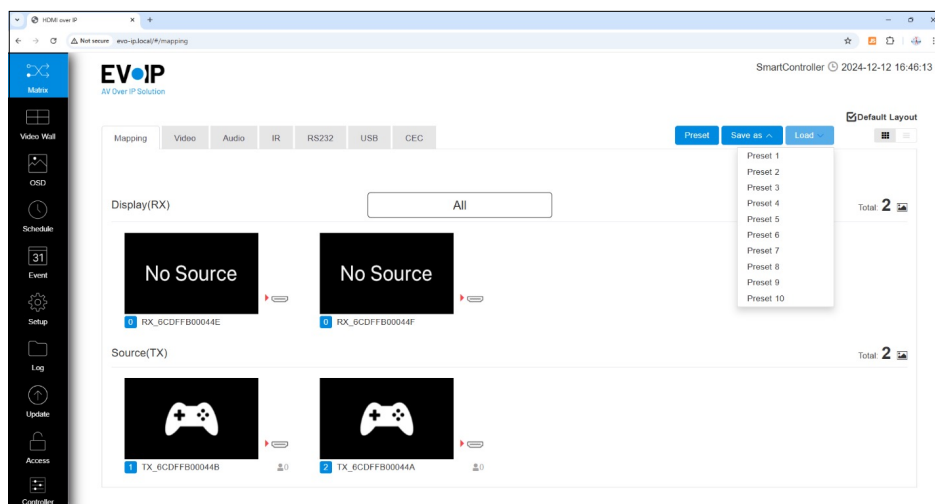
1.2.4 Save as

Quickly saves the current layout of audio, video, control, and USB mappings to a numbered preset.



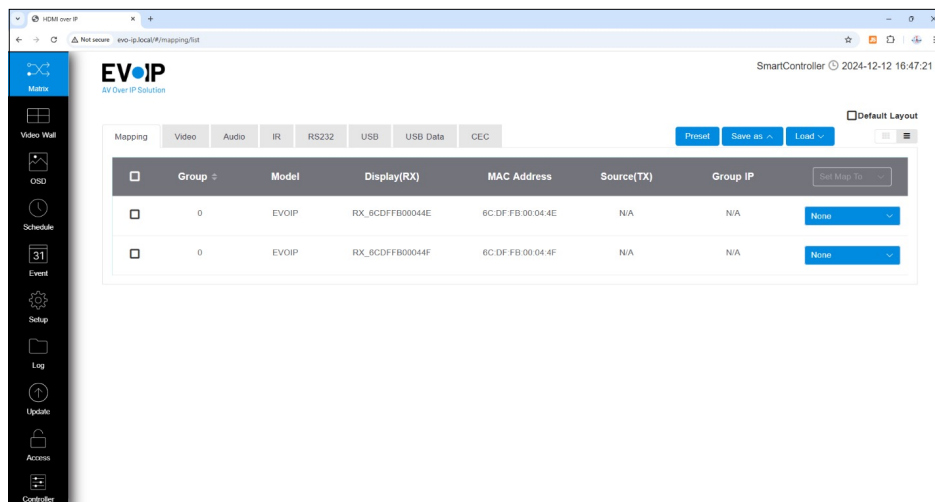
1.2.5 Load

Quickly recalls a previously saved audio, video, control, and USB mapping.



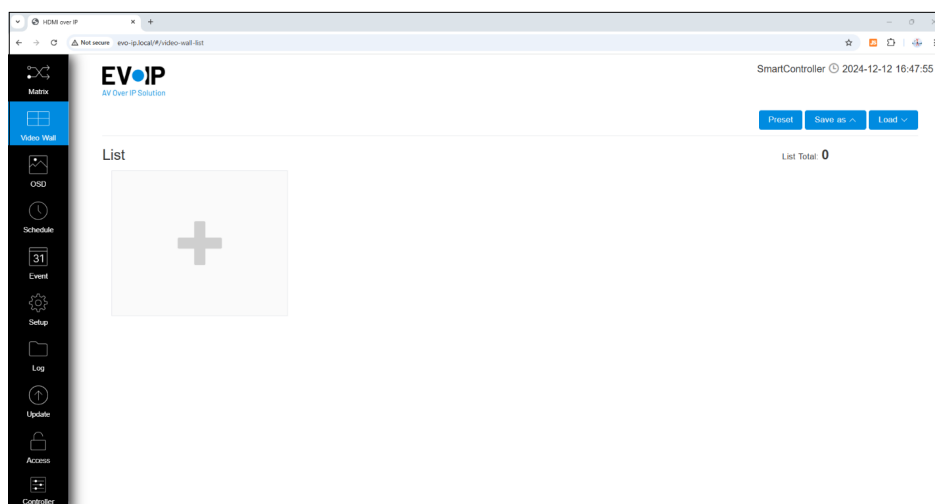
1.2.6 Dropdown Layout

Ideal for larger systems where dragging and dropping can be problematic, the **Dropdown** option in **Matrix Mode** lists all receivers and allows one or multiple receivers to switch from an available list of source transmitters. This can be selected as a default layout by checking the **Default Layout** checkbox. All audio, video, control, and KVM options available in icon mode are also available in the dropdown layout as well.



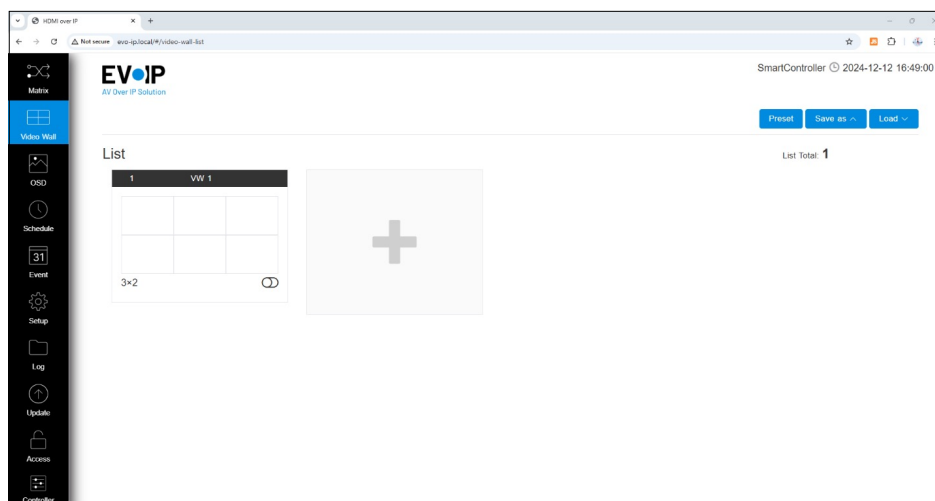
1.3 Video Wall Mode

EVO-IP can accommodate multiple video walls, up to 25 displays, in any configuration, as well as through presets. To start setting up a video wall preset, simply click on the **+** sign within the **Video Wall** mode tab.



1.3.1 Add a Video Wall Preset

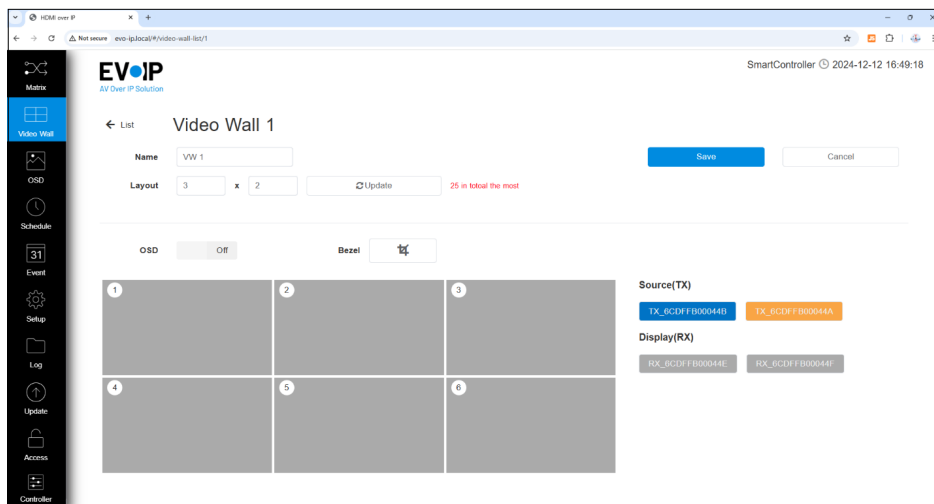
A default 3x2 option will appear. Touch or roll a mouse over the top right of the preset and select the **pencil** icon to setup and edit.



1.3.2 New Setup

Create a name for the preset, enter the correct layout of the video wall and select **Updated**. Once the name and layout is done, select **Save**.

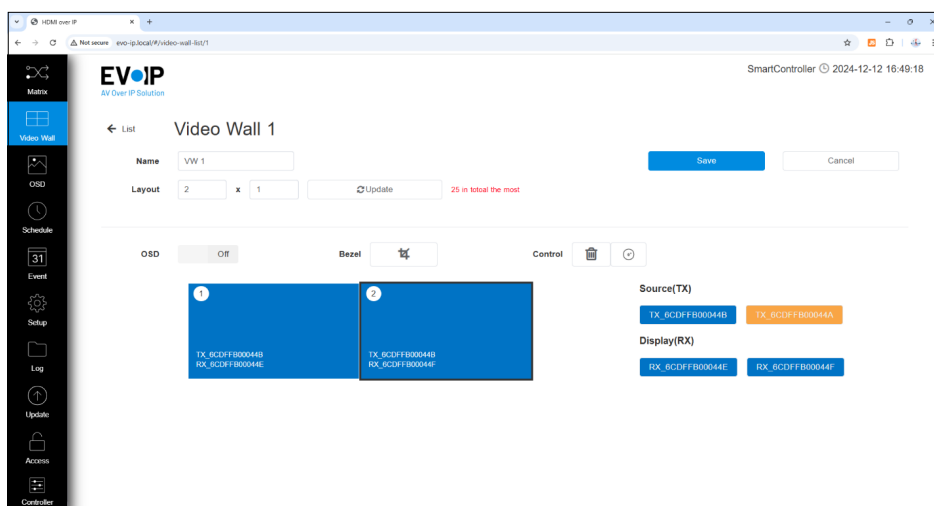
Note: Each video wall can be setup to have up to 25 displays in any configuration.



1.3.3 Edit Content & Display Settings

Choose the displays that will be part of your video wall by simply dragging and dropping them into the correct orientation. Select the source(s) by dragging and dropping them as well. When an individual screen is selected, you can change the horizontal/vertical orientation by rotating content being shown 180 degrees if needed.

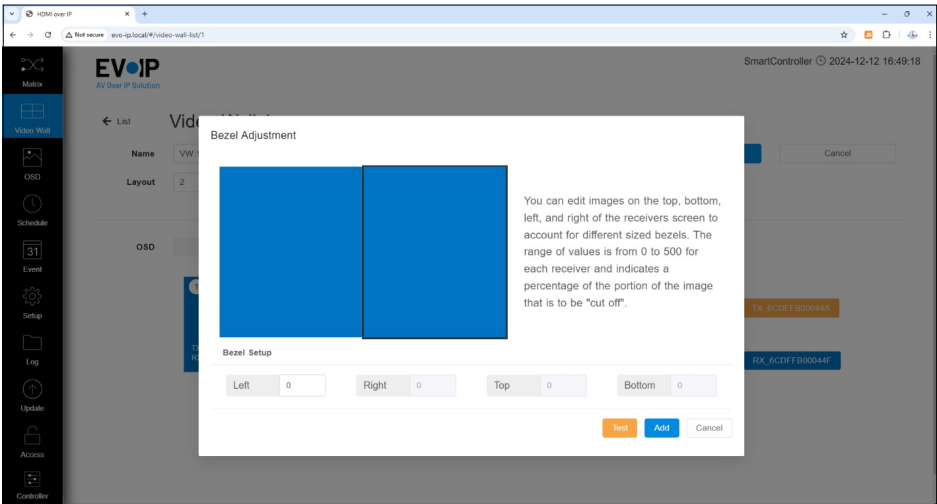
Note: There can be multiple sources used in a video wall preset.



1.3.4 Bezel Adjustment

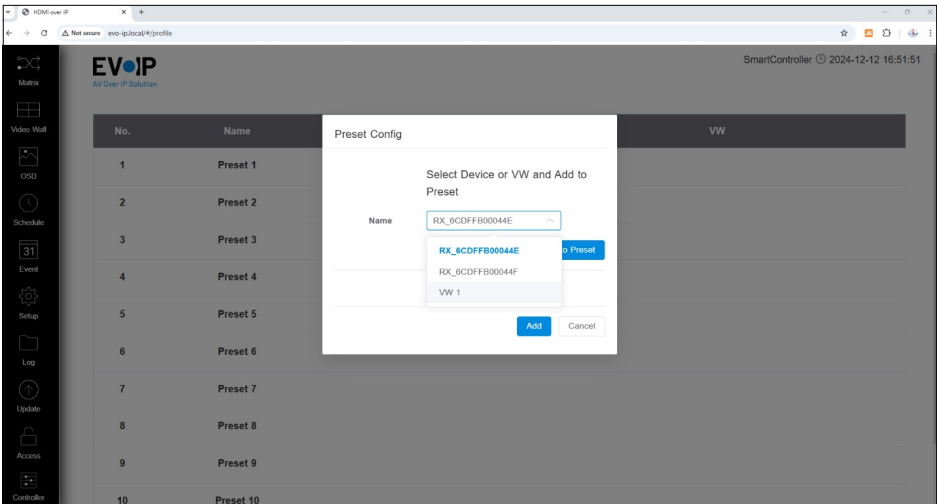
Depending on the type of displays you are using for your video wall, you may need to make adjustments to account for different bezels. To accomplish this, select a display to highlight options, and then select the **Bezel Adjustment** icon. From here, depending on the layout of your video wall, you will have options to change how the image is shown on the selected display, by removing part of the image on the left, right, top, or bottom bezels. Use the up or down arrows to select a percentage of the image on the screen (the value is a percentage that must be between 0-500). Select **Test** to see how the setting changes the appearance and **Apply** once the image is correct.

Note: This will likely need to be done on ALL displays within the video wall if it is done on 1.



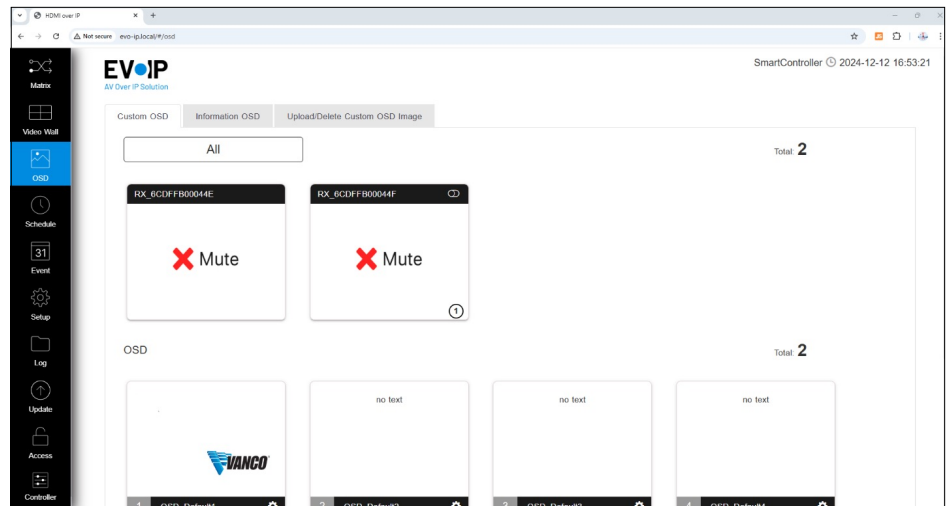
1.3.5 Preset

Adds a video wall configuration to a new or previously created preset (also found in matrix mode).



1.4 On Screen Display (OSD) Mode

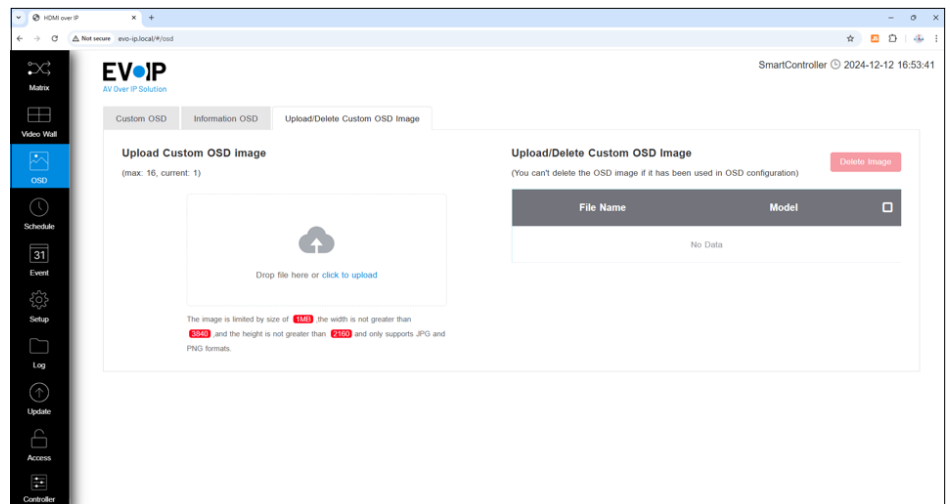
Allows for customized messages, images, logos, or albums of images to be overlaid or viewed on displays. Once an OSD preset is created, it is simply dragged and dropped to the display(s) it will need to be used on. Each display is listed with an enable/disable button on the top right and shows which OSD preset is selected to be used on the bottom right.



1.4.1 Image Upload/Delete

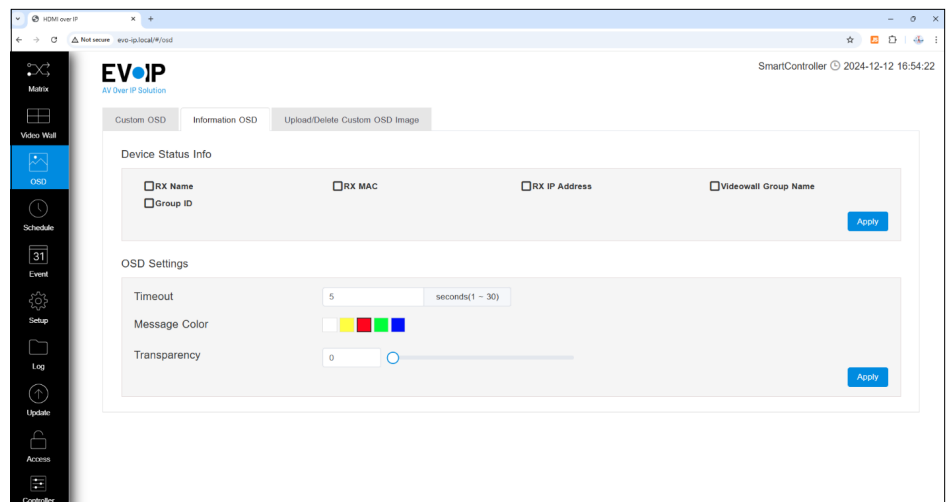
To upload images to be used for OSD presets, simply drag and drop files on your computer into the upload area or select **Click to Upload** to browse and open the image(s) you wish to upload for use. Images are limited JPEG or PNG files that are no more than 1MB, and no larger than 3840x2160 in size.

Note: Images can ONLY be deleted when they are NOT selected for use on displays. To delete an image, drag and drop a different OSD preset to the display(s) in question to allow them to be deleted.



1.4.2 Information

This section allows for information to be shown on the screen that can be helpful in setup, and/or identifying displays and receiver information. The length of time these are present can be changed, as well as the color or transparency of the information. It is necessary to select the **Apply** button for changes to take effect.



1.4.3 Create a New Preset - Message

To create a custom message of up to 36 characters (numbers, letters, and spaces only), select a name for the preset in the **Name** field. Make sure that **Message** is selected from the **Type** dropdown menu, then select the resolution to be used.

- Transparency can be adjusted from 0 (not transparent) to 100 (completely transparent).
- Color and font size can be adjusted.
- Select **Add** for changes to take effect.

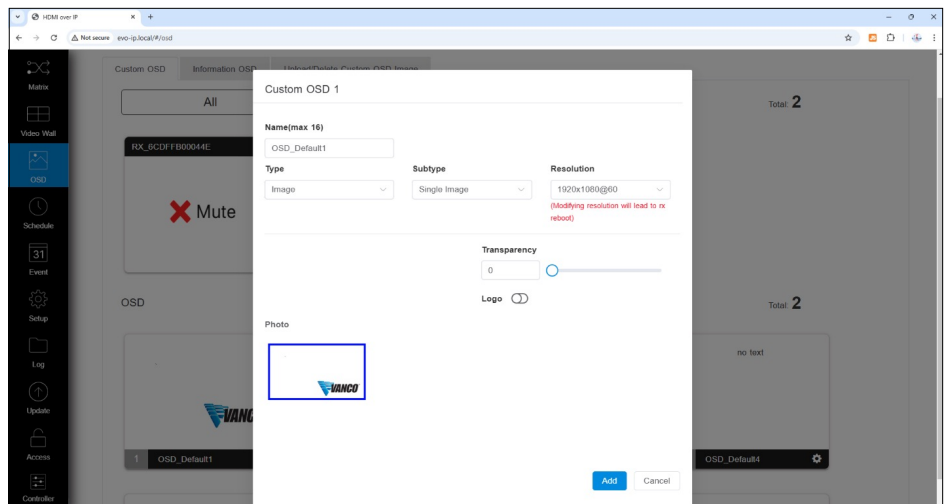
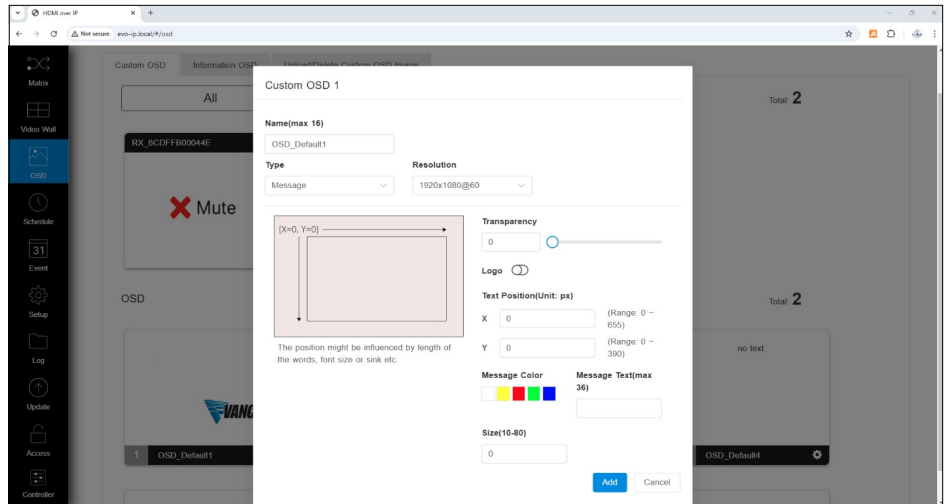
Note: Anytime the resolution is changed, the receiver(s) will automatically reboot.

1.4.4 Create a New Preset - Image

To create an OSD preset with an image, select a name for the preset in the **Name** field. Make sure that **Image** is selected from the **Type** dropdown menu, and **Single Image** is selected from the **Subtype** dropdown menu. Then select the resolution and image you would like to use.

- Transparency can be adjusted from 0 (not transparent) to 100 (completely transparent).
- When **Logo** is not enabled (default), the image will appear as it was uploaded. When **Logo** is enabled, the position of the image will remain but will be overlaid directly on top of the source content being played on the receiver(s).
- Select **Add** for changes to take effect.

Note: Anytime the resolution is changed, the receiver(s) will automatically reboot.

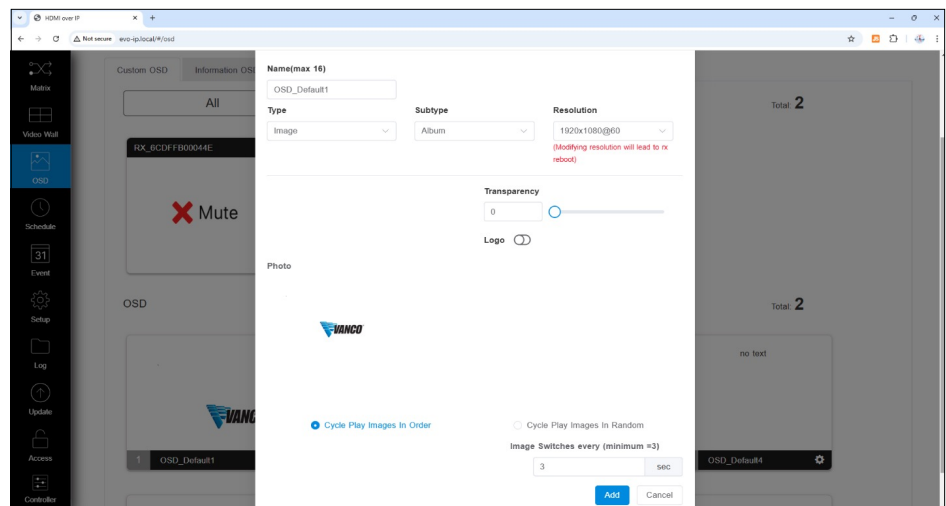


1.4.5 Create a New Preset - Album

To create an OSD preset with an image select a name for the preset in the **Name** field. Make sure that **Image** is selected from the **Type** dropdown menu, and **Album** is selected from the **Subtype** dropdown menu. Select the appropriate resolution, then select the images that you would like to use. If you choose to play them in order, the images will cycle in the order they are selected. If you choose to play them randomly, images will randomly cycle through differently. You can also choose to change the time it takes to switch to a new image (minimum 3 seconds).

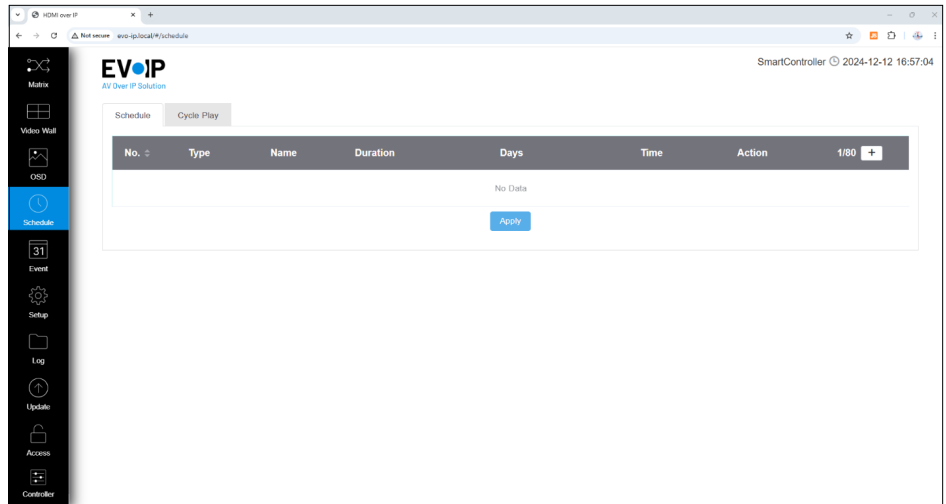
- Transparency can be adjusted from 0 (not transparent) to 100 (completely transparent).
- When **Logo** is not enabled (default), the image will appear as it was uploaded. When **Logo** is enabled, the position of the image will remain but will be overlaid directly on top of the source content being played on the receiver(s).
- Select **Add** for changes to take effect.

Note: Anytime the resolution is changed, the receiver(s) will automatically reboot.



1.5 Schedule

The EVO-IP user interface also allows for scheduling of actions for either the transmitter, receiver, or preset (created in **Matrix Mode**).

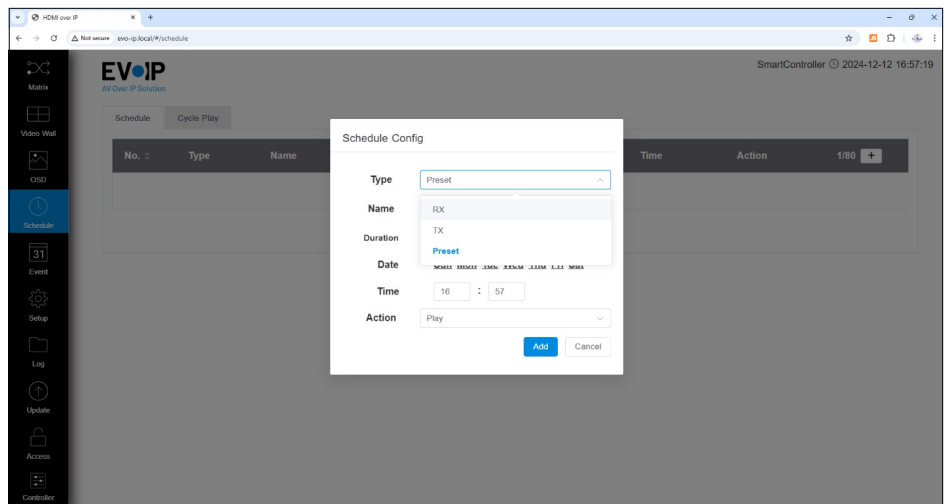


1.5.1 Create a New Schedule

Click the **+** icon to create a new scheduled action. From the **Type** drop down menu, select **RX**, **TX**, or **Preset**.

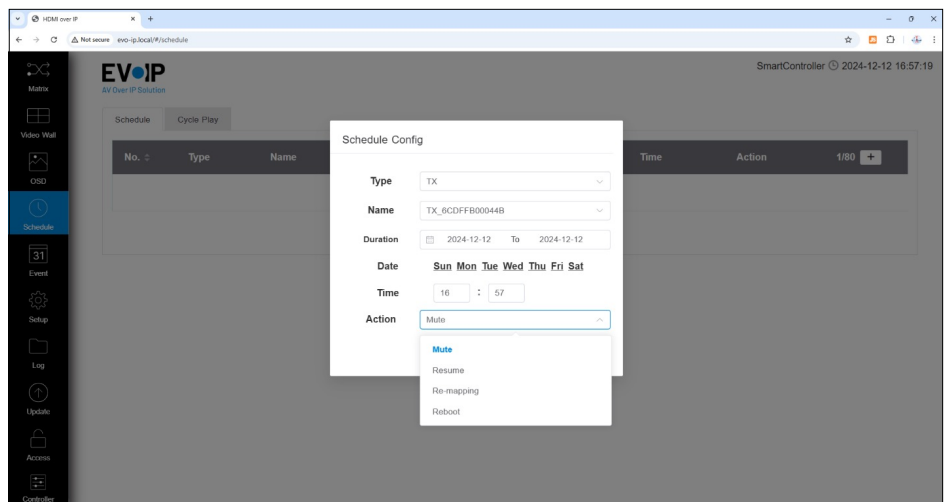
1.5.2 Select a New Action

Next, you can type in a customer **Name**, pick the duration you would like the action to start and/or stop, the day(s) you want to have the action happen, time and action.



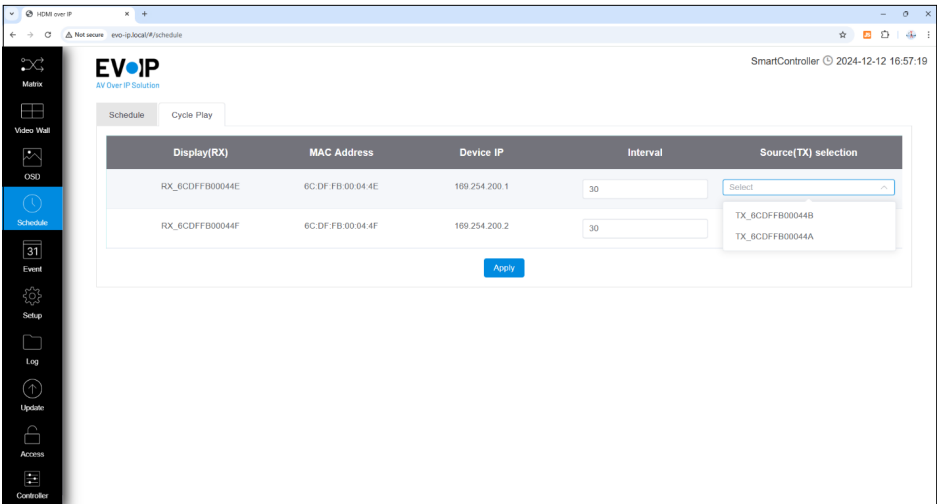
- **Mute:** cuts HDMI signal and voltage on the TX or RX
- **Resume:** re-establishes HDMI signal and voltage on the TX or RX
- **Re-mapping:** recalls a specific mapping of sources & receivers (preset)
- **Reboot:** reboots a specific transmitter or receiver
- **Enable:** enables a preset
- **Disable:** disables a preset

Note: it is important to make sure your control box is set up within the correct time zone. This is done within the Controller tab and window under the Time tab. Please see that section for further details.



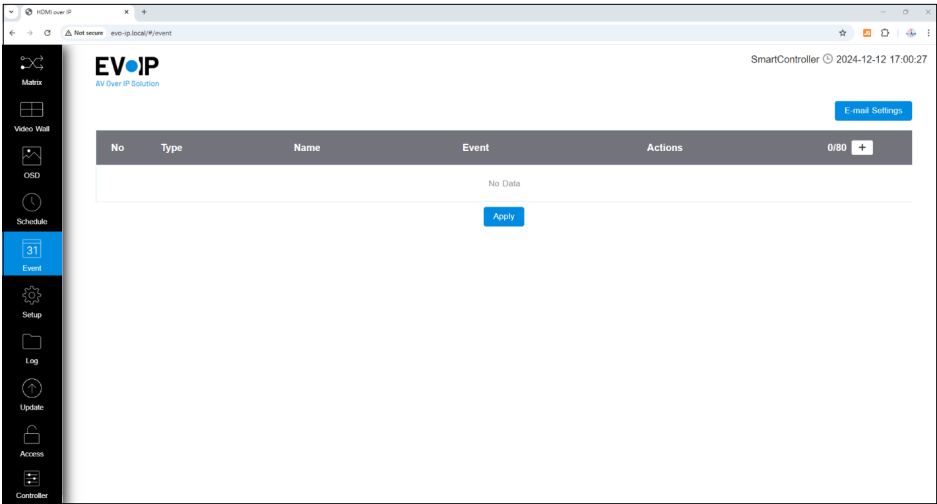
1.5.3 Cycle Play

The **Cycle Play** option allows for selected or all sources to be shown and automatically switched based on a determined time interval. This is great for demo's as well as for systems with multiple camera NVR's to be able to cycle through ALL cameras automatically.



1.6 Event

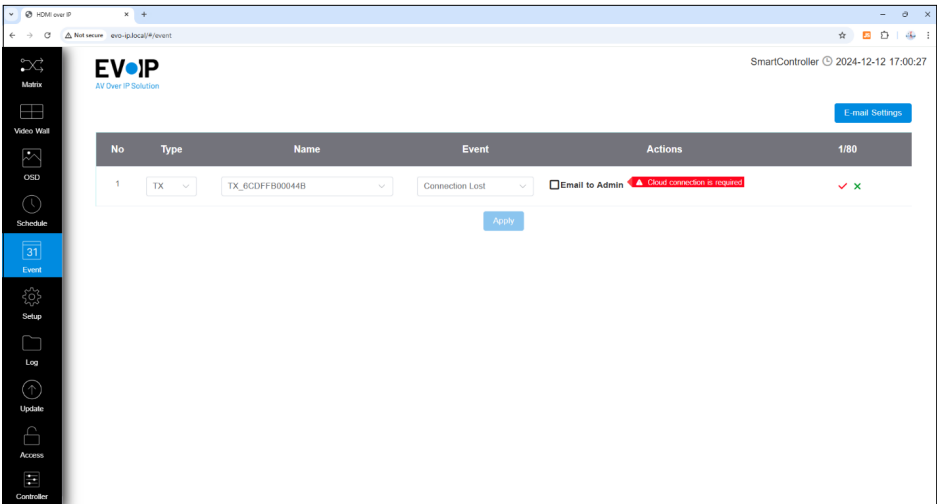
The **Event** tab allows the setup of automated notifications in the event of a transmitter or receiver issue. To start, first select or click on the + icon.



1.6.1 Add a New Event

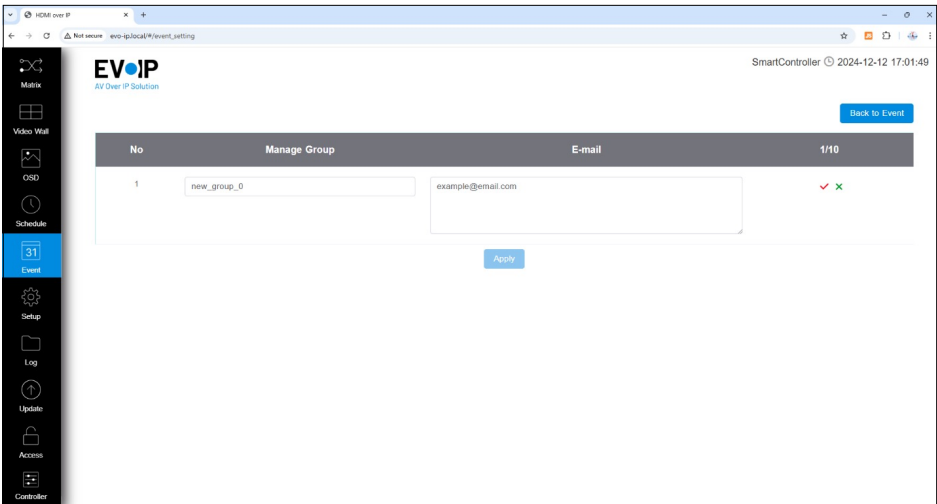
In this menu, you will select the **Type** of device (TX/RX), the **Name** of the device, the type of **Event** you want to be notified for, and the action to send **Email to Admin**. Once completed, select or click on the red checkmark, then select **Apply**.

Note: Your control box will need to be connected to the cloud to acccount for this feature. Please see instructions for this under the Controller tab settings.



1.6.2 Adding an Email Address

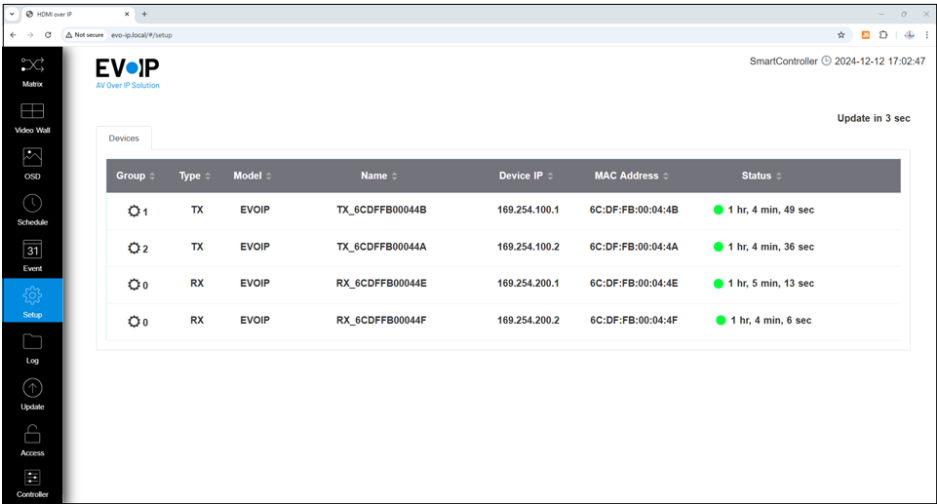
Before you officially receive notifications, you will need to add your email within the **Email Settings**. Here you can add and manage a group or email addresses that will receive notifications or simply enter 1. Once this information is entered, select or click on the red checkmark and click apply.



1.7 Setup

Once a device is connected and shown online, go to the Setup tab, touch or move your mouse to the right side of the row (to the right of the status time) and select or click on the pencil icon to begin setting up individual transmitters or receiver.

Note: If cables were not labeled and you are not sure which transmitter or receiver you are physically working with, under the Group column, select or click on the “sun” icon in the row of the device in question and it will turn red for 30-seconds. The physical transmitter or receiver will have a red blinking LED light to help you identify the device you are working with.



1.7.1 Transmitter Setup

There are a lot of options when setting up each transmitter, but most commonly used settings are the **Basic Settings** which allow you to rename the transmitter, change the group ID of the transmitter, allowing you to either select an image or show a preview of what is being played on the source connected to the transmitter. Once these settings are completed, make sure you select or click **Apply** for the settings to take effect.

The transmitter is also responsible for several **A/V Settings** including EDID (presets or ability to Copy EDID), method of audio, and ARC/eARC. Once these settings are completed, make sure you select or click on **Apply** for the changes to take effect.

You can define how you would like the CEC pin of the HDMI signal to be used for CEC, ARC/eARC, or none of the above. With both fiber and copper options for connectivity, this is where you would setup how your transmitter is being connected to the network switch. EVO-IP 2.0 also has RS232 routing. You will need to enter the RS232 protocol information under **RS232 Settings** to be able to have serial commands routed to/from the device connected to the transmitter. Once these settings are completed, make sure you select or click on **Apply** for the changes to take effect.

The screenshot shows the 'Device Setup' page in the EVO-IP web interface. The left sidebar contains navigation icons for Matrix, Video Wall, OSD, Schedule, Event, Setup (highlighted), Log, Update, Access, and Controller. The main content area is titled 'Device Setup' and includes a 'SmartController' status bar showing '2024-12-12 17:03:10'.

Information

Type	TX	Device IP	169.254.100.1	MAC Address	6C:DF:FB:00:04:4B
Alive Time	1 hr, 5 min, 12 sec	MCU Version	1.10.14/1.00.03	System Version	3.10.05

Basic Settings

Name: TX_6CDFFB00044B

Group ID: 1

Photo: Photo 1

Apply

The screenshot shows the 'A/V Settings' and 'Network Settings' pages in the EVO-IP web interface.

A/V Settings

EDID: Default EDID (4K2K60_444Stereo Audio 2.0 SDR) | Copy EDID: Select

Audio: HDMI | Streaming Video: On

ARC/eARC Return: None

Apply

Network Settings

IP Mode: Static | IP Address: 169.254.100.1

Subnet Mask: 255.255.0.0 | Gateway: 169.254.100.1

Apply

Hardware Usage

CEC Pin Usage: ARC/eARC

The screenshot shows the 'Hardware Usage' and 'RS-232 Settings' pages in the EVO-IP web interface.

Hardware Usage

CEC Pin Usage: ARC/eARC

Network Interface Usage: Copper

Apply

RS-232 Settings

RS-232 Command Relay: Off | Baud Rate: 115200

Data Bit: 8 | Stop Bit: 1

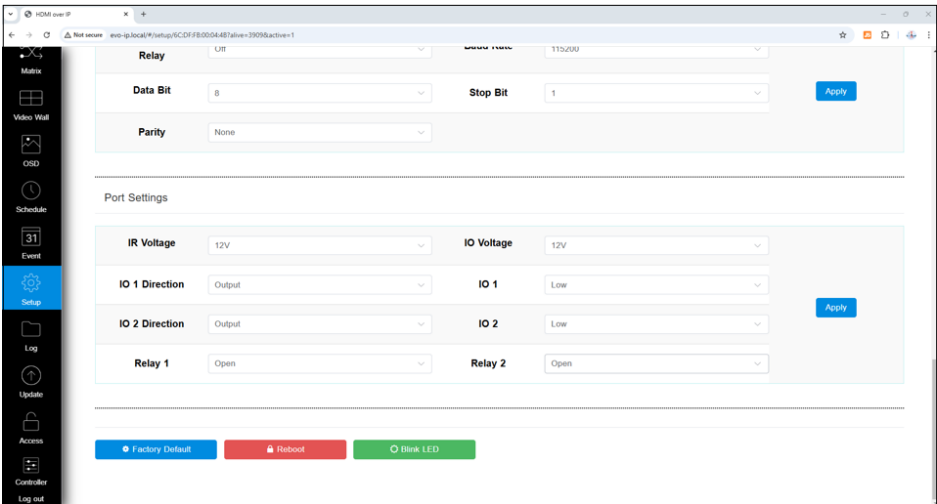
Parity: None

Apply

Port Settings

IR Voltage: 12V | IO Voltage: 12V

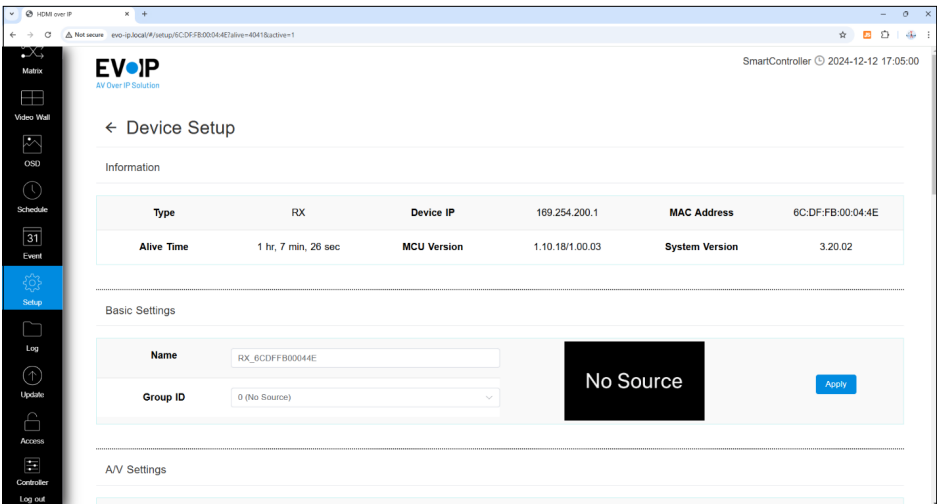
Each transmitter is also equipped with triggers, IO, and relay options as well. Make sure you use the correct settings for each based on the device(s) you are using with the transmitter. Once these settings are completed, make sure you select or click on **Apply** for the changes to take effect.



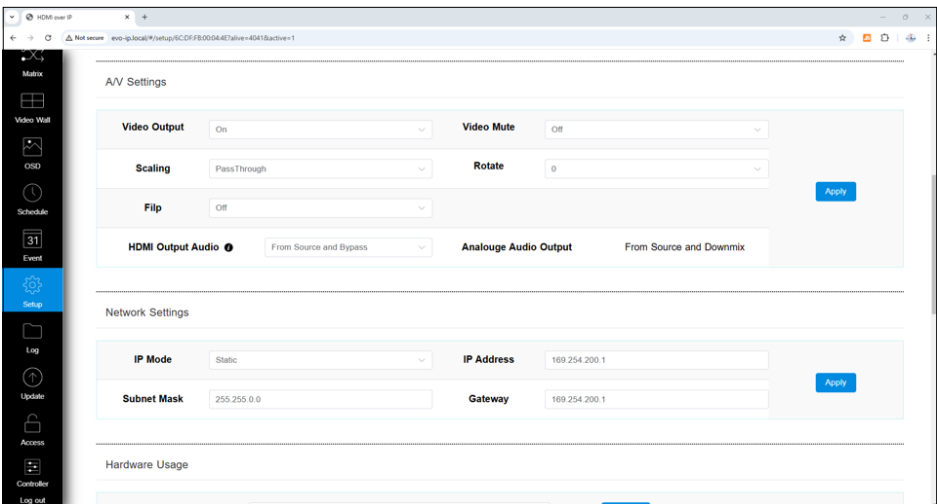
1.7.2 Receiver Setup

As with the transmitter, there are many different settings to help customize and create a reliable and stable connection with the system. Within the **Basic Settings**, you can change the name of the receiver. Once these settings are completed, make sure you select or click on **Apply** for the changes to take effect.

Note: Receivers ALWAYS assume the ID of the source being played on it and ALWAYS shows a preview of the source that is selected on it within the Icon View of Matrix Mode.



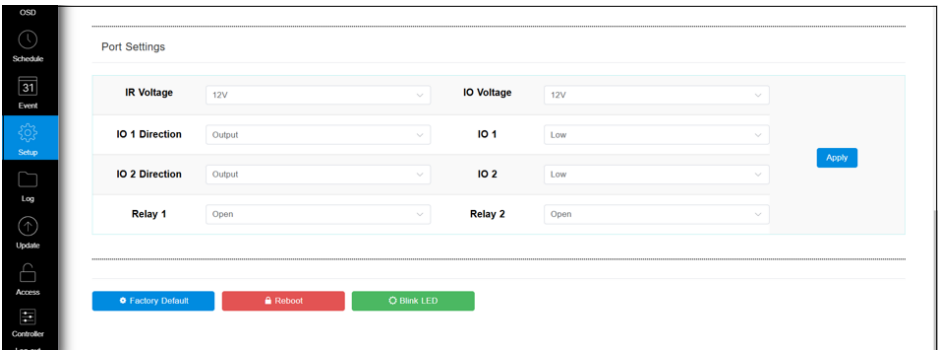
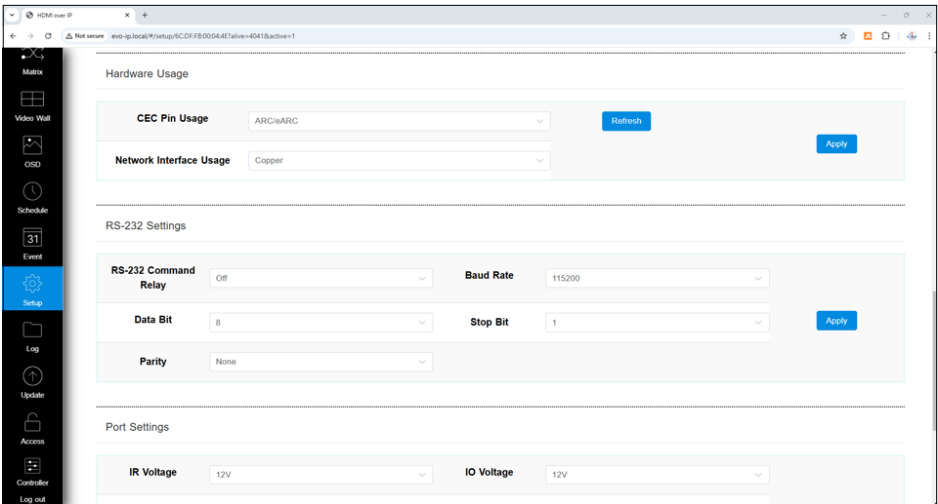
Within the **A/V Settings** of the receiver, you can adjust the **Scaling** of the video resolution output which often helps with smaller displays with lower resolutions work together with larger 4K displays within the same system. You can also **flip** how the image is being shown vertically or horizontally. Once these settings are completed, make sure you select or click on **Apply** for the changes to take effect.



Note: It is recommended to leave the network settings to their default settings.

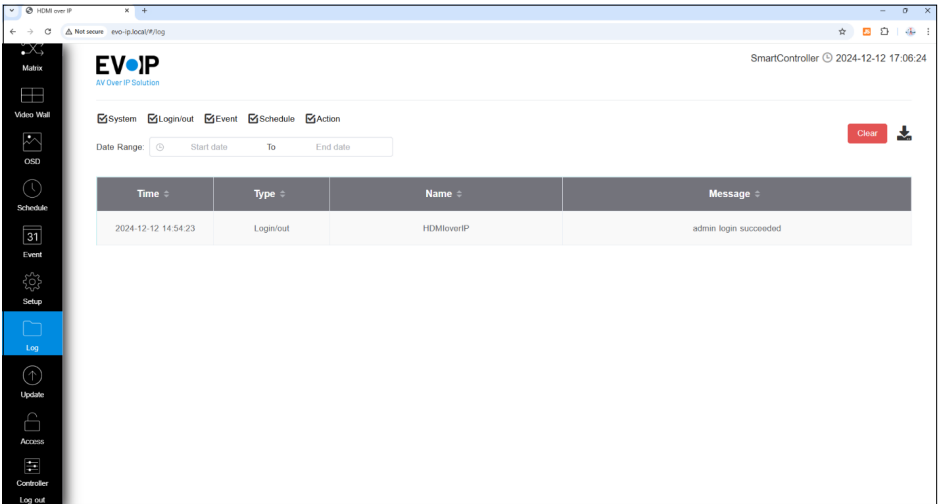
You can define how you would like the CEC pin of the HDMI signal to be used for CEC, ARC/eARC, or none of the above. With both fiber and copper options for connectivity, this is where you would setup how your receiver connects to the network switch. EVO-IP 2.0 also has RS232 routing. You will need to enter the RS232 protocol information under **RS232 Settings** to be able to have serial commands routed to/from the device connected to the transmitter. Once these settings are completed, make sure you select or click on **Apply** for the changes to take effect.

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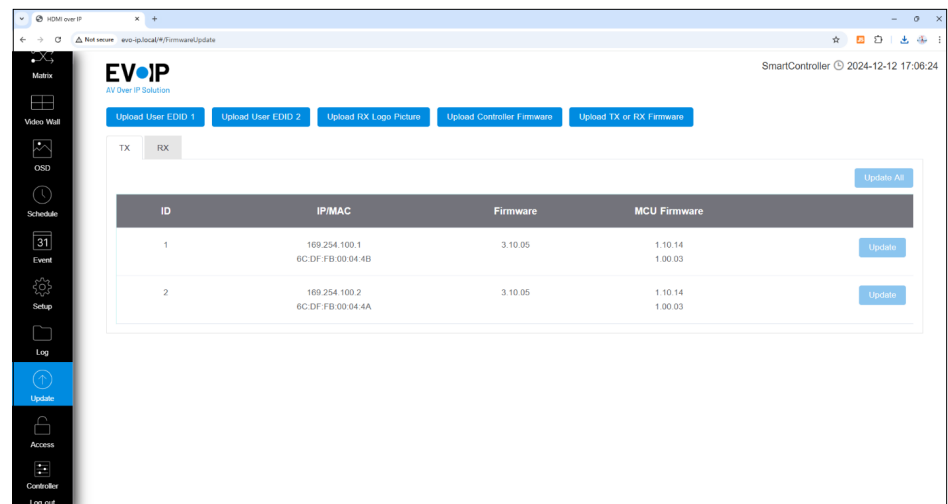
1.8 Log

The **Log** provides a list of items and actions that occur within the system and includes logging in/out, events, schedules, and other actions or occurrences which may help in troubleshooting issues. The range of the actions can be setup, and the list can be exported via .csv file.



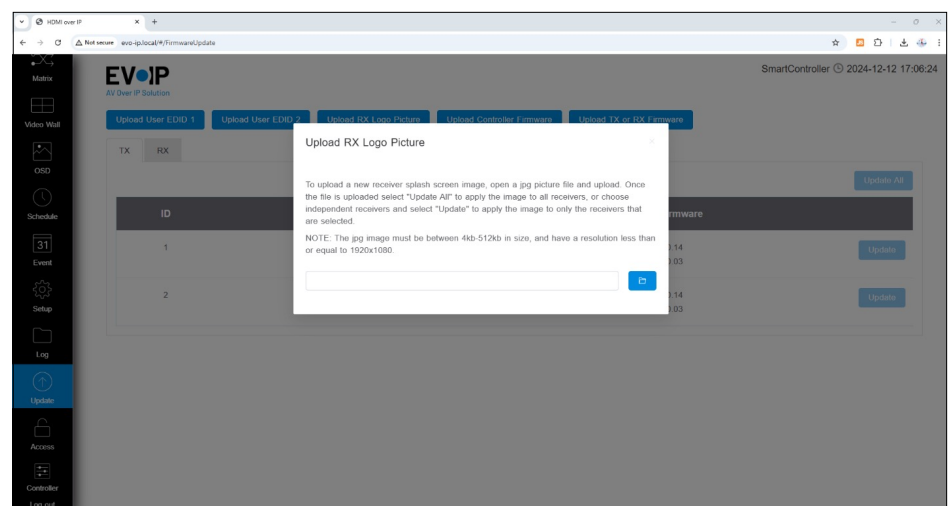
1.9 Update

Updates within EVO-IP 2.0 have never been easier. Within the **Updates** tab, you can upload user EDID options which can be found within the transmitter setup tab, upload a custom splash-screen to be seen when a receiver does not have any source selected, as well as update the control box and specific transmitters and receivers, or all transmitters and receivers from the user interface.



1.9.1 Splash Screen

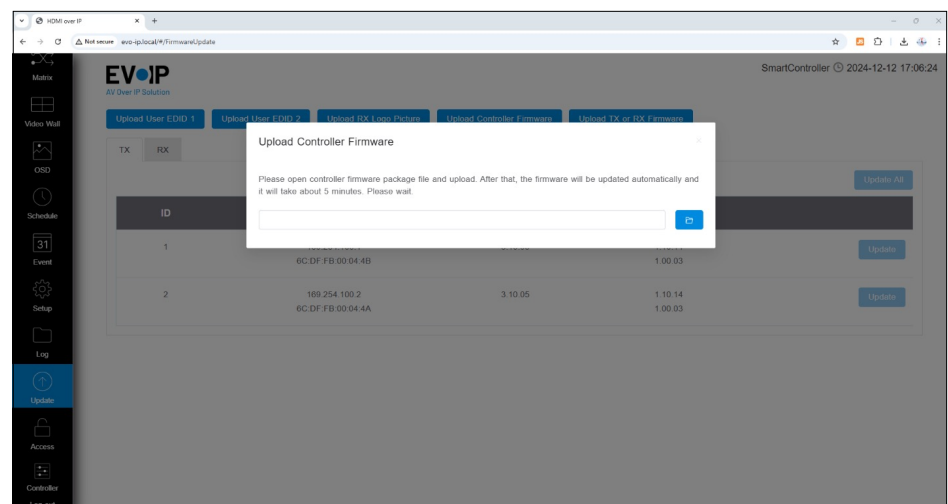
When uploading a customized splash screen, follow the size requirements of a .jpg file that is 1920x1080 and up to 512kb.



1.9.2 Firmware

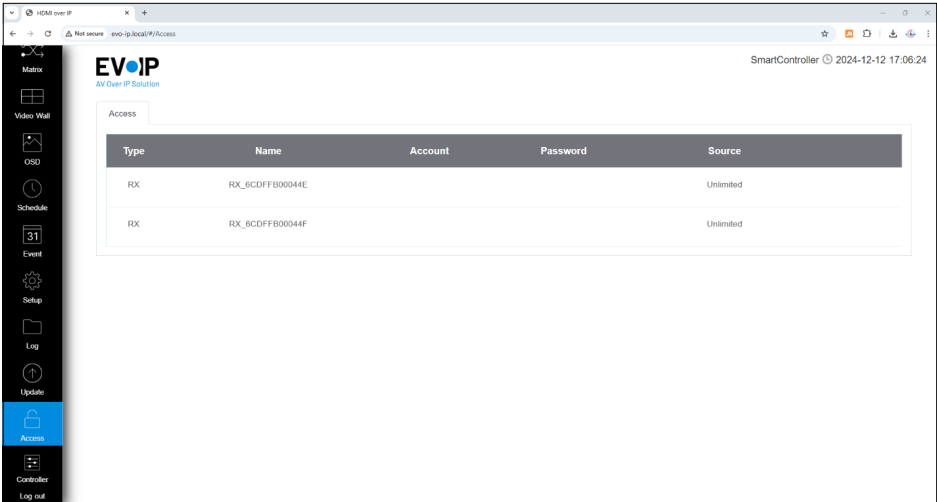
Any future updates for EVO-IP 2.0 will be on the product page on the www.vanco1.com website under the **Downloads** tab. Download that latest firmware, then browse and upload the file to perform the update.

Note: You can also update the firmware for the transmitter and receiver following the same process.



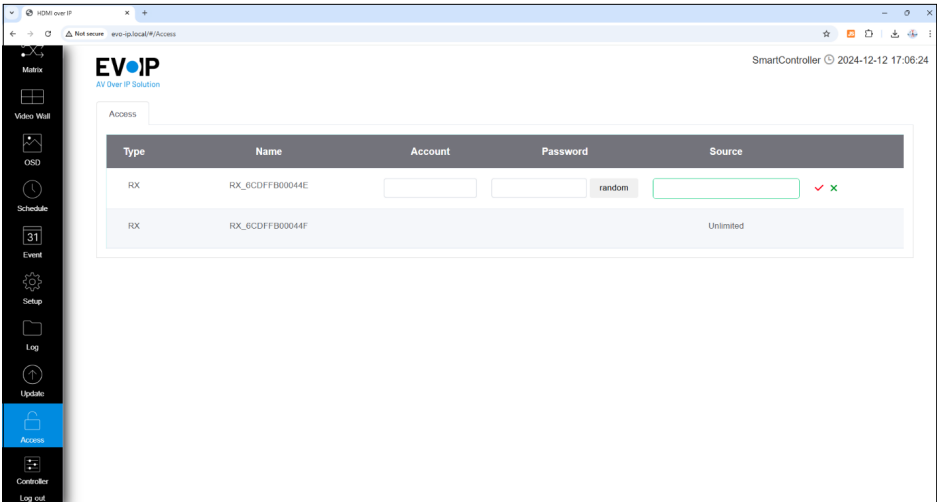
1.10 Access

The **Access** tab allows you to create multiple logins for the User Interface. These can have either admin or write access which acts as an “installer” login and provides access to everything, or a read only or user which provides reduced access so that it is more difficult to make changes to settings that may impact the stability and performance of the system.



1.10.1 Edit

Within the **Access** tab, you can also limit what sources are available to specific receivers or displays. The username and password can either be randomized, or unique login information can be entered manually. Once setup is complete, select or click on the red checkmark, then select **Apply**.



1.11 Controller

The **Controller** tab opens a new window that will require your same login credentials as a write or admin user.



1.11.1 Settings

Within the **Settings** tab, you can **Save** or **Load** a control box's configuration (great as a backup), view serial and network connectivity settings, and view or change the control or video network information. Once the setting is confirmed, select or click on **Apply** before any changes can be made.

The **Control** IP information can be changed as needed and is used to connect to external networks and control systems.

The **Video** IP information relates ONLY to the network associated with the transmitters and receivers and is recommended to remain at their default settings.

The screenshot shows the 'System Configurations' page in the EVO-IP web interface. The page is divided into several sections:

- System Configurations:** Contains 'Save' and 'Load' buttons.
- Controller Settings:**
 - General:** Fields for Version (1.10.36), RS-232 BaudRate (57600), HTTPS (Off), Telnet (On), Telnet Port (23), GUI Version (1.10.36), Domain Name (evo-ip), SSH (Off), and SSH Port (22).
 - Control Network:** Includes an 'Apply' button, DHCP (On), IP Address (192.168.111.123), Subnet Mask (255.255.255.0), and Gateway (192.168.111.1).
 - Video Network:** Includes an 'Apply' button, Telnet Port (23).
 - Control Network (repeated):** Similar to the first Control Network section.
 - Video Network (repeated):** Includes an 'Apply' button, DHCP (Off), IP Address (169.254.8.100), Subnet Mask (255.255.0.0), and Gateway (169.254.8.1).
 - TX and RX IP Addresses Range Settings:** Fields for TX IP Addresses From (169.254.100.1) To (169.254.103.255) and RX IP Addresses From (169.254.200.1) To (169.254.203.255).
 - Controller Reset:** Buttons for 'Settings Reset', 'Network Reset', and 'Reset All'.

1.11.2 Time

If you are using the **Schedule** function of EVO-IP 2.0, it is imperative to make sure you have the correct time zone selected from this section. Once the setting is confirmed, select or click **Apply** before any changes can be made.

The screenshot shows the 'Time Settings' page in the EVO-IP web interface. The page contains the following fields and buttons:

- Device Time:** A button labeled 'Apply'.
- Time Zone:** A dropdown menu currently showing 'America/New York'.
- NTP Server:** A text field containing 'time.nist.gov'.

1.12 Vanco.io Cloud Setup

1.12.1 Installer Account

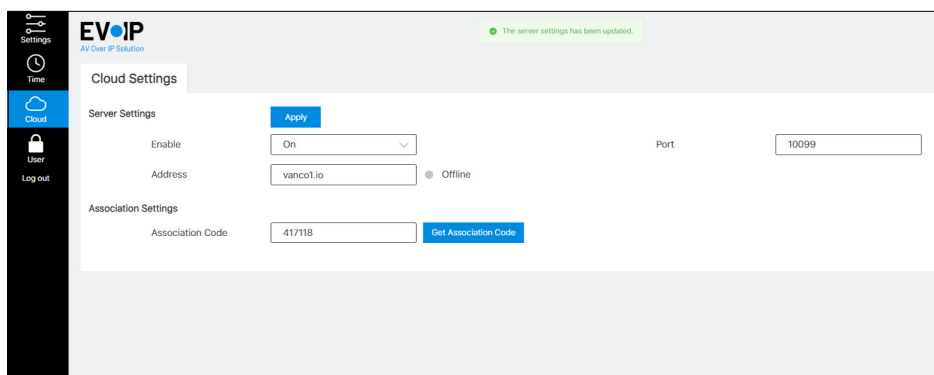
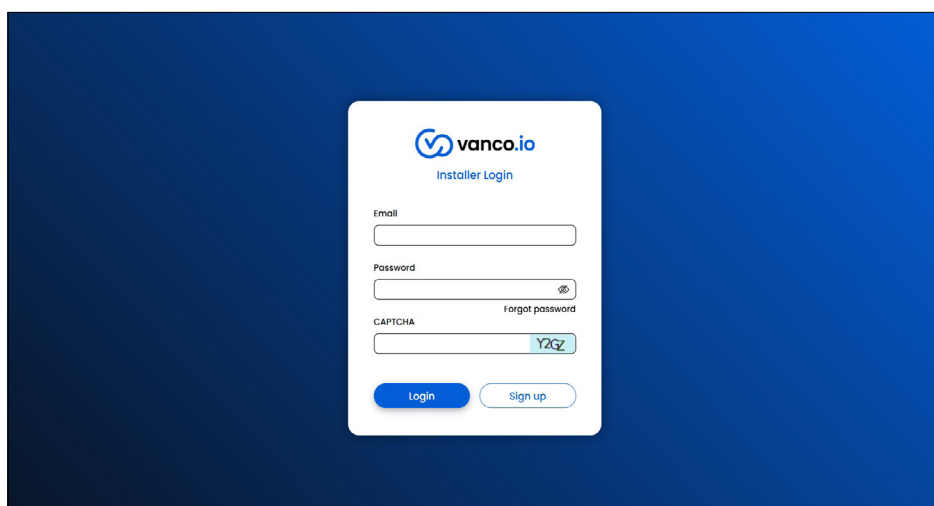
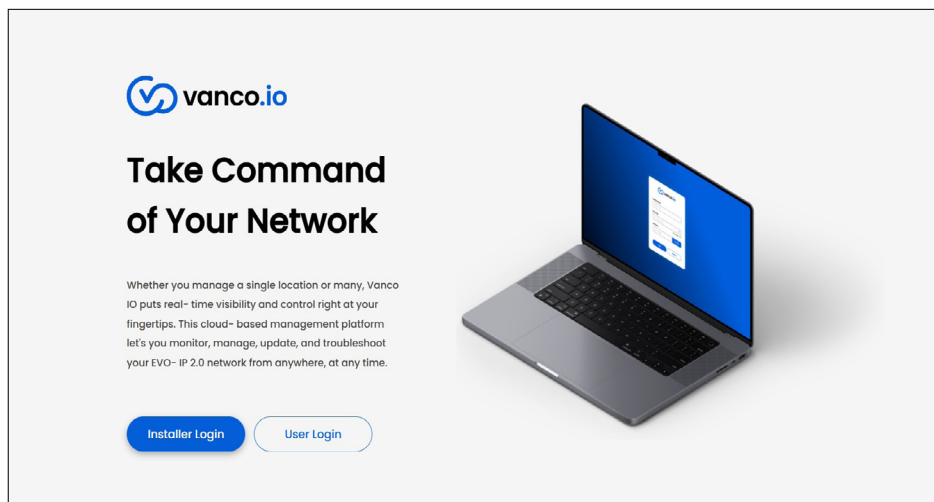
To access the cloud and/or receive automated notifications from the **Events** tab, you need to make sure you are connected to the cloud.

First visit www.vanco1.io/installer and setup an **Installer** cloud account. You will also need to login into the Controller UI and select or click on the **Cloud** menu.

Note: An Installer account is required before an End User account can be used

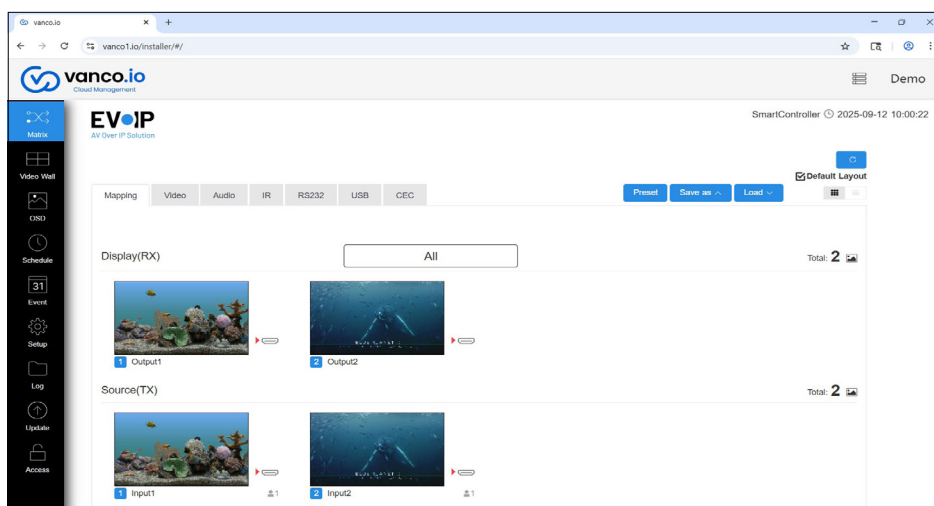
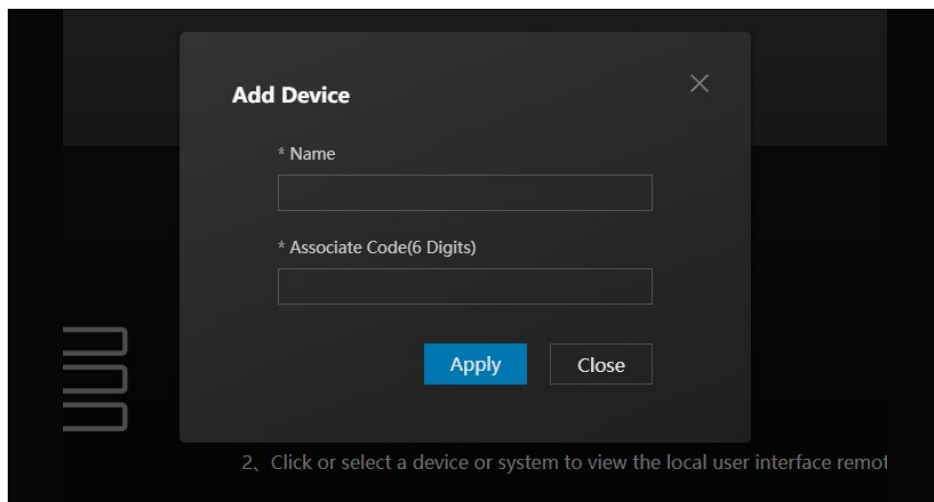
The first time you visit the www.vanco1.io/installer site, you will need to sign up for an account. Enter an email address, provide a secure password, and enter the CAPTCHA characters as prompted. You will need to confirm the account in email before logging in for the first time.

For EVO-IP 2.0, you will need to go into the Controller UI, make sure your cloud is enabled and the address is set to vanco1.io. Once confirmed and applied, click on **Get Associate Code** and copy and paste the code going back into the www.vanco1.io/installer window. Once added the system will pop up and should be good to go.

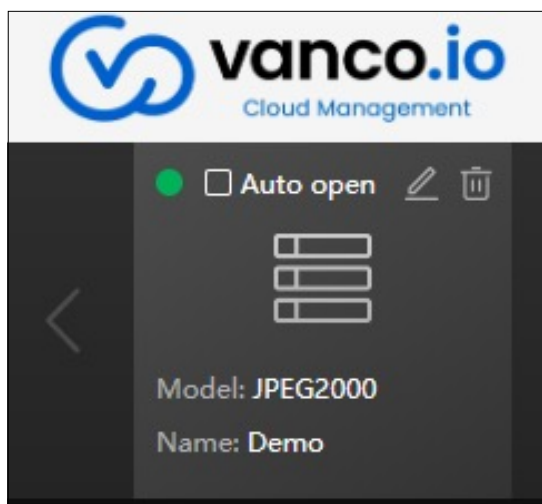


Once your sign up email was received and confirmed, setup by selecting or clicking on **Add a Device** and follow the directions. When it asks for an **Association Code**, return to the **Controller** window, go to the **Cloud** tab, and click on **Get Association Code**. Numbers will appear in the field and you will need to enter those with the cloud UI and select or click on **Apply**. The window will refresh and you will have access to the EVO-IP UI remotely based on the type of account that was created.

Once successfully added, click the  icon to view and select the devices you have on the cloud.



By default, no system will automatically populate when you login. If you would like to have a specific device automatically come up when logging into the cloud, select or click on the **Auto Open** check box.



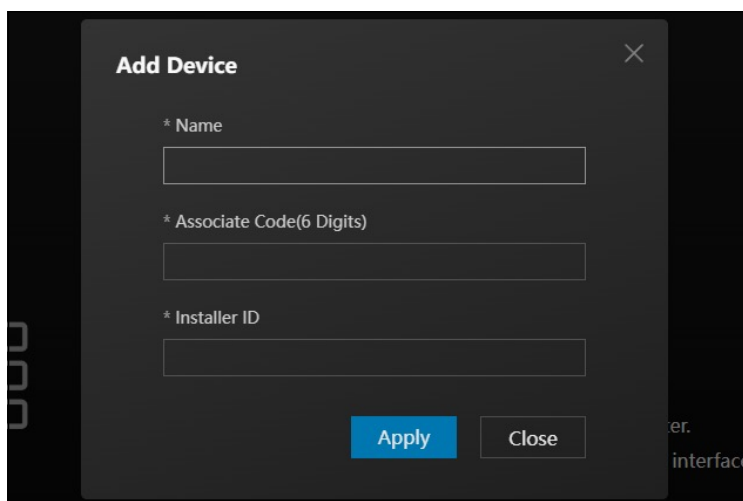
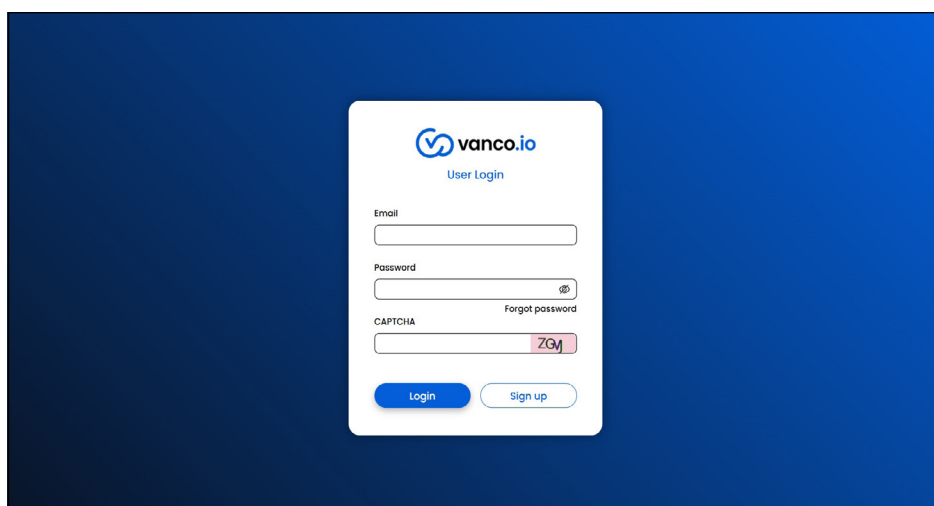
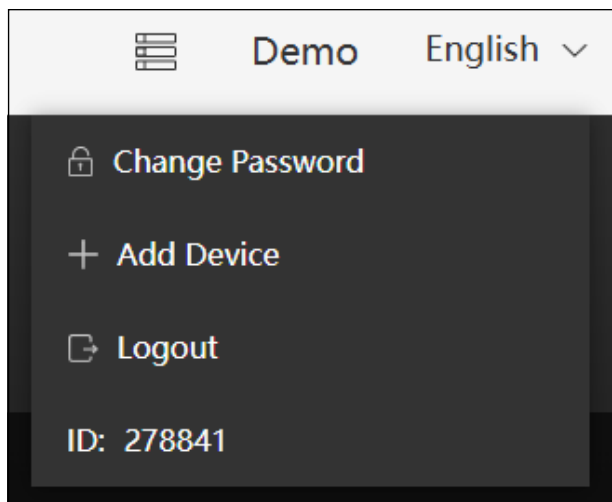
1.12.2 End User Account

The End User account for the cloud is the same as the End User login for local access to the EVO-IP 2.0 UI, and only allows for limited access and functionality to avoid unnecessary issues and site visits.

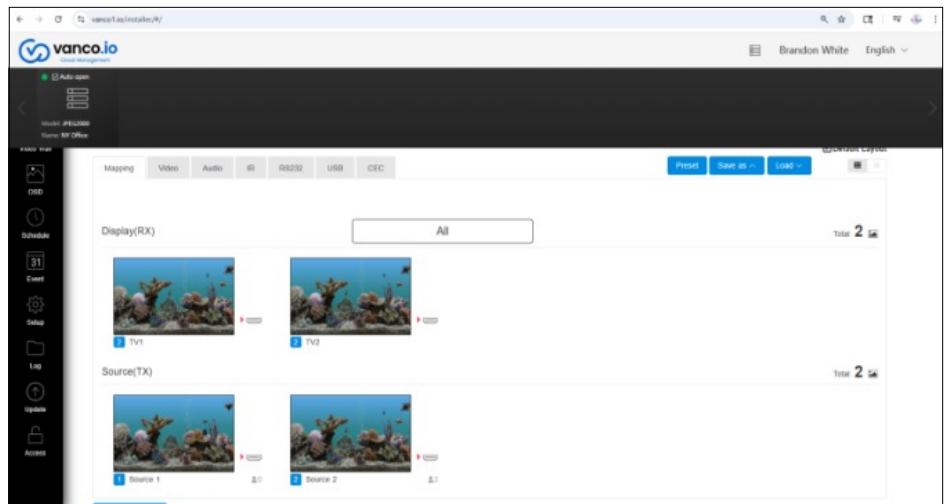
An **Installer** account and **Installer ID** is necessary and required to setup any **End User accounts**. The **Installer ID** can be found on the installer's login once they select or click their name.

First visit www.vanco1.io/user and setup an **End User** cloud account. First time you visit the www.vanco1.io/user site, you will need to sign up for an account. Enter an email address, provide a secure password, and enter the CAPTCHA characters as prompted. You will need to confirm the account in email before logging in for the first time.

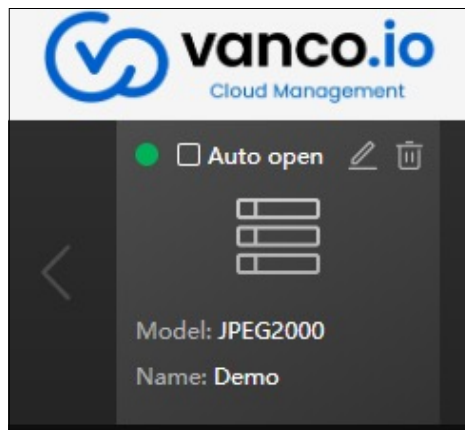
Once your sign up email was received and confirmed, setup by selecting or clicking on **Add a Device** and follow the directions. When it asks for an **Association Code**, THE INSTALLER MUST RETURN to the **Controller** window (under Installer read/write access), go to the **Cloud** tab, and click on **Get Association Code**. Numbers will appear in the field and you will need to enter those with the cloud UI, along with the Installer ID, and select or click on **Apply**. The window will refresh and you will have access to the EVO-IP UI remotely based on the type of account that was created.



Once successfully added, click the  icon to view and select the devices you have on the cloud.

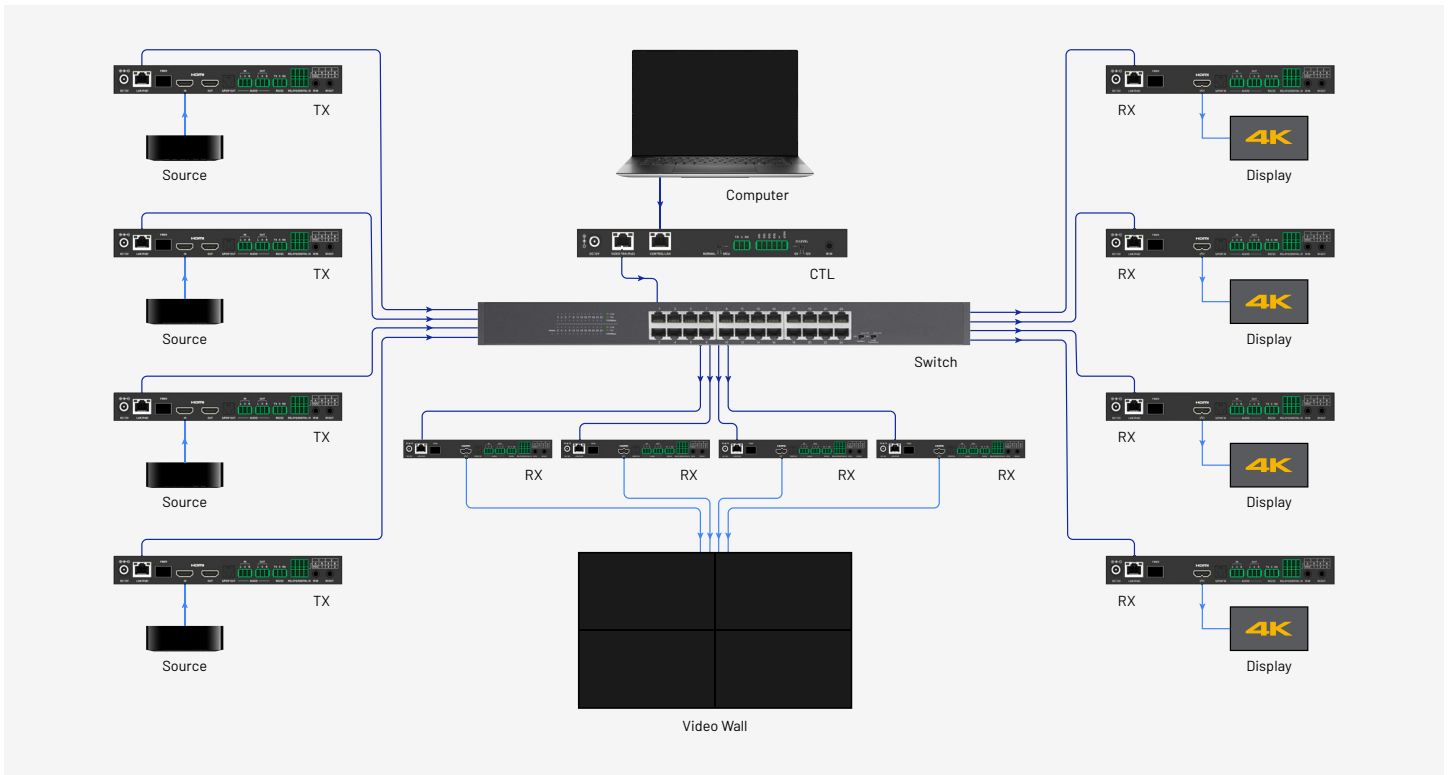


By default, no system will automatically populate when you login. If you would like to have a specific device automatically come up when logging into the cloud, select or click on the **Auto Open** check box.



Dante AV Setup

Section 2.0



2.1 Connection Diagram

Below is a basic setup and use of EVOIPTX2 and EVOIPRX2 devices within the Dante ecosystem. It is HIGHLY recommended to visit <https://www.getdante.com/resources/> for additional information regarding additional and advanced use of Dante Controller.

When using the EVO-IP 2.0 devices solely with Dante Controller for audio and video setup and control, please take note of the following:

- EVOIPTX2 is NOT needed for setup or control. Do NOT connect the VIDEO LAN or CONTROL LAN ports to the network when using Dante Controller.
 - If a control box is initially connected or used, disconnect the EVOIPTX2 and reset all transmitters and receivers to Factory Default.
- Dante AV-A allows for simple switching, EDID setup for transmitters. Other EVO-IP 2.0 functions and features such as Video Wall and OSD are NOT available when using Dante Controller for audio and video.
- The EVOIPTX2 by default is set to HDMI input audio.
- The EVOIPRX2 needs an audio subscription to output from the HDMI and audio outputs.
- Subscriptions for audio and video are unicast. Applications for multicast may be needed.
- Default audio sampling rate of Dante PCM is 48KHz.
- Vanco.io is NOT available
- Link to download Dante Controller can be found here:
 - Windows: <https://my.audinate.com/content/dante-controller-v415010-package-windows>
 - Mac: <https://my.audinate.com/content/dante-controller-v41509-package-apple-silicon>

2.2 Setting Up EVO-IP 2.0 Transmitters and Receivers

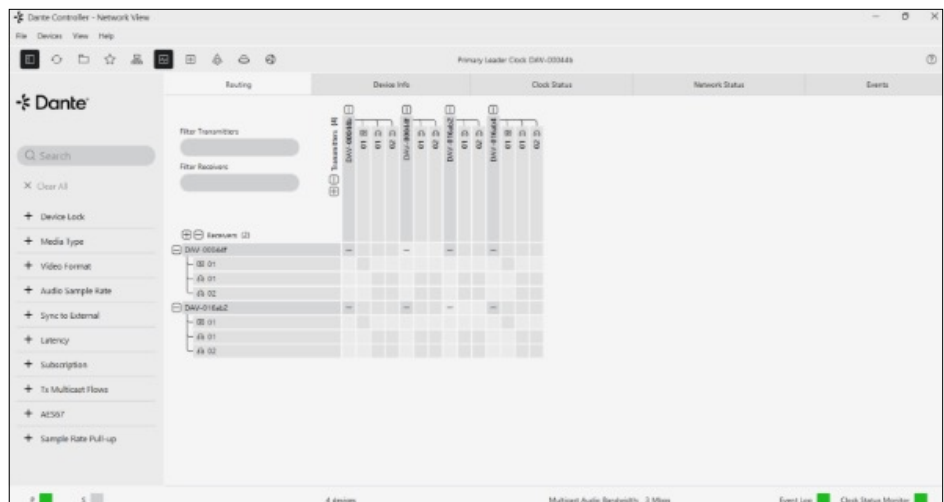
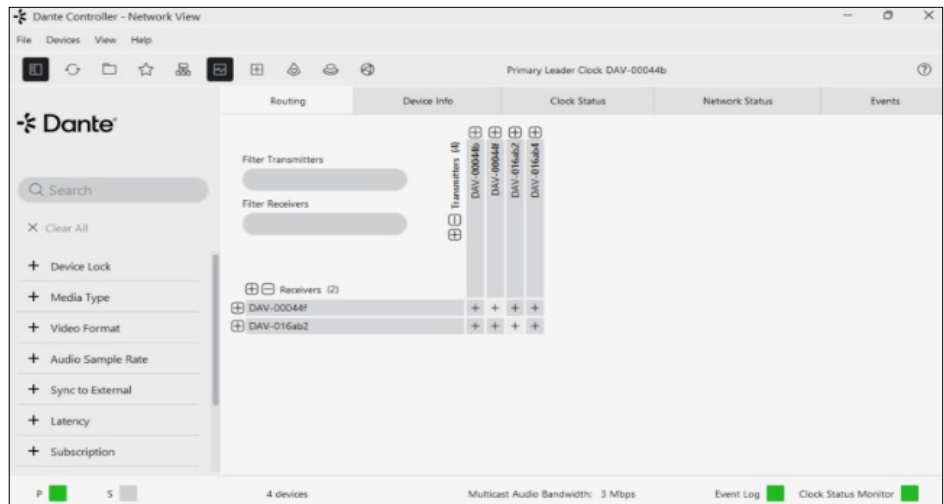
Connect the EVOIPTX2 and EVOIPRX2 devices to the Dante network. Transmitters (ENC) and receivers (DEC) are factory defaulted as DHCP. If there is a DHCP server (router) in the network, ENC and DEC IP addresses will be assigned by the DHCP server. If there is no DHCP server in the network, ENC and DEC will have IP addresses of 169.254.XXX.XXX which meets APIPA (Automatic Private IP Addressing) protocol and IP conflict can be avoided.

Open Dante Controller, and the transmitter and receivers will automatically show up within the interface. Note that the receivers are also listed as transmitters. This is due to the audio input capabilities that are present on the receivers to route audio back to the transmitters as needed.

Click on the + signs to expand the audio and video options for each device.

Video is represented by 

Audio Channels are represented by 



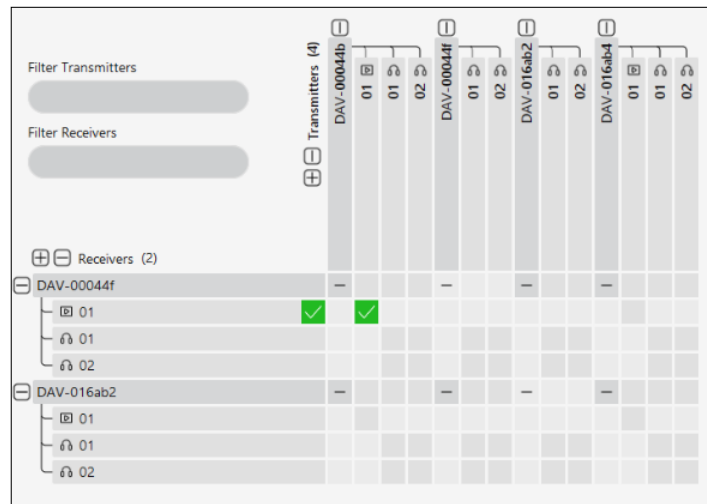
To create a subscription to switch audio and/or video, simply click on the box within the matrix that corresponds to the action you want to achieve. The example below shows the video from transmitter ending in 44b is being subscribed to the receiver ended in 44f.



represents a successful subscription



represents a failed subscription (hover over the icon with the mouse cursor for information)

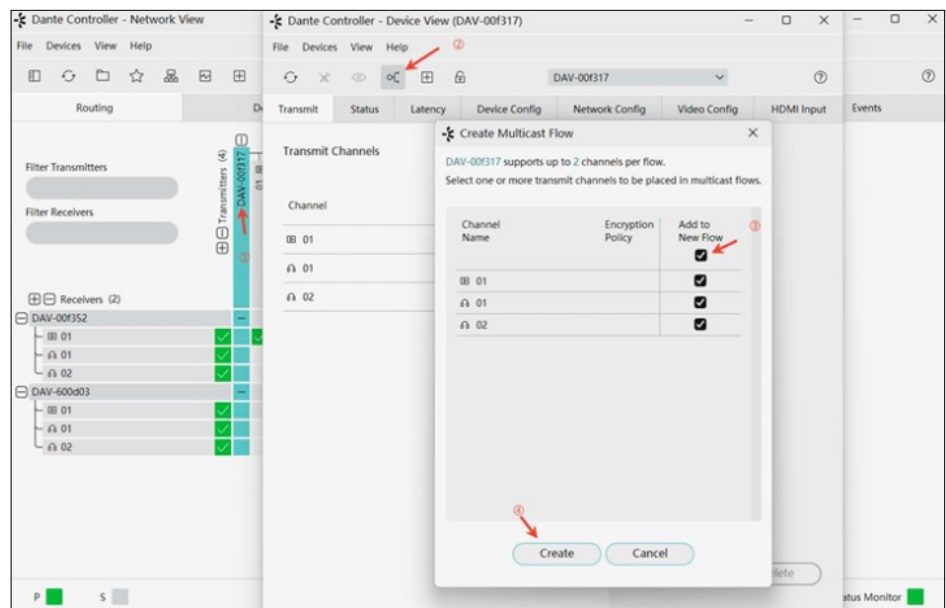


Note: Audio and video are routed INDEPENDENTLY by default

2.3 Creating a Multicast Flow

By default, Dante is unicast (point to point). To have an audio or video source subscribed to multiple clients, would need to create a multicast flow.

1. Double click or select the source/transmitter you want to have go to multiple receivers/channels
2. Select the menu option to create a multicast flow
3. Check all (video and audio channels) or specific content for the multicast flow
4. Select **Create**. The TX and RX will reboot automatically and the changes will take effect once they are back online.

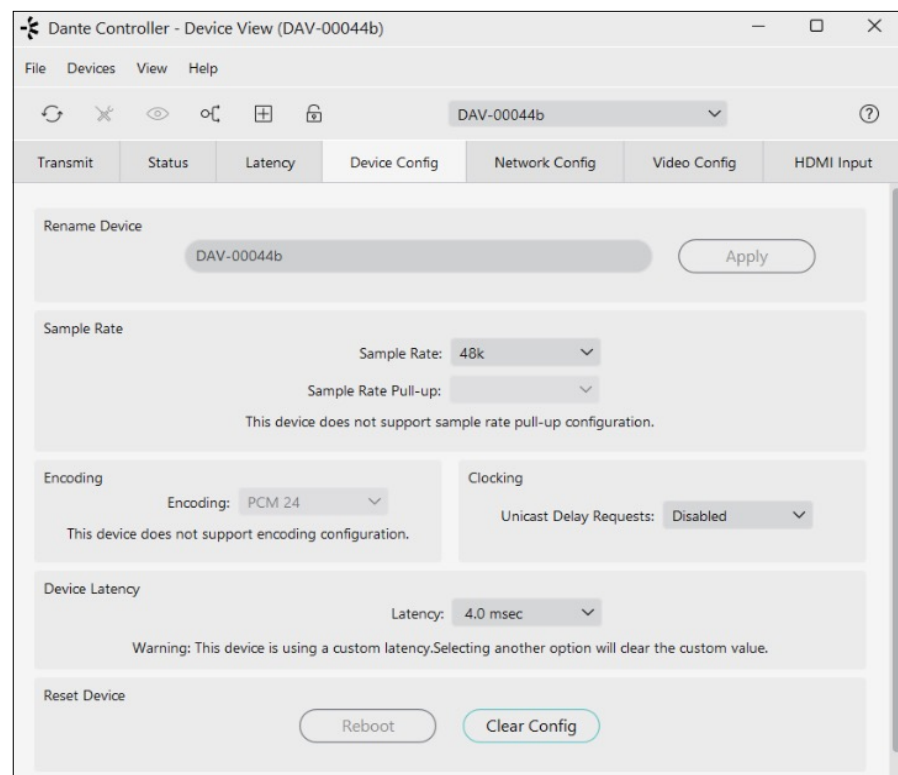
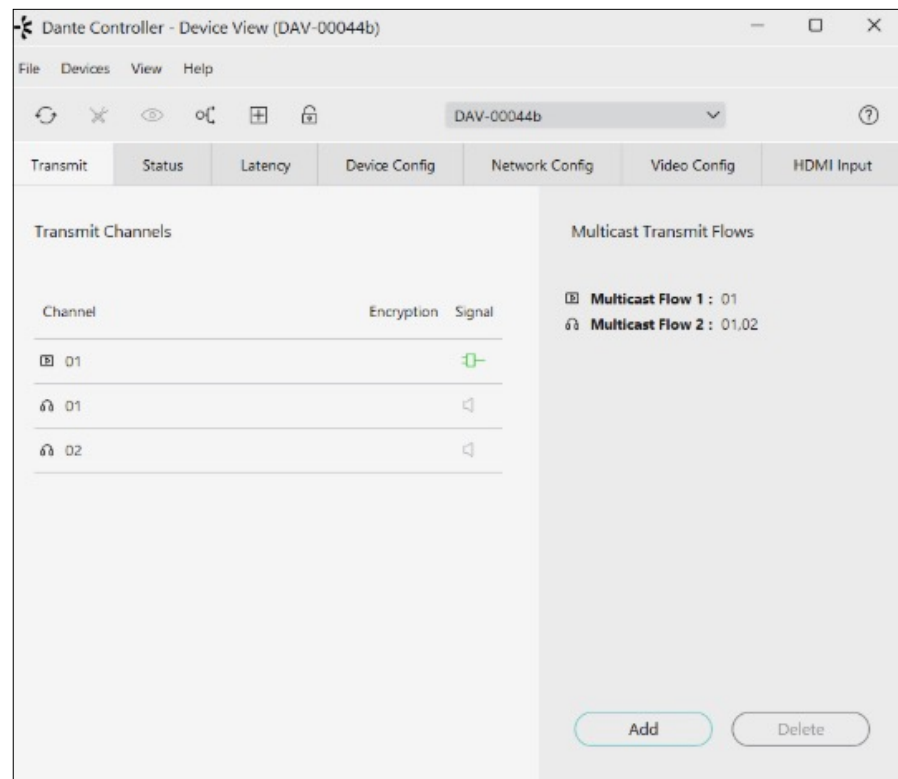


2.4 View and Edit Transmitter Settings

To change the name and settings of the transmitter, double-click or select the transmitter you would like to edit, and a window opens up that provides multiple options to view the status, latency, device and network configuration of the device, as well as video settings.

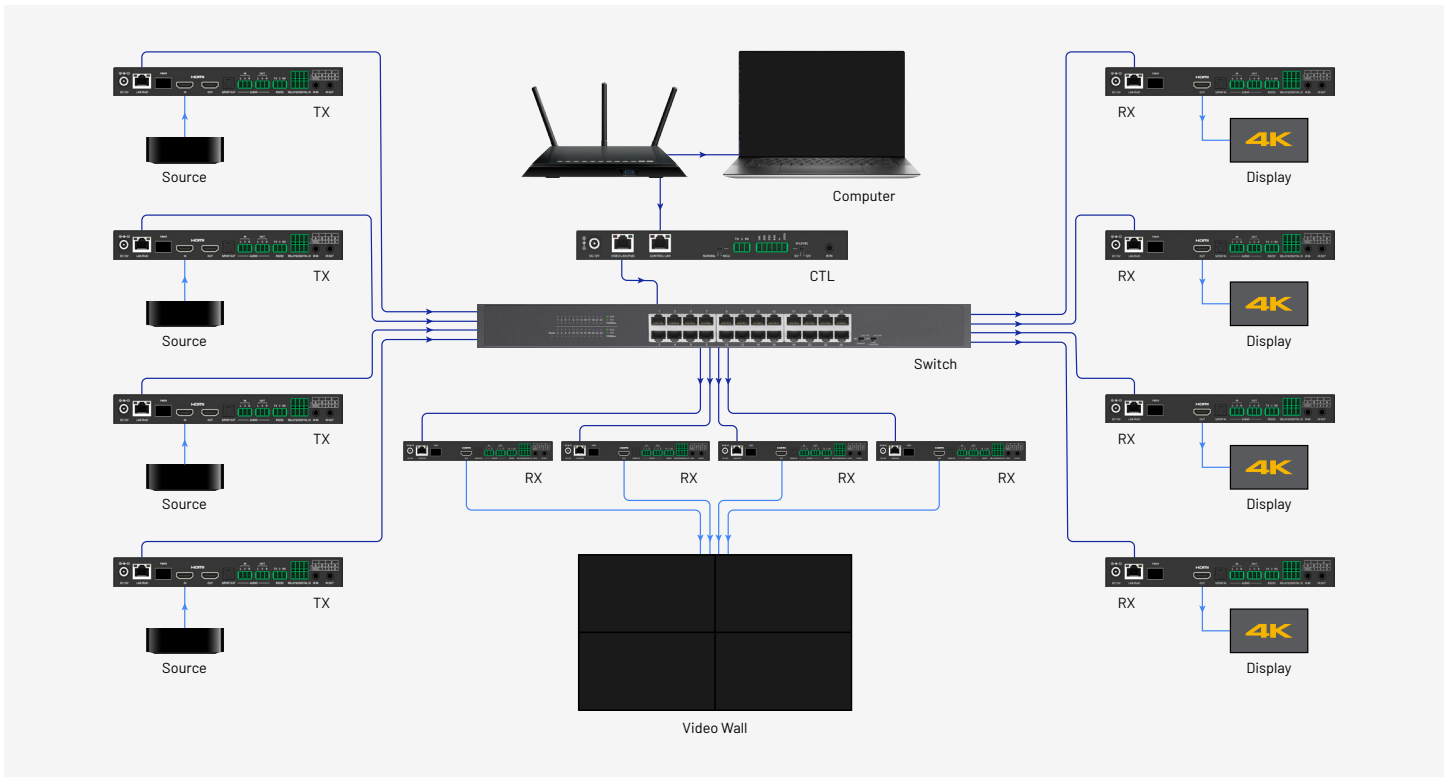
- **Transmit tab:** allows you to manually add flows of audio and video
- **Device configuration:** allows you to change the name of the transmitter, sample rate for audio, clocking, and latency.

Note: If audio sampling rate is changed, the unit(s) will reboot automatically for the changes to take effect. If the Sample Rate is of the HDMI input is NOT consistent, there will be no audio output.



Hybrid Setup

Section 3.0



3.1 Connection Diagram

Below is a basic setup and use of EVOIPCTL2, EVOIPTX2, and EVOIPRX2 devices within the Dante ecosystem. It is HIGHLY recommended to visit <https://www.getdante.com/resources/> for additional information regarding additional and advanced use of Dante Controller.

When using the EVO-IP 2.0 devices solely with Dante Controller for audio and video setup and control, please take note of the following:

- The EVOIPCTL2 is needed for setup or control of video functionality and features
- Dante AV-A allows for simple switching of audio signals through Dante Controller
- Connection and control through Dante Controller would require a LAN connection with an IP address within the 169.254.x.x subnet (255.255.0.0)
- Default audio sampling rate of Dante PCM is 48KHz.
- Link to download Dante Controller can be found here:
 - Windows: <https://my.audinate.com/content/dante-controller-v415010-package-windows>
 - Mac: <https://my.audinate.com/content/dante-controller-v41509-package-apple-silicon>

3.2 Setting Up EVO-IP 2.0 Transmitters and Receivers through the EVOIPCTL2 UI

Initially have both Video Lan and Control Lan ports on the EVOIPCTL2 connected with the Video Lan going to the managed switch with the EVOIPTX2/ RX2 units, and Control Lan going to the computer or external network.

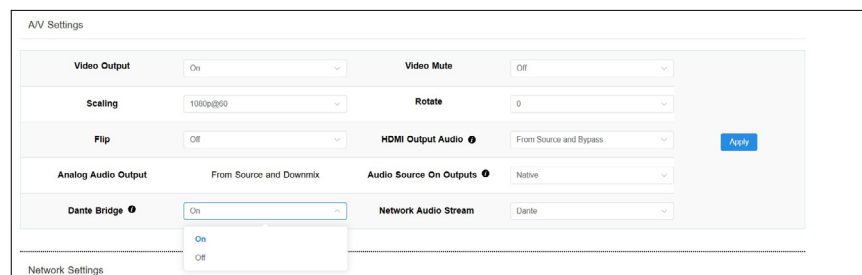
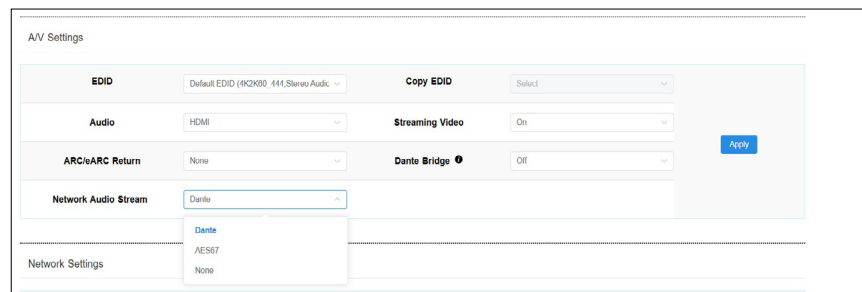
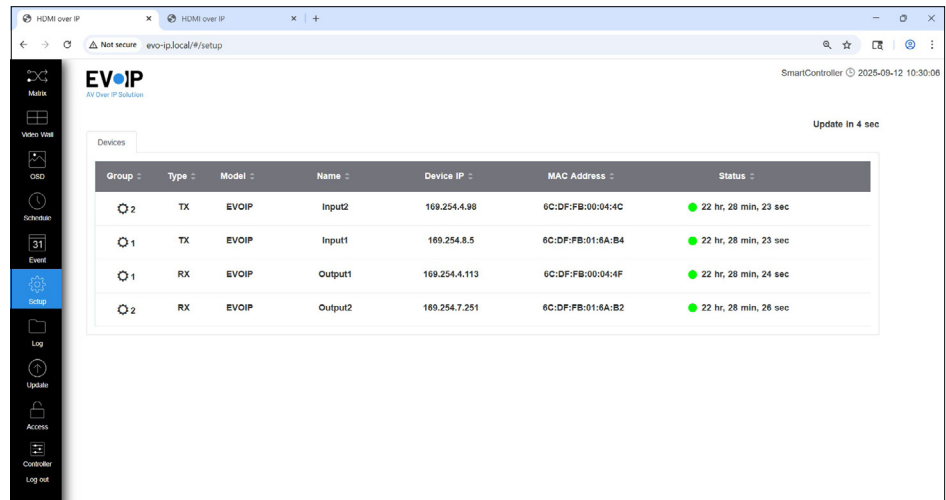
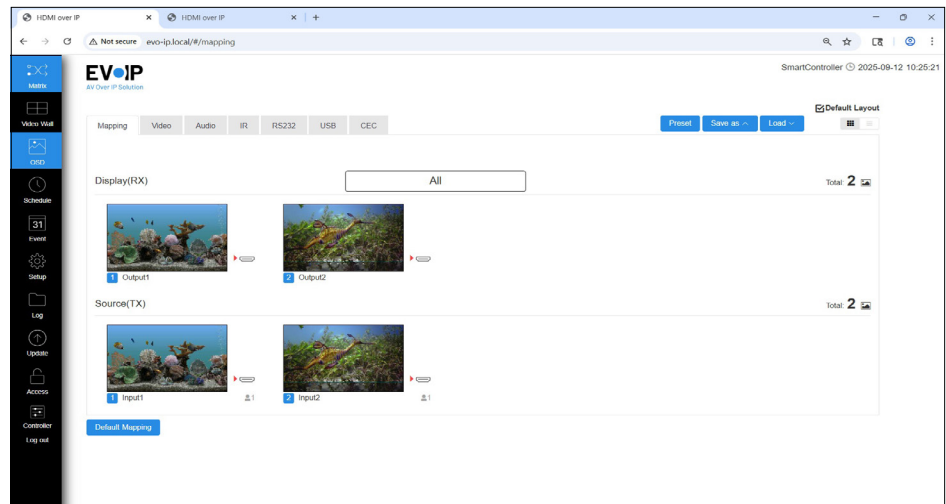
In a browser of a computer connected to the same network as the Control Lan, type in evo-ip.local or the EVOIPCTL2 IP address and login.

Once logged in, go to the **Setup** tab, touch or roam your mouse over a transmitter, and click on the **pencil** icon to go into device settings.

Within the A/V Settings, click on or select the **Dropdown** menu for Network Audio Stream and make sure Dante is selected, and click **Apply** for each transmitter being used with Dante for audio. The transmitter will automatically reboot with the changes taking effect.

After all transmitters are configured, within the **Setup** tab, touch or roam your mouse over a receiver, and click on the **pencil** icon to go into device settings. Within the A/V Settings, click on the **Dropdown** menu for **Audio Source on Outputs** and select **Dante**, then click **Apply**.

Note: The Native option allows the RX to subscribe the EVO-IP audio stream onto the HDMI Output and analog audio output



3.2.1 Audio Stream Options

Within the Network Audio Stream options, there are 3 options:

1. **Dante:** Set to enable Dante function.

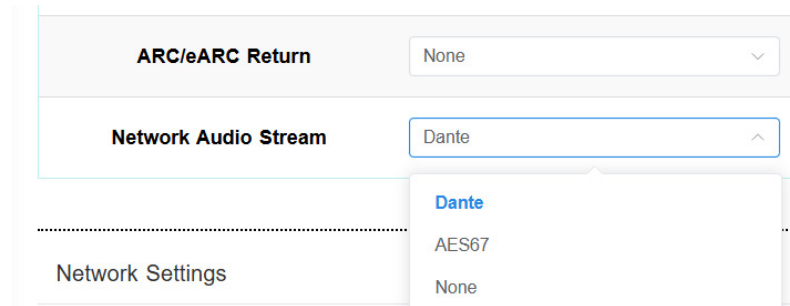
Note: The factory default setting of "Network Audio Stream" is Dante.

2. **AES67:** Set to enable AES67 function.

Note: AES67 function and Dante function are mutually exclusive. After selecting AES67, there will be no Dante receiver device shown in Dante Controller. EVO-IP only implements TX HDMI IN audio or analog audio IN as AES67 audio source (AES67 Transmitter) shown in DC which can be used together with the 3rd party AES67 Receivers.

3. **None:** Turn off Dante function and AES67 function.

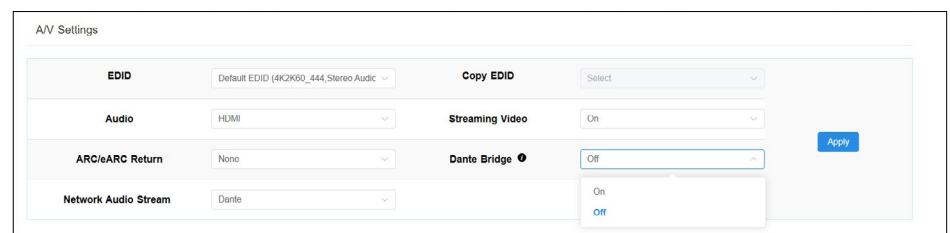
Note: Select the corresponding function and click the "Apply" button, the device will automatically reboot to take effect.



3.2.2 Dante Bridge

Audio is not always one way from a source to display or sink. The Dante Bridge allows transmitters and receivers to have audio routed from the display or sink, to the source end as well. If this is needed within your setup, make sure the Dante Bridge is ON within the transmitter and receiver A/V Settings. Once the setting has been applied, the device will automatically power cycle.

Note: Default setting for TX is OFF while the default setting for the RX is ON



3.3 Setting Up EVO-IP 2.0 Transmitters and Receivers within Dante

1. Connect the EVOIPTX2 and EVOIPRX2 devices to the Dante network.
2. Open Dante Controller, and the transmitter and receivers will automatically show up within the interface.

Note: If the Dante Bridge setting is set to ON within the EVO-IP UI, then the transmitters will ALSO show up in the list of receivers within Dante Controller, and the receivers will show up in the list of transmitters within Dante Controller to allow for audio to be routed from the sink end, to the source end as well.

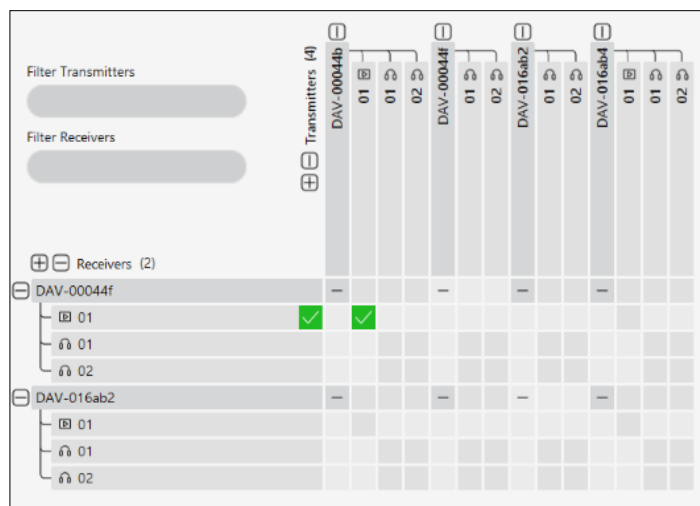
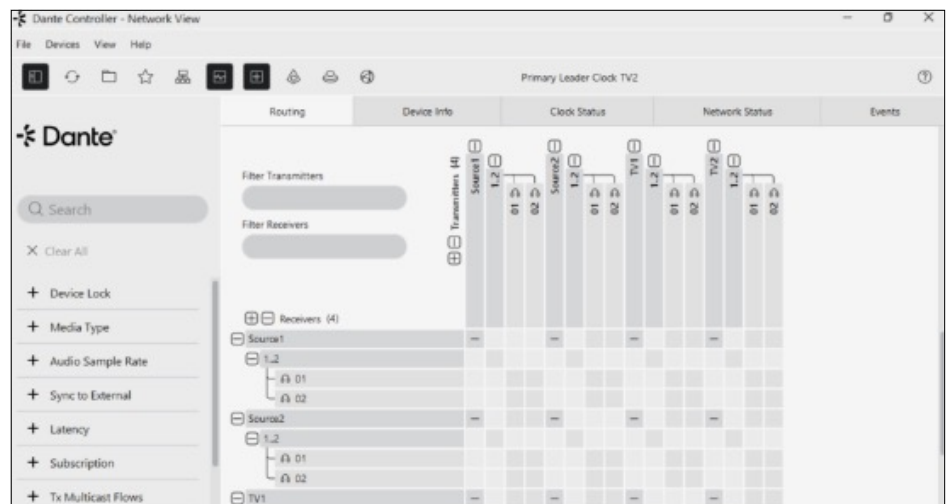
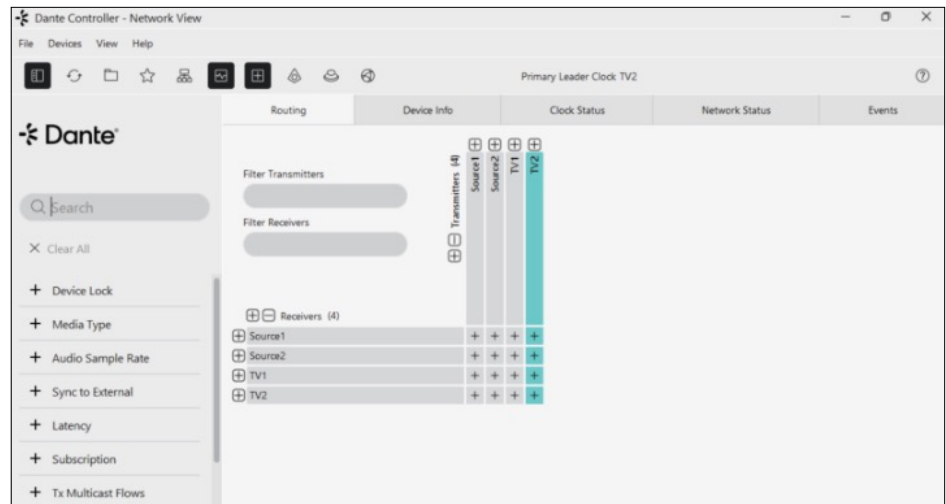
3. Click on the + signs to expand the audio and video options that are available for each device.

Note: Audio Channels are represented by 

4. To create a subscription to switch audio and/or video, simply click on the box within the matrix that corresponds to the action you want to achieve. The example below shows the video from transmitter ending in 44b is being subscribed to the receiver ended in 44f

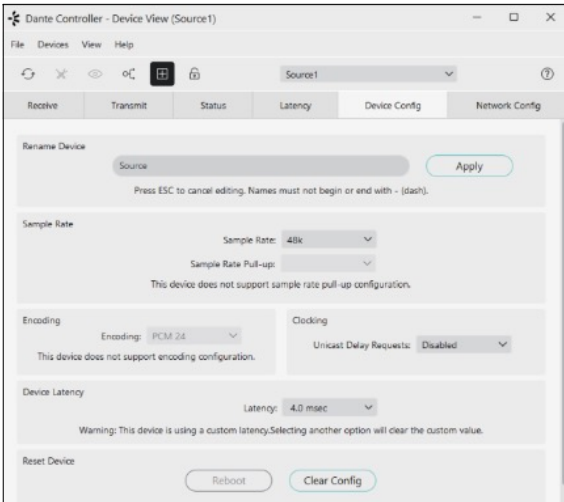
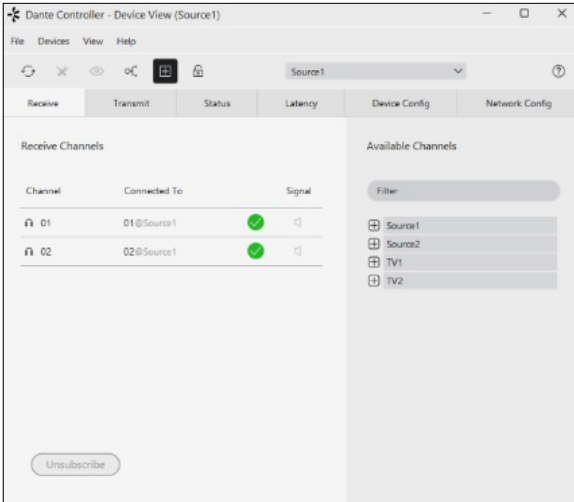
 represents a successful subscription

 represents a failed subscription (hover over the icon with the mouse cursor for information)



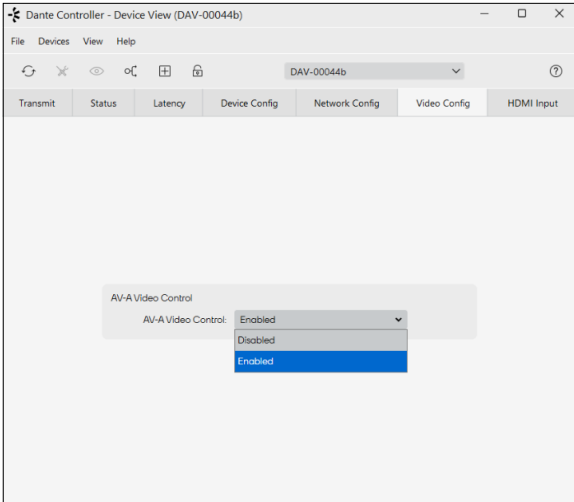
3.3.1 View and Edit Transmitter Settings

To change the name and settings of a transmitter or receiver, double-click or select the receiver you would like to edit, and a window opens up. Flows and subscriptions for the transmitter(s) and receiver(s) can be shown, as well as the status and ability edit any subscriptions and functionality.



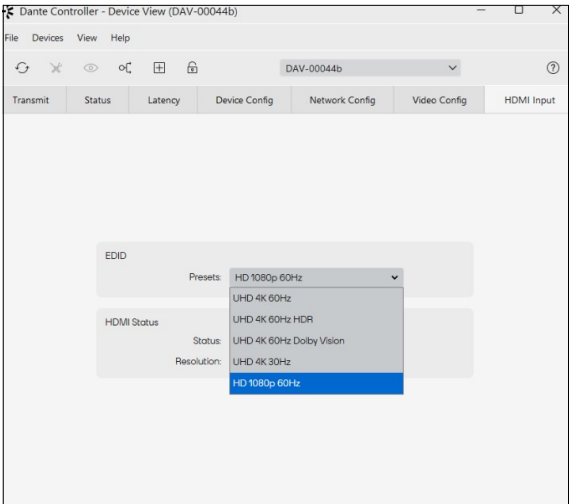
Video Configuration

Allows you to enable or disable video control within Dante Controller



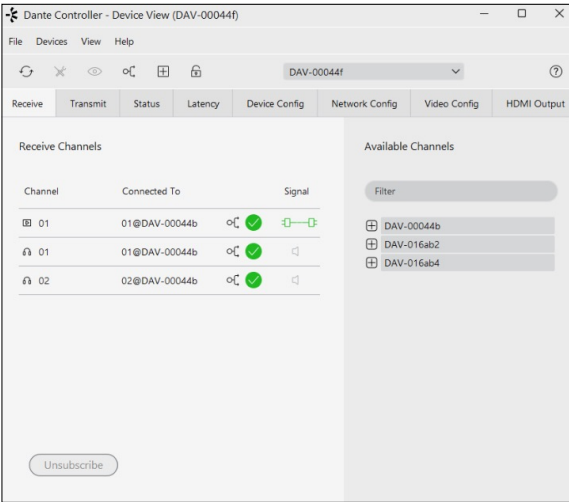
HDMI Input

View and change EDID settings for the transmitter when connected to a HDMI source.



3.3.2 View and Edit Receiver Settings

To change the name and settings of the receiver, double-click or select the receiver you would like to edit, and a window opens up that provides multiple options to view the status, latency, device and network configuration of the device, as well as video settings. Since the receiver has the ability to not only receive audio and video signals, but also transmit audio, there are tabs to show the status and edit any subscriptions and functionality. Otherwise, the receiver settings within Dante Controller largely follow that of the transmitter settings.



Network Setup

Section 4.0

4.1 Modify Single TX/RX Network Configurations

DHCP mode: Transmitters (ENC) and receivers (DEC) by factory default are DHCP. In this mode, if there is a DHCP server (router) in the network, the ENC and DEC IP addresses will be assigned by the DHCP server. If there is no DHCP server in the network, ENC and DEC will have IP addresses of 169.254.XXX.XXX which meet APIPA (Automatic Private IP Addressing) protocol and can any potential IP conflicts

Static IP mode: If you want to change ENC and DEC to use STATIC IP mode, you need to change the settings in Controller UI under the Settings menu:

- 1. Change DHCP to Off.
- 2. Set IP Address/Subnet Mask/Gateway in "Video Network" section.
- 3. Set IP address ranges for TX's and RX's.

Note: The IP address ranges must be in the same network segment as "Video Network", because TX & RX are managed and controlled by the controller through Video Network port.

You can modify ENC/DEC network configurations within the EVO-IP 2.0 UI by going to:

- 1. Setup>Devices (TX or RX listed)>Network Settings section:
- 2. If IP Mode is set to DHCP, the IP Address/Subnet Mask/Gateway cannot be modified.
- 3. If IP Mode is Static, the IP Address/Subnet Mask/Gateway can be modified.

Video Network

Apply

DHCP Off

IP Address 169.254.8.100

Subnet Mask 255.255.0.0

Gateway 169.254.8.1

TX and RX IP Addresses Range Settings

TX IP Addresses From 169.254.100.1 To 169.254.103.255

RX IP Addresses From 169.254.200.1 To 169.254.203.255

Network Settings

IP Mode DHCP

IP Address 169.254.4.145

Network Settings

IP Mode Static

IP Address 169.254.4.145

4.2 EVO-IP 2.0 Device Network Status

For ENC/DEC devices there are 4 different states:

- **Green:** The device is online and is able to be controlled
- **Gray:** The device is offline and is not able to be controlled (for example, if the device is power off).
- **Yellow:** The IP address of the device is not in the same network segment as the Video Network which means it is not able to be controlled, and you need to manually modify the IP settings of the device to regain control.
- **Red:** The IP address of the device conflicts with other devices in the network, is not able to be controlled. You need to manually modify their IP settings to regain control.

Note: The IP mode of a TX or RX by default will change according to whether DHCP is On/Off within the settings of the Controller UI Video Network. If it is not in the factory default state, it will not.

Devices						
Group	Type	Model	Name	Device IP	MAC Address	Status
1	TX	EVOIP	TX_6CDFFB085B0B	192.168.10.121	6C:DF:FB:08:5B:0B	7 min, 3 sec
2	TX	EVOIP	TX_6CDFFB085B08	192.168.10.208	6C:DF:FB:08:5B:08	7 min, 2 sec
0	RX	EVOIP	RX_6CDFFB10C373	169.254.7.91	6C:DF:FB:10:C3:73	4 min, 17 sec
0	RX	EVOIP	RX_6CDFFB0D13BA	192.168.10.200	6C:DF:FB:0D:13:BA	7 min, 2 sec

4.3 Control & Video Network

4.3.1 Control Network

The Control Network defaults to DHCP being ON. If there is a DHCP server (router) in the network, the IP address will be assigned by the DHCP server. In the event there is no DHCP server in the network and no IP is allocated for more than 30 seconds, address resolution protocol (ARP) will check to see if the address 192.168.6.100 exists in the network. If it does not exist, it will use 192.168.6.100 as the address for the Control Network port. If the address exists, then it will continue to check IP addresses until an available address is found (ex: 192.168.6.101,192.168.6.102, etc).

While in DHCP mode, URL [evo-ip.local](#) can be used to access the EVO-IP 2.0 UI because the IP address could be dynamically changed by DHCP server.

While in STATIC IP mode, you will need to manually set the Control Network IP address/subnet/gateway. This will allow you to access the EVO-IP UI using the known IP address, or [evo-ip.local](#).

Control Network		Apply	
DHCP	Off	Subnet Mask	255.255.255.0
IP Address	192.168.70.104	Gateway	192.168.70.1

4.3.2 Video Network

The Video Network defaults to DHCP being ON. If there is a DHCP server (router) in the network, the IP address will be assigned by the DHCP server. In the event there is no DHCP server in the network and no IP is allocated for more than 30 seconds, automatic private IP addressing (APIPA) will generate an IP (169.254.xxx.xxx) for Video Network port.

While in DHCP mode, URL [evo-ip.local](#) can be used to access the EVO-IP 2.0 UI because the IP address could be dynamically changed by DHCP server.

While in STATIC IP mode, you will need to manually set the Video Network IP address/subnet/gateway. This will allow you to access the EVO-IP UI using the known IP address, or [evo-ip.local](#).

Video Network

Apply

DHCP

Off

Subnet Mask

IP Address

169.254.8.67

Gateway

TX and RX IP Addresses Range Settings

TX IP Addresses From

169.254.100.1

To

169.254.103.255

4.3.3 Address and DNS Settings

While in the **Controller UI**, DNS server settings can be adjusted accordingly based on the scenario you need to use to allow for connection to the vanco.io cloud server.

Default (DHCP Control and Video Networks)

- **Control Network:** DHCP set to On and connected to a router with internet
- **Video Network:** DHCP set to Off

Default Settings

- Cloud Access: select **Control Network**
- DNS Server: **Obtain DNS server address automatically**
- Preferred DNS Server: show the preferred DNS obtained from the router
- Alternate DNS Server: show the alternate DNS obtained from the router

The screenshot shows the 'Address and DNS Settings' page in the EVO-IP Controller UI. The interface is divided into several sections: General Settings, Control Network, Video Network, TX and RX IP Addresses Range Settings, and DNS Settings. The DNS Settings section is highlighted with a red box. In this section, 'Cloud Access' is set to 'Control Network', 'DNS Server' is set to 'Obtain DNS server address automatically', and 'Preferred DNS server' is set to '202.96.134.133'. The 'Alternate DNS server' is set to '202.96.128.86'.

Static (Control and Video Networks)

- **Control Network:** DHCP set to Off and connected to a router with internet
- **Video Network:** DHCP set to Off

Default Settings

- Cloud Access: select **Control Network**
- DNS Server: select **Use the following DNS server address**
- Preferred DNS Server: set the preferred DNS
- Alternate DNS Server: set up a backup DNS (optional)

The screenshot shows the 'Address and DNS Settings' page in the EVO-IP Controller UI. The interface is divided into several sections: General Settings, Control Network, Video Network, TX and RX IP Addresses Range Settings, and DNS Settings. The DNS Settings section is highlighted with a red box. In this section, 'Cloud Access' is set to 'Control Network', 'DNS Server' is set to 'Use the following DNS server address', and 'Preferred DNS server' is set to '202.96.134.133'. The 'Alternate DNS server' is set to '202.96.128.86'.

Cloud Through Video Network LAN Only

Used for Hybrid EVO-IP and Dante setup.

- **Control Network:** LAN not connected
- **Video Network:** DHCP set to On (router with internet connected to the switch)

Default settings

- Cloud Access: select **Video Network**
- DNS Server: select **Obtain DNS server address automatically**
- Preferred DNS Server: Not required
- Alternate DNS Server: Not required

The screenshot displays the EVO-IP Network Setup User Interface. The interface is organized into sections for different network configurations. On the left, a sidebar contains navigation links: Settings, Time, Cloud, User, and Log out. The main content area is divided into four sections: Control Network, Video Network, TX and RX IP Addresses Range Settings, and DNS Settings. Each section has an 'Apply' button. The Control Network section shows DHCP set to 'On', IP Address '192.168.70.108', Subnet Mask '255.255.255.0', and Gateway '192.168.70.1'. The Video Network section shows DHCP set to 'On', IP Address '192.168.10.66', Subnet Mask '255.255.255.0', and Gateway '192.168.10.1'. The TX and RX IP Addresses Range Settings section has fields for TX IP Addresses From, To, RX IP Addresses From, and To. The DNS Settings section has Cloud Access set to 'Video Network', Dns Server set to 'Obtain DNS server address automatically', Preferred DNS server '8.8.8.8', and Alternate DNS server '192.168.10.1'.