SDVoE Controller

User Manual ***English***

No. 38364

lindy.com

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Safety Instructions



! WARNING !

Please read the following safety information carefully and always keep this document with the product.
Failure to follow these precautions can result in serious injuries or death from electric shock, fire or damage to the product.
Touching the internal components or a damaged cable may cause electric shock, which may result in death.
This device is a switching type power supply and can work with supply voltages in the range 100 - 240 VAC For worldwide usability four different AC adapters are enclosed: Euro type, UK type, US/Japan type and Australia/New Zealand type. Use the appropriate AC adapter as shown in the picture and ensure it is firmly secured in place and does not detach by pulling before installing into a power socket.
To reduce risk of fire, electric shocks or damage:

- Do not open the product nor its power supply. There are no user serviceable parts inside.
- Only qualified servicing personnel may carry out any repairs or maintenance.
- Never use damaged cables.
- Do not expose the product to water or places of moisture.
- Do not use this product outdoors it is intended for indoor use only.
- Do not place the product near direct heat sources. Always place it in a well-ventilated place.
- Do not place heavy items on the product or the cables.
- Please ensure any adapters are firmly secured and locked in place before inserting into a wall socket

Instructions for Use of Power Supply

To connect the adapter
Slide the desired plug adapter into the power supply until it locks into place.



To remove the adapter
Press the push button latch.
While pressed, remove the adapter.

Introduction

Thank you for purchasing the SDVoE Controller. This product has been designed to provide trouble free, reliable operation. It benefits from both a LINDY 2-year warranty and free lifetime technical support. To ensure correct use, please read this manual carefully and retain it for future reference.

SDVoE is a globally recognised standard for high quality distribution of AV content with other features, including control, matrix, video wall and multi view over longer distances via 10G Network with no compressions and latency.
This Controller can be used to manage the Lindy SDVoE Transceiver 38365 that features HDMI, USB, IR, RS-232 and Audio signals to distribute all the signals through a 10G managed network switch and to set up many configurations and layouts. It supports dual network ports, one for network control and one for multicast video distribution.
It provides control via Web GUI, TCP, RS-232, IR & GPIO.

SDVoE Alliance® is a registered trademark and SDVoE™ and SDVoE API™ are trademarks of the SDVoE Alliance.

Package Contents

- SDVoE Controller
- IR Emitter Cable, 1.5m
- IR Receiver Cable, 1.5m
- 2 x Mounting Ears & 4 x Screws
- 2 x 3-Pin Terminal Block
- 6-Pin Terminal Block
- 12VDC 1A Multi-country Power Supply (UK, EU, US & AUS), Screw Type DC Jack: 5.5/2.1mm
- Lindy Manual

Features

- Supports video, audio, RS-232, IR, KVM control and management of the distributed system
- Maximum point-to-point Distance: 100m (328.08ft)
- PoE (Power over Ethernet) support on Video LAN port
- Built-in Web GUI control interface, supporting Drag & Drop operations and image preview
- Dual network ports to isolate Controls and Multicast networks
- Support LAN/RS-232 port control and third-party central control (API commands available on request)
- Support IR Control (20 – 60KHz) on IR IN 3.5mm port (12V)
- 4 channel GPIO control ports (5V/12V optional level)
- HTTPS, SSH, SFTP security compatible
- Screw Type DC Jack for a secure power connection

Specification

- Transmission distance: 100m
- Network Video Bandwidth: 1G
- PoE Standard: 802.3at
- Operating Temperature: 0°C - 40°C (32°F - 104°F)
- Storage Temperature: -20°C - 60°C (-4°F - 140°F)
- Relative Humidity: 20 - 90% RH (Non-condensing)
- Metal Housing
- Colour: Black
- Power Requirements: AC100-240V 50/60Hz
- Power Consumption: 8.4W

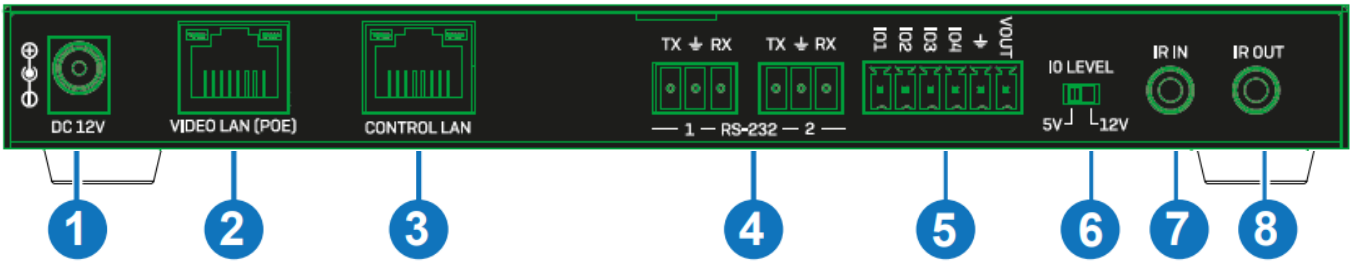
Installation

Front



1. RESET Button: Press and hold this button for 10 seconds when the unit is powered-on until the STATUS LED starts flashing to restore the default settings.
2. POWER LED: Indicates power.
3. STATUS LED: This will flash yellow/green every second until the unit boots up completely and control LAN is ready, then it will stay on.
4. UPDATE: Firmware update port (do not connect it while the unit is working).

Rear



1. DC 12V: Connect the 12VDC 1A PSU to an AC wall outlet and securely connector to the unit.
2. VIDEO LAN (PoE): Connect to the same Network Switch where all SDVoE Transceivers are connected using a single RJ-45 Cat.6 or above cable. The unit can be powered via PoE if the connected Switch has this feature.
3. CONTROL LAN: TCP/IP control network port.
4. RS-232: Connect one or two PC, Serial Controller or Serial device via two phoenix block 3-way connection for the pass-through transmission of RS-232 commands.
5. 6-Pin Phoenix Connector: 4 channel I/O level outputs, 1 channel ground, 1 channel power output (up to 12V 0.5A)
6. IO LEVEL: DIP Switch to control I/O level output and Voltage out; switch to left for 5V I/O level out, switch to right for 12V I/O level out.
7. IR IN: Connect the supplied IR Receiver cable for 12V IR signal reception.
8. IR OUT: IR signal output port (reserved for future use).

Please Note:

- As default the IP mode of the CONTROL LAN port is DHCP, the PC connected needs to be set to “Obtain an IP address automatically” mode and an optional DHCP server (for example a network router) is recommended in the system.
- If there is no DHCP server in the system, 192.168.0.225 will be used as the IP address of the CONTROL LAN port. Set the IP address of the PC in the same network segment (for example 192.168.0.88).

Operation

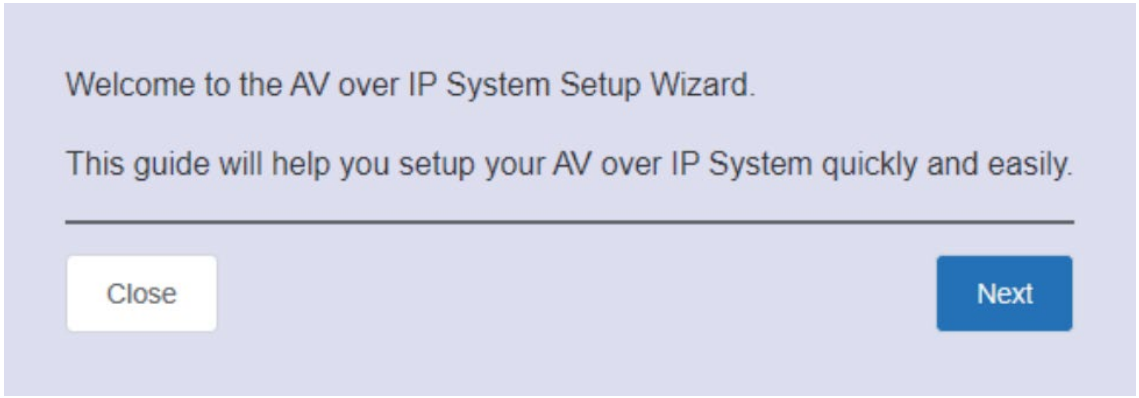
Web GUI

This Controller can be managed via the built-in Web GUI.
Please follow the below steps:

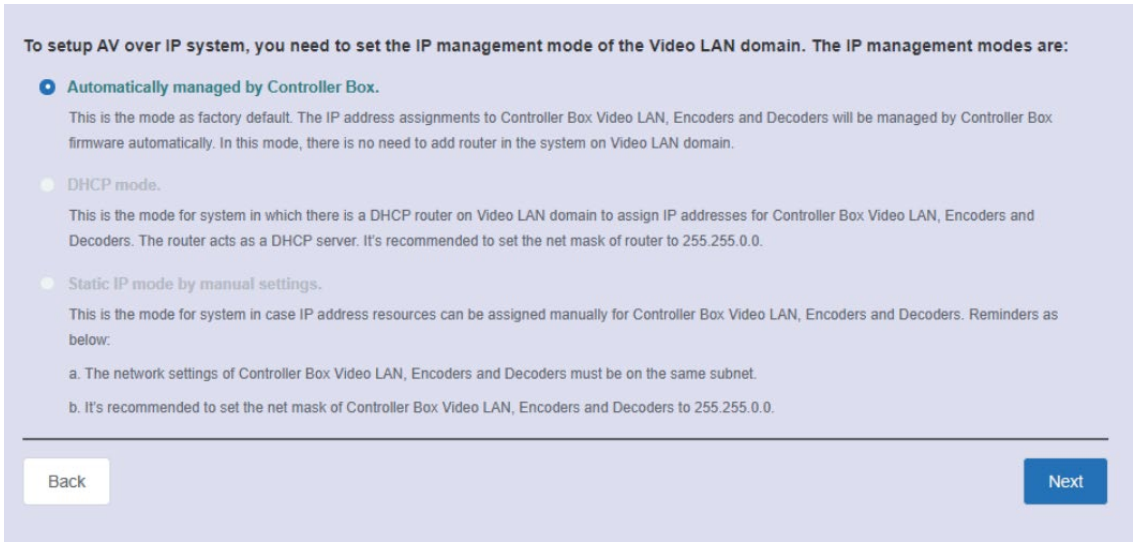
Input the Controller's default IP address (192.168.0.225) or the URL (http://controller.local) into the Web browser address bar on the PC to enter the Web GUI login interface:



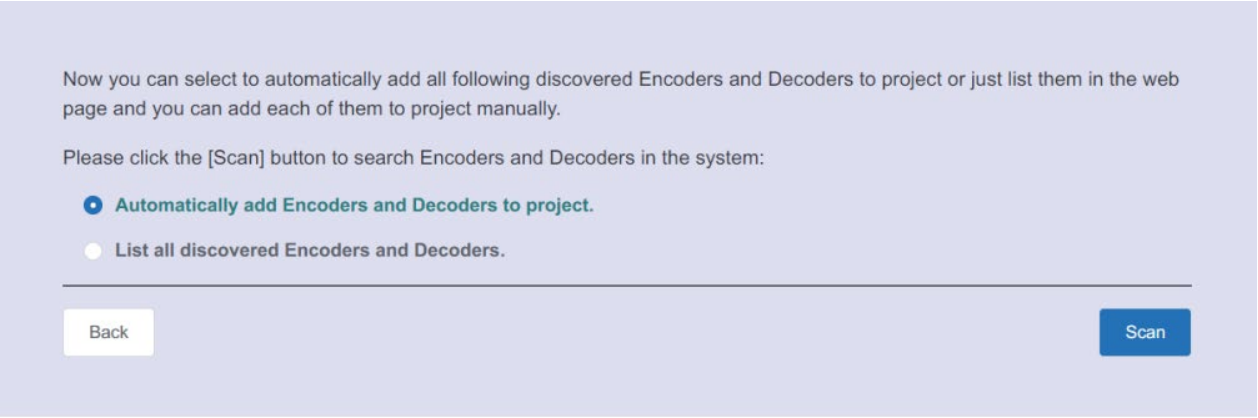
Select the default username (admin) and password (1234) on the above login interface. Then, click on **Log In** to enter the Web GUI interface. For the first time, you need to setup the project, as shown in the following picture:



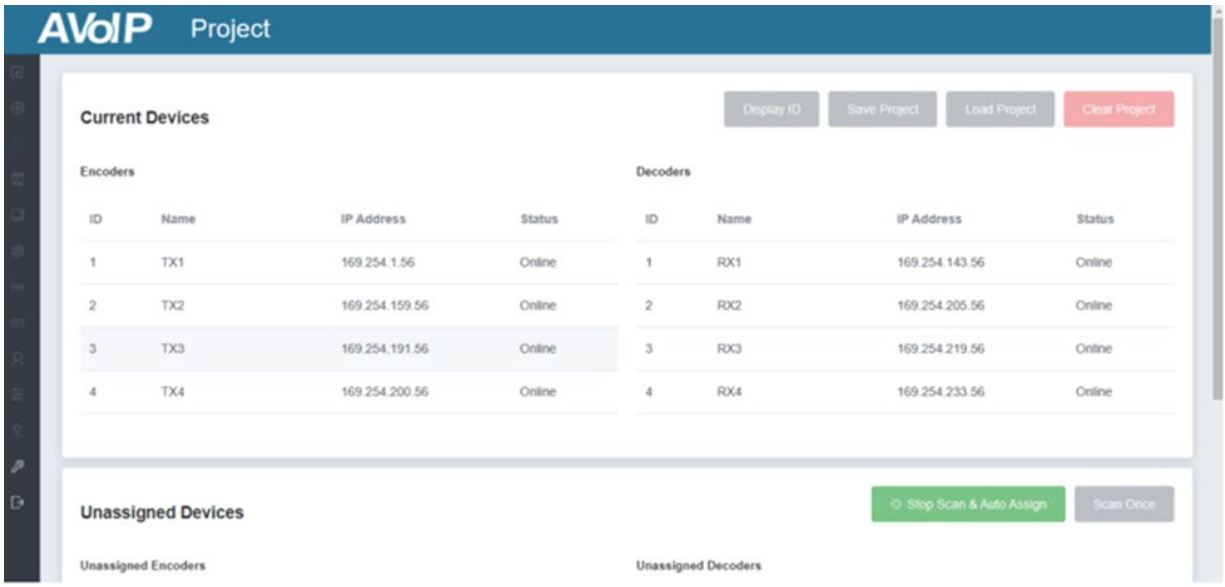
Click on **Close** button to load an existing project in the web page directly or click on **Next** button to go to the next step.



On this interface, you need to set the IP mode of Video LAN.
Automatically managed by Controller Box
Click on **Next** button and wait for the completion to enter the interface as shown below:

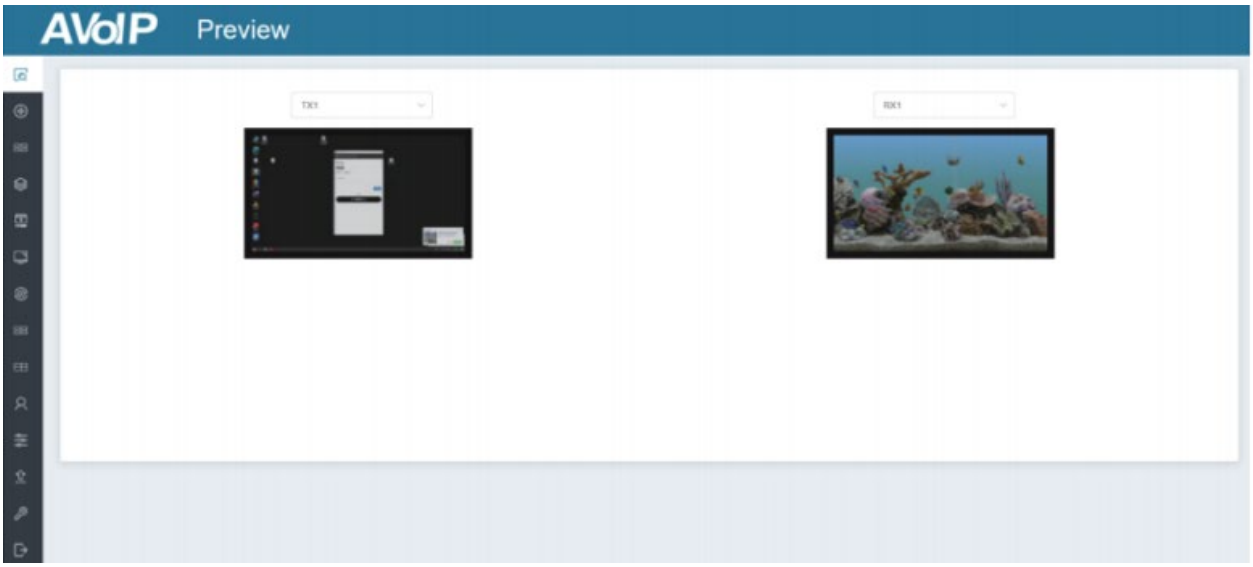


Select **Automatically add Encoders and Decoders to project** and click on **Scan** button to enter the Project page. All the connected devices will be listed in the **Current Devices** list.

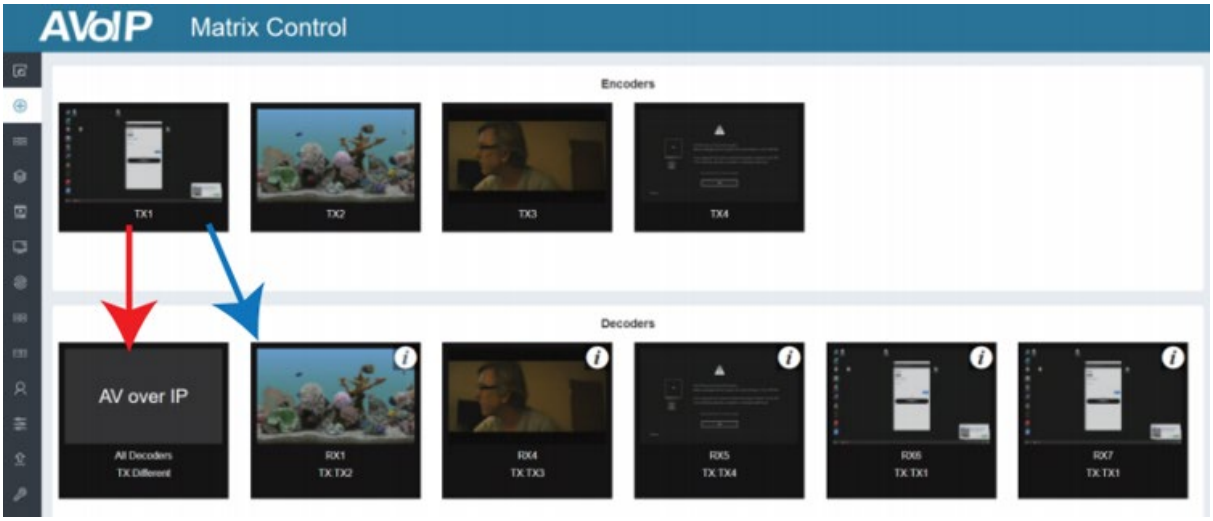


Then click on **Stop Scan & Auto Assign** to stop the search.

Preview Page
On this page is possible to see the preview of the Encoder/Decoder by clicking on the dropdown lists.

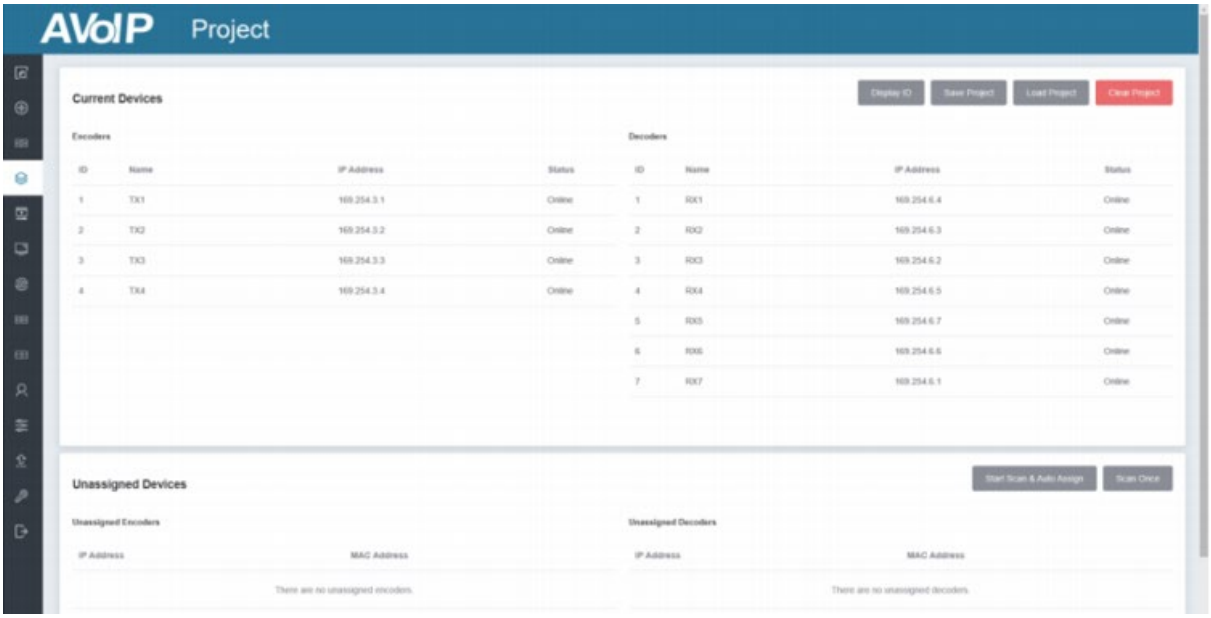


Matrix Control Page



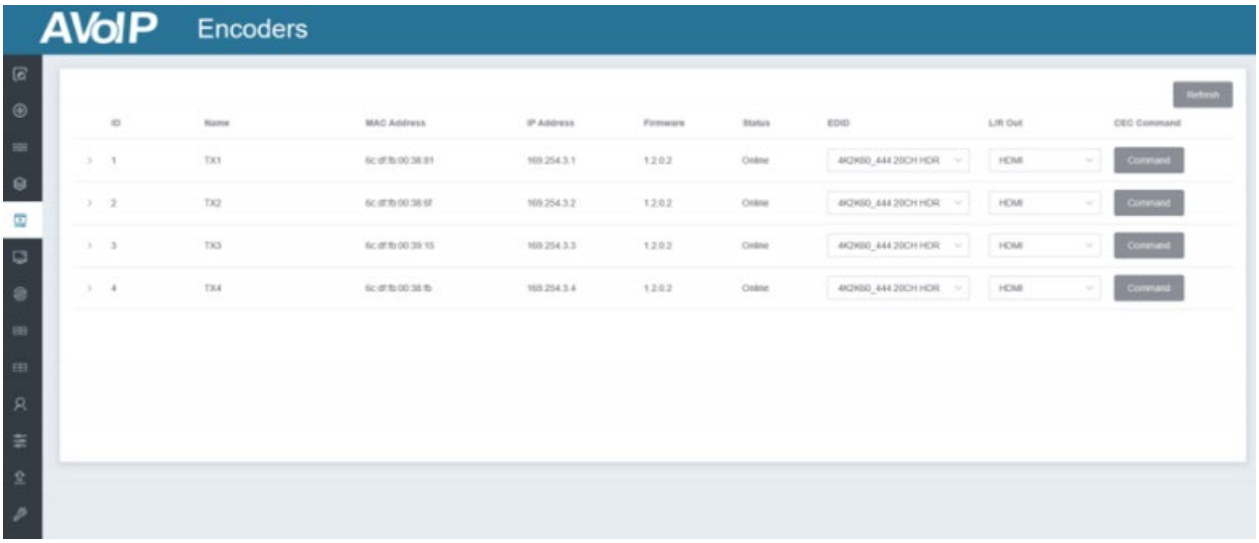
Encoders: Display all the connected Encoders. The text in the figure is the name of the device.
Decoders: Display all the connected Decoders. The text on the first line is the name of the Decoder and the text on the second line refers to the Encoder where the signal resource comes from.
If an Encoder shows “No Signal”, it means that the Encoder cannot be dragged. If there is an image on an Encoder, it means that the Encoder can be dragged. As shown in the figure above, if an Encoder is dragged to the place where the red arrow points to, all Decoders will share the same signal resource from this Encoder; if an Encoder is dragged to the place where the blue arrow points to, only the indicated Decoder can receive signals from this Encoder.

Project Page



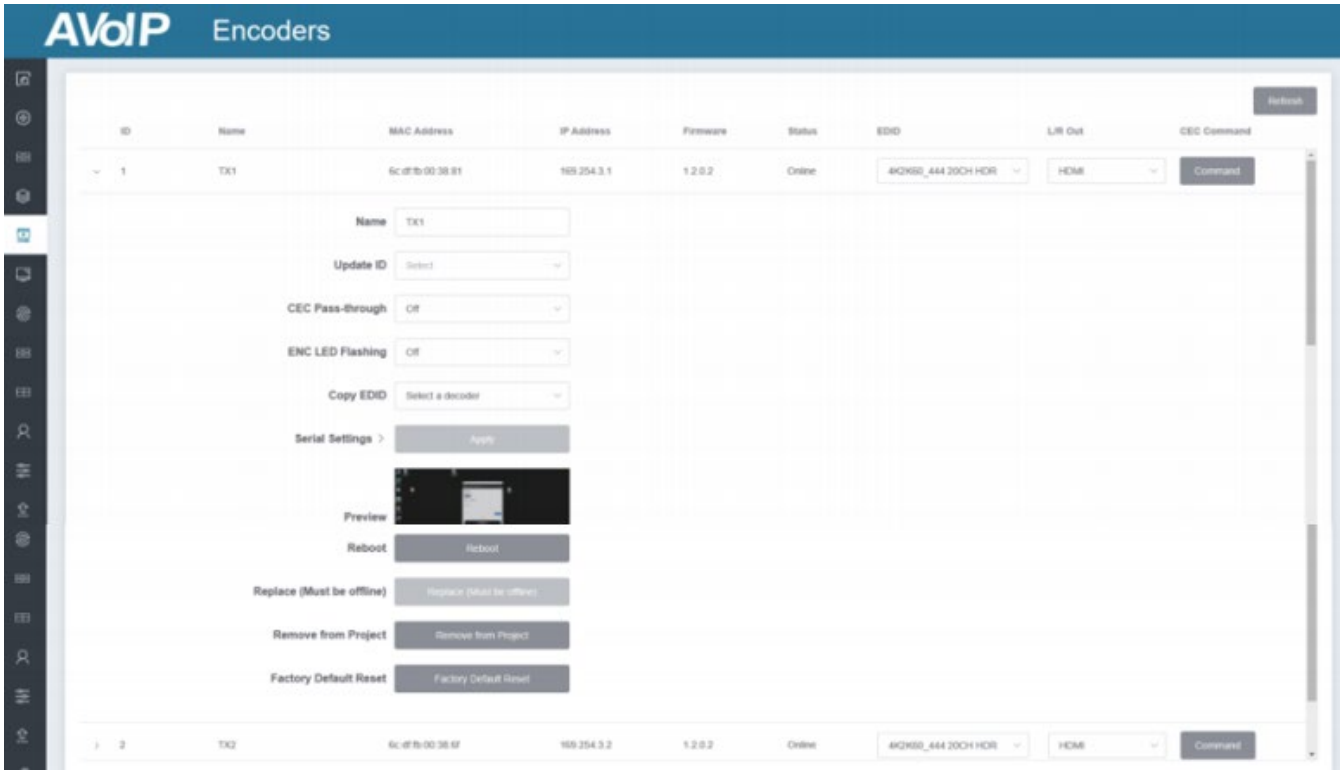
Current Devices: Devices that have been added to the current project.
Unassigned Devices: Devices not added to the current project.
Click on **Display ID** to display the ID or PATTERN of the Decoders.
Click on **Save Project** to save the project file (config_file.json) in order to use the saved project next time without scanning devices again.
Click on **Load Project** to load the existing project directly.
Click on **Clear Project** to clear the current project, then is needed to setup the project again.
Click on **Scan Once** to search devices that do not appear in the current project.
Click on **Start Scan & Auto Assign** to search new devices automatically and add them to the current project.

Encoders Page

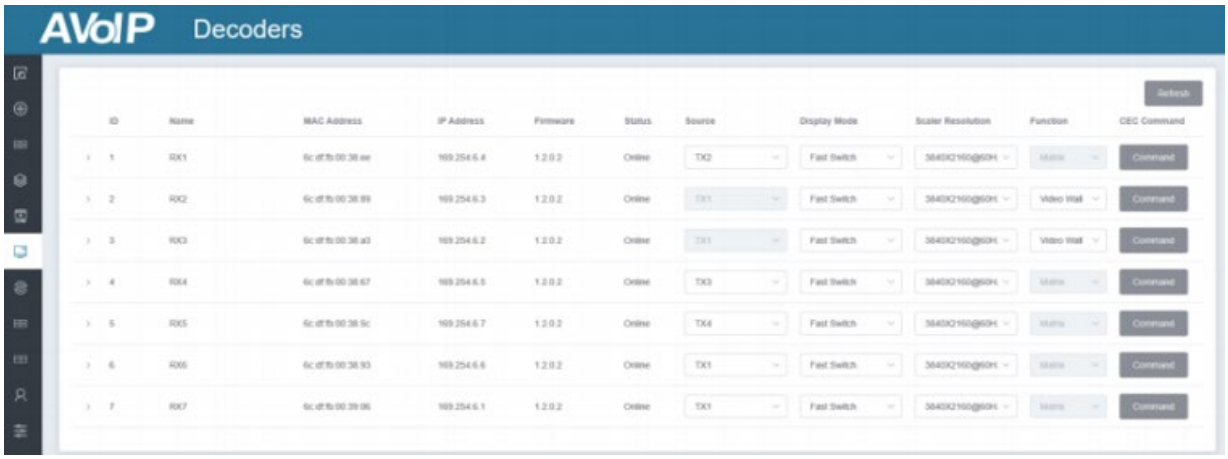


Click on **Refresh** to refresh the data of the current Encoders.
ID: Shows the ID of the current device* (Note: ID cannot be duplicated).
Name: Shows the name of the current device.
MAC Address: Shows the MAC Address of the current device.
IP Address: Shows the IP Address of the current device.
Firmware: Shows the Firmware version of the current device.
Status: Shows the status (**Online** or **Offline**) of the current device.
EDID: Shows the EDID of the current device.
Click on the drop-down list to set the current Encoder's EDID.
L/R Out: Shows the audio selection of the current device.
Click on the drop-down list to set the current Encoder's audio output.
CEC Command: Shows the CEC Command of the current device.
Click on **Command** to set the CEC command for the Encoder.

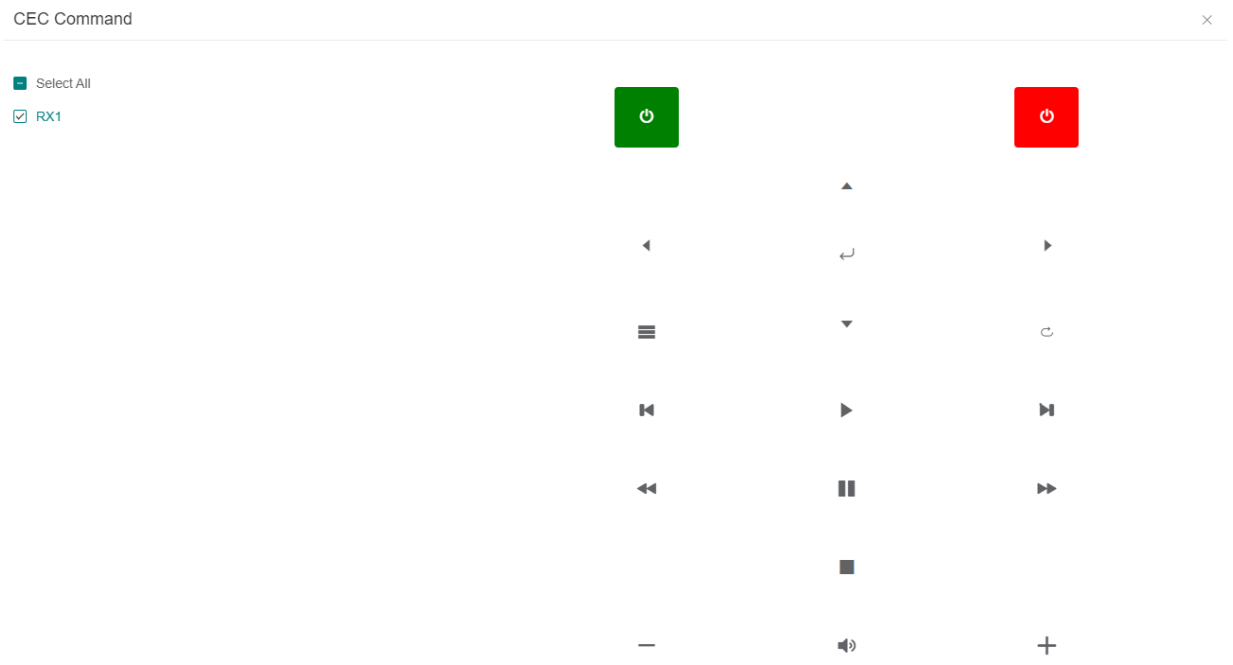
*Click on the icon on the left of ID numbers to check the detailed information about the current Encoder and setup it as required, as shown below:



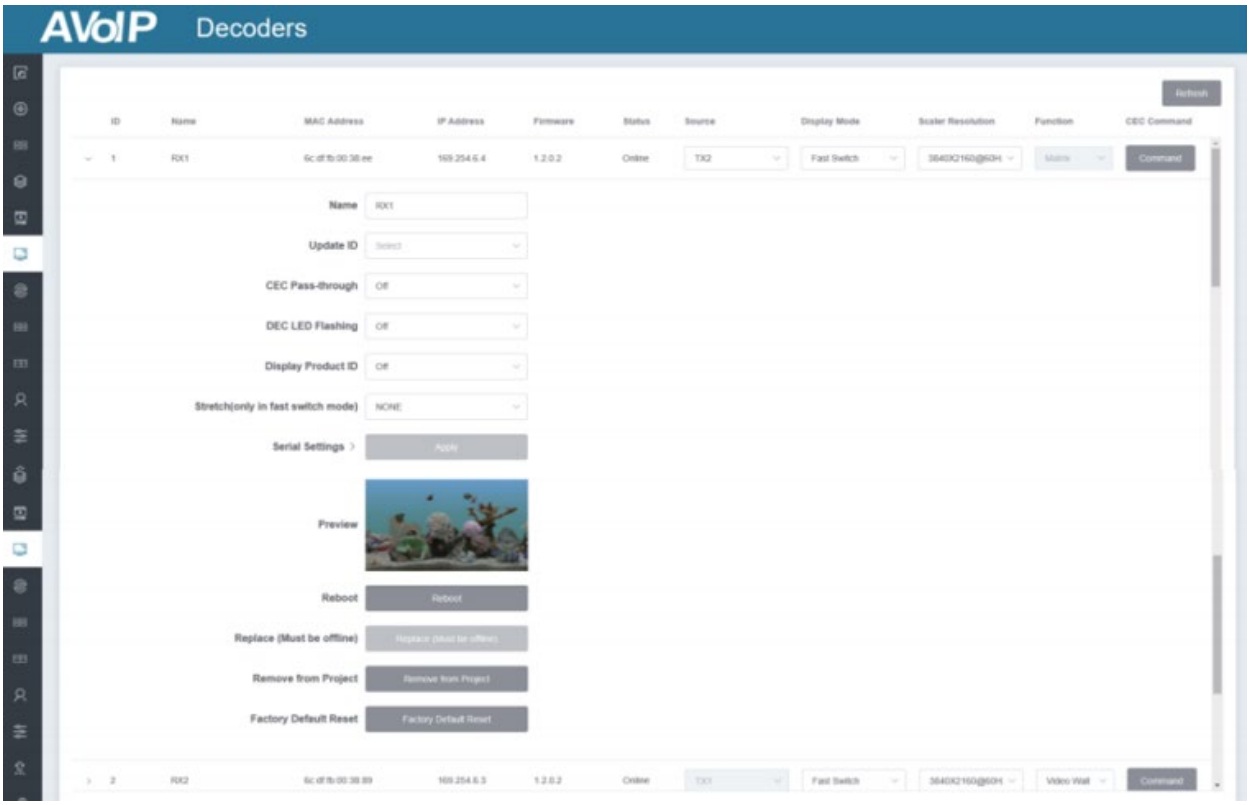
Decoders Page



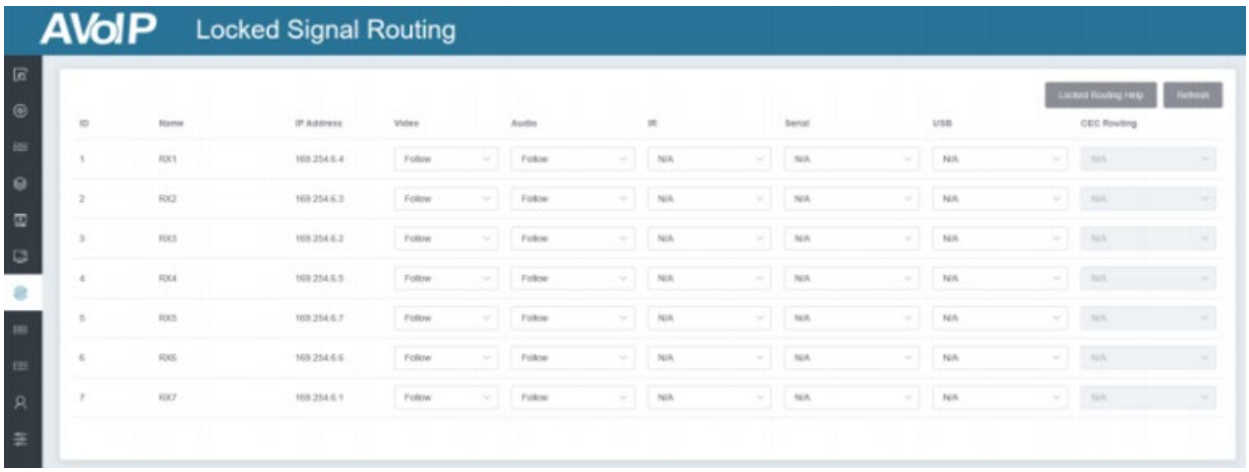
Click on **Refresh** to refresh the data of the current Decoders.
ID: Shows the ID of the current device* (Note: ID cannot be duplicated).
Name: Shows the name of the current device.
MAC Address: Shows the MAC Address of the current device.
IP Address: Shows the IP Address of the current device.
Firmware: Shows the Firmware version of the current device.
Status: Shows the status (**Online** or **Offline**) of the current device.
Source: Shows the signal source (Encoder) of the current device.
Click on the drop-down list of Source to select the current Decoder's signal source.
Display Mode: Shows the display mode of the current device.
Click on the drop-down list of Display Mode to select the current Decoder's display mode.
Scaler Resolution: Shows the resolution of the current device.
Click on the drop-down list of Scaler Resolution to select the current Decoder's resolution.
Function: Shows the mode (**Matrix / Video Wall / Multiview**) of the current device.
Click on the drop-down list of Function to select the current Decoder's mode.
CEC Command: Shows the CEC Command of the current device.
Click on **Command** to set the CEC command for the Decoder.



*Click on the icon on the left of ID numbers to check the detailed information about the current Decoder and setup it as required, as shown in below:

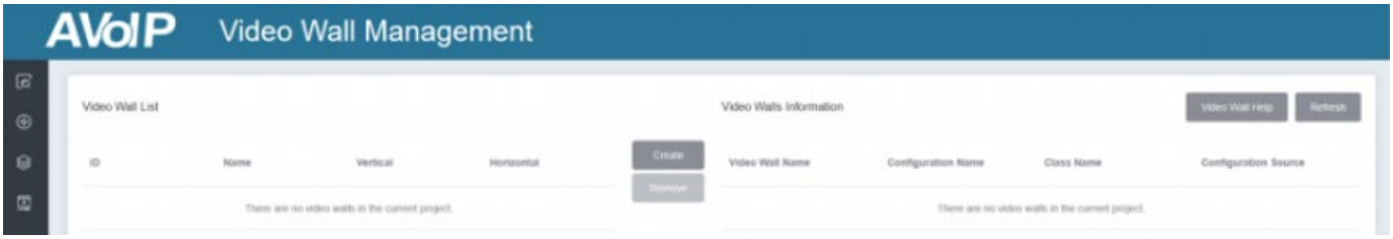


Locked Signal Routing Page

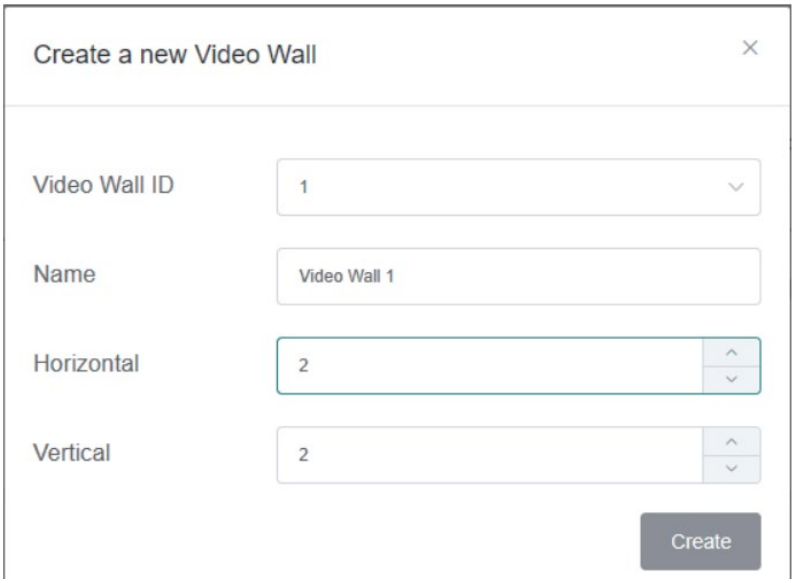


On this page is possible to independently route the video and audio signals between Encoder & Decoder devices. The IR/Serial/USB signals can be set up as required, by default are setted as **N/A** (Not Active), select **Follow** to activate the required signals. Please click on **Locked Routing Help** for details.

Video Wall Management Page



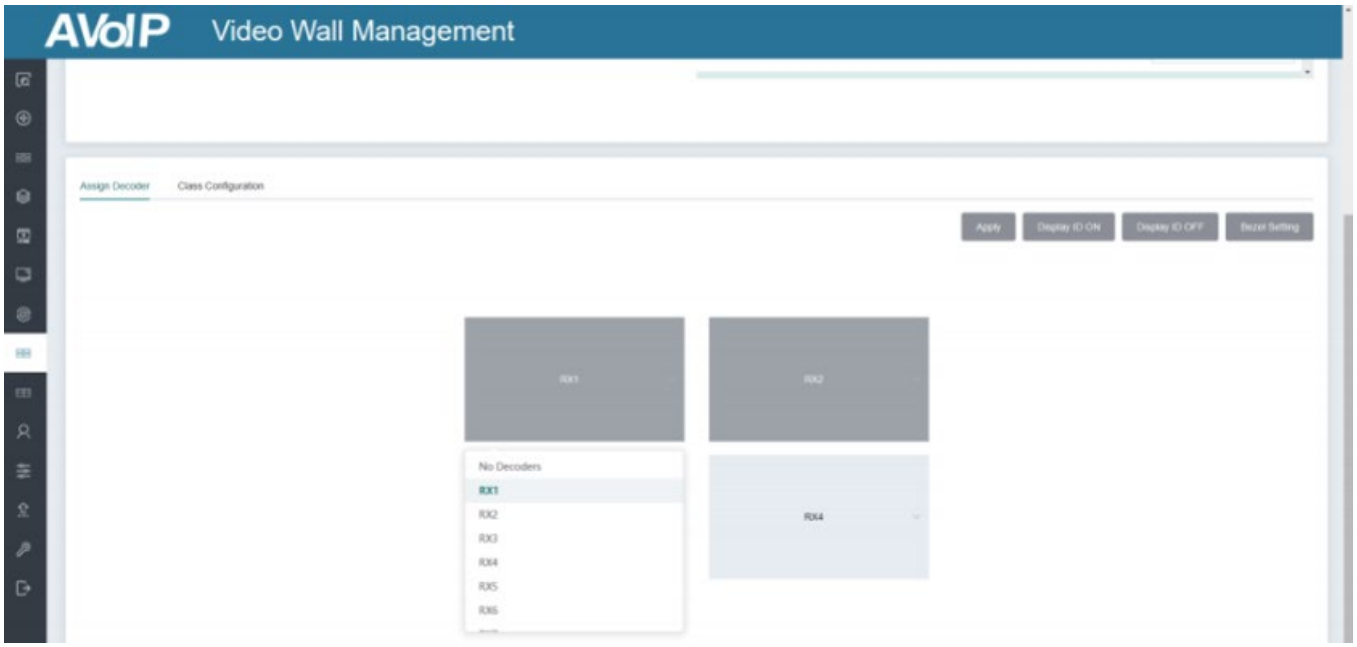
On this page is possible to create and configure video wall applications. Click on **Create**, the following pop-up window will be shown:



Set the **Video Wall ID**, **Name**, **Horizontal** and **Vertical** panel numbers. Then click on **Create**.
Note: Up to 9 video walls can be created.

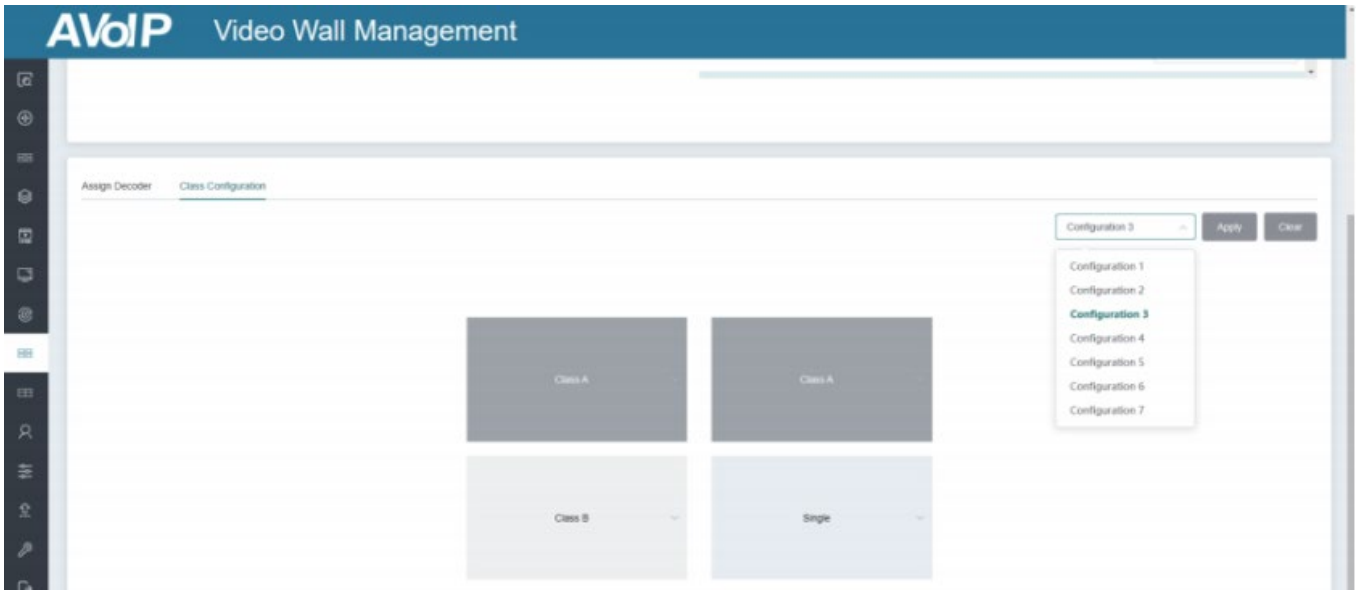
Select the video wall that you want to configure on the **Video Wall List**, then click on **Assign Decoder** to enter the Decoder assignment page.

Click on each screen to select the corresponding Decoder device, then click on **Apply**.

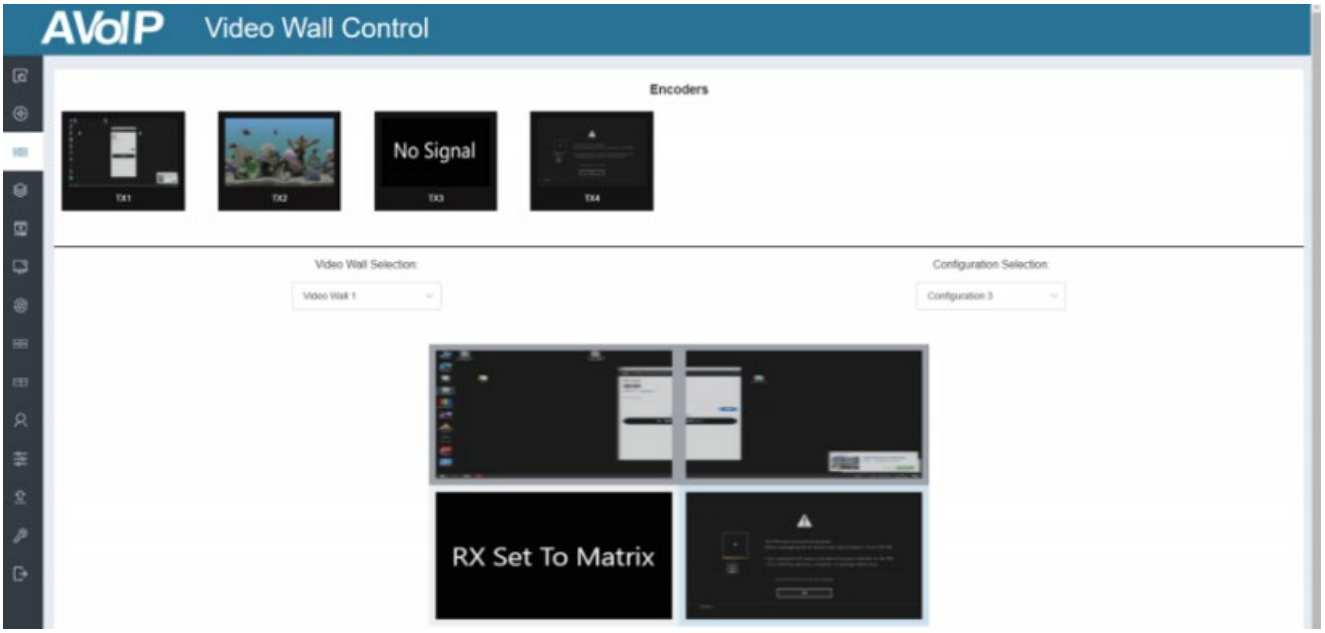


Note: A Decoder can only be assigned to one video wall.

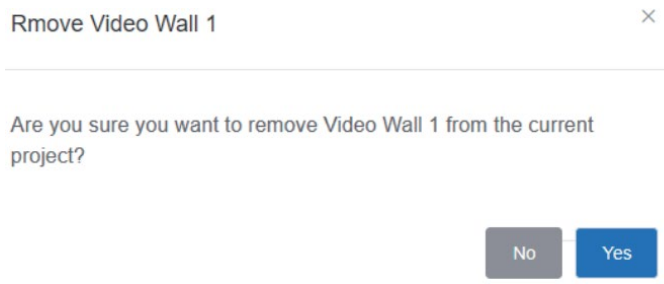
Click on **Class Configuration** to enter the class configuration page, then click each screen to select the corresponding Class as required (the same class name will form a video wall, you can create a regular or irregular video wall). Then click on **Apply**.

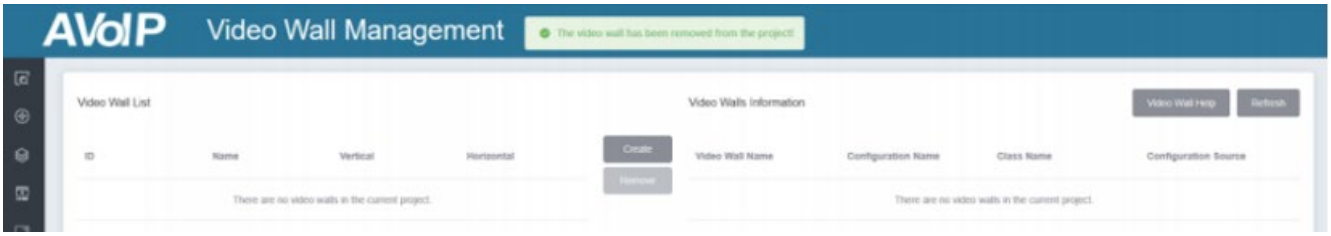


Note: Up to seven configurations can be set up for different application scenarios.
After the configuration is completed, is possible to check it on the **Video Wall Control** page to see the preview, as shown in the below example:



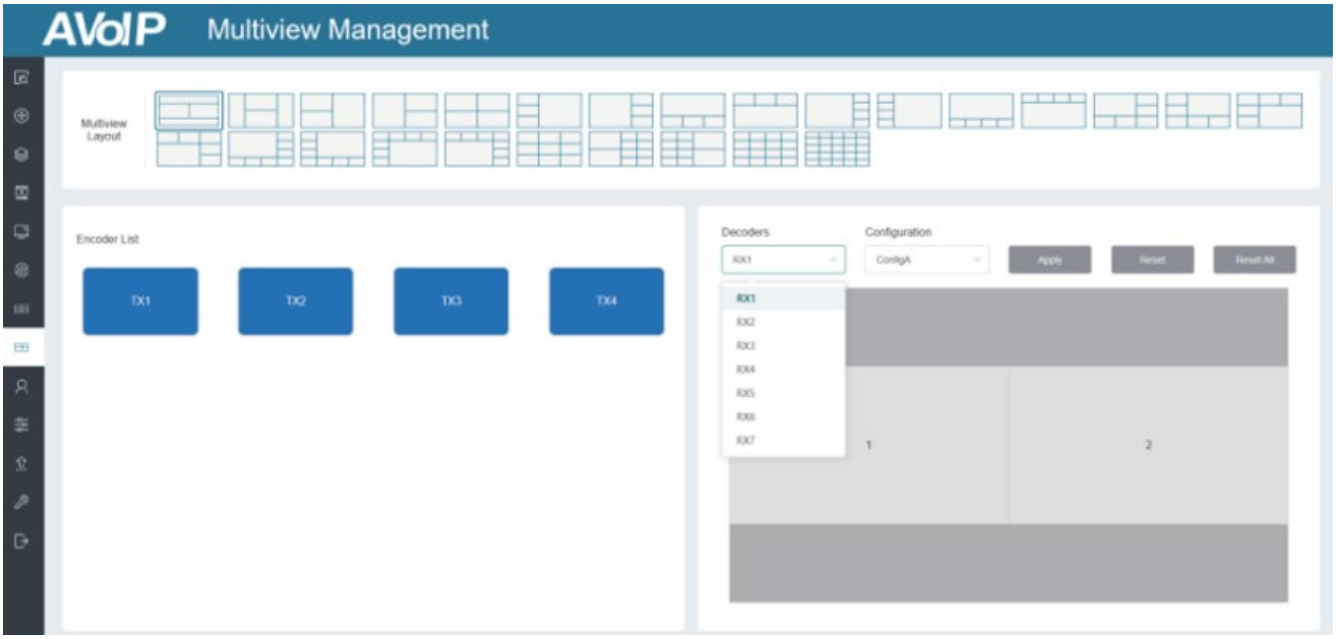
Here is possible to select different video walls and configurations saved in advance by clicking on the drop-down boxes under **Video Wall Selection** and **Configuration Selection**. It's also possible to drag the Encoders directly on the top of the page to the video wall to change the signal sources.
To delete a video wall, just select the video wall on the **Video Wall List**, then click on **Remove**. A prompt window will pop up and it can be deleted after clicking on **Yes**.





Notes:
- 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 with a range from 1x2 up to 9x9.
- The controller creates and manages the video wall configurations and provides a simplified control interface and API commands to third party control system.

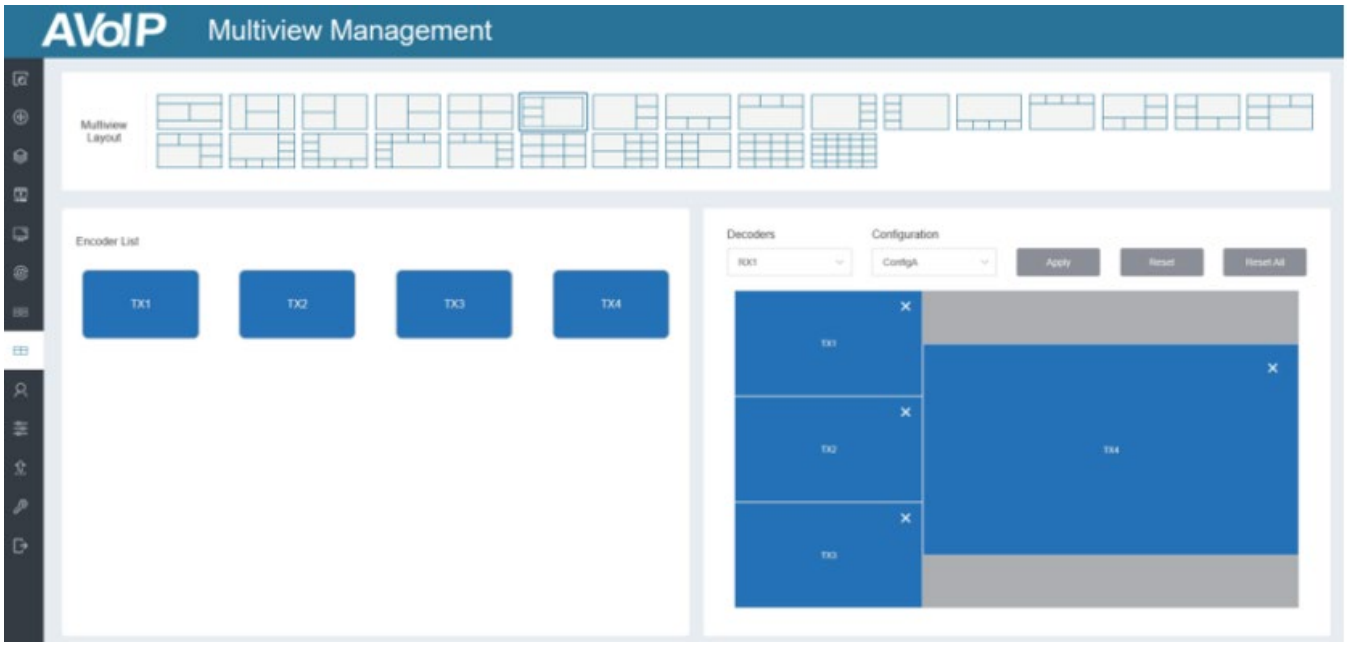
Multiview Management Page



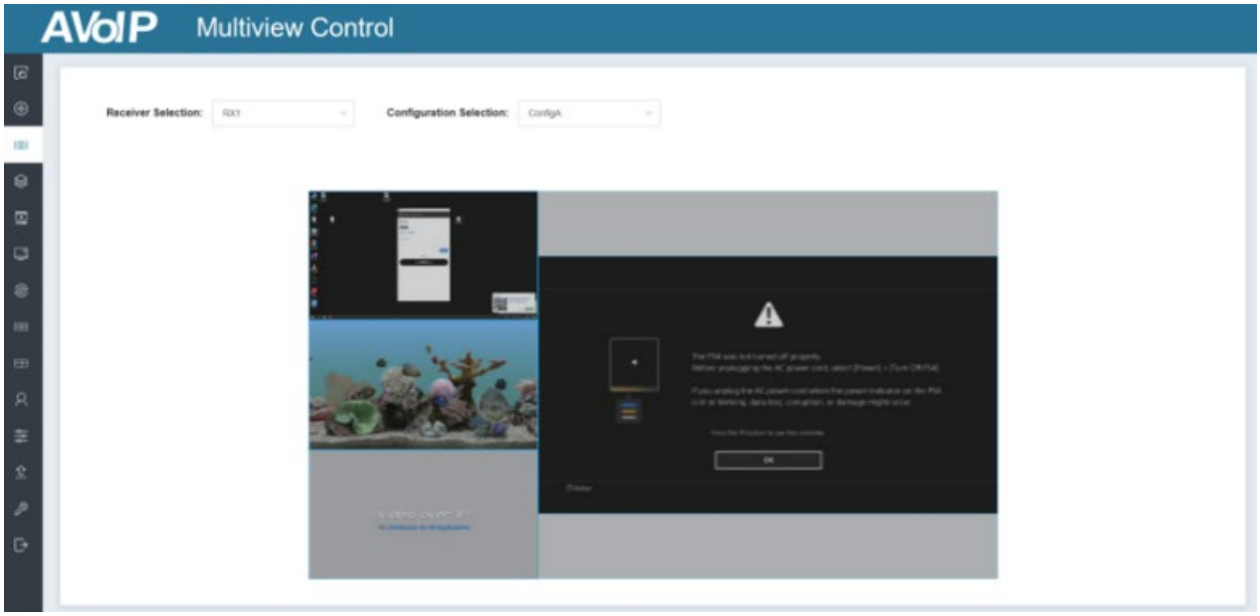
On this page is possible to create and configure Multiview options as required. Please follow the below steps:

Click the drop-down list of **Decoders** to select the Decoder device as shown in the above figure. Then click to select the desired **Multiview Layout**, which will be displayed in the lower right corner.

Drag Encoders from the **Encoder List** to the **Multiview Layout** respectively, then click on **Apply**.



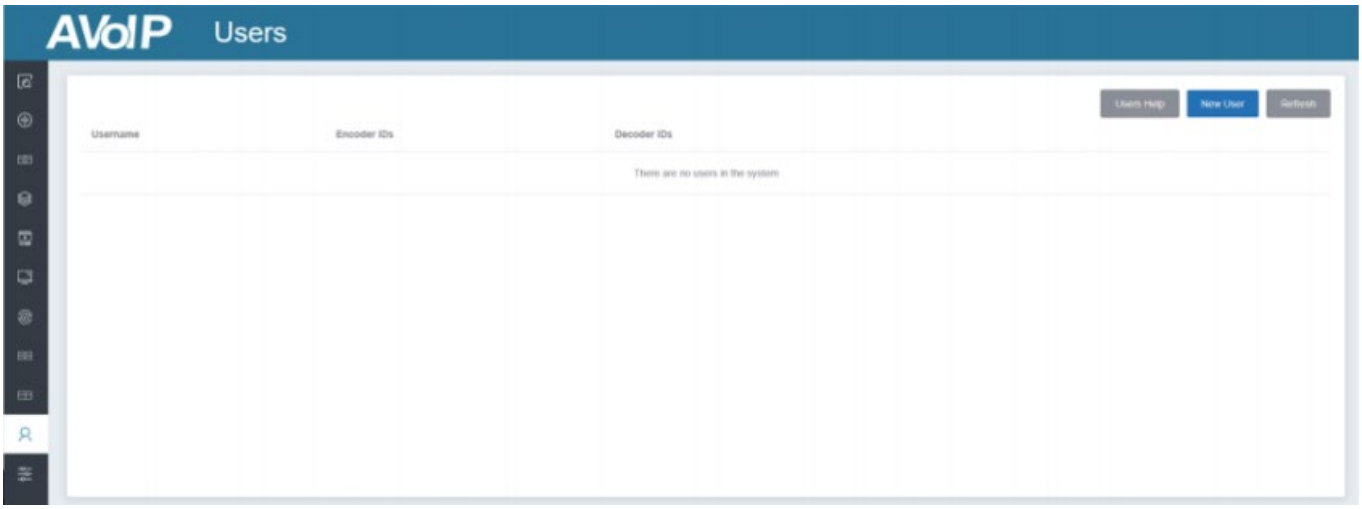
After the configuration is completed, is possible to check it on the **Multiview Control** page to see the preview, as shown in the below example:



Here is possible to select different Decoders and configurations saved in advance by clicking the drop-down box under **Receiver Selection** and **Configuration Selection**.
To delete one Multiview configuration click on **Reset**, to delete all Multiview configurations click on **Reset All**; a prompt window will pop up and it can be deleted after clicking on **Yes.**

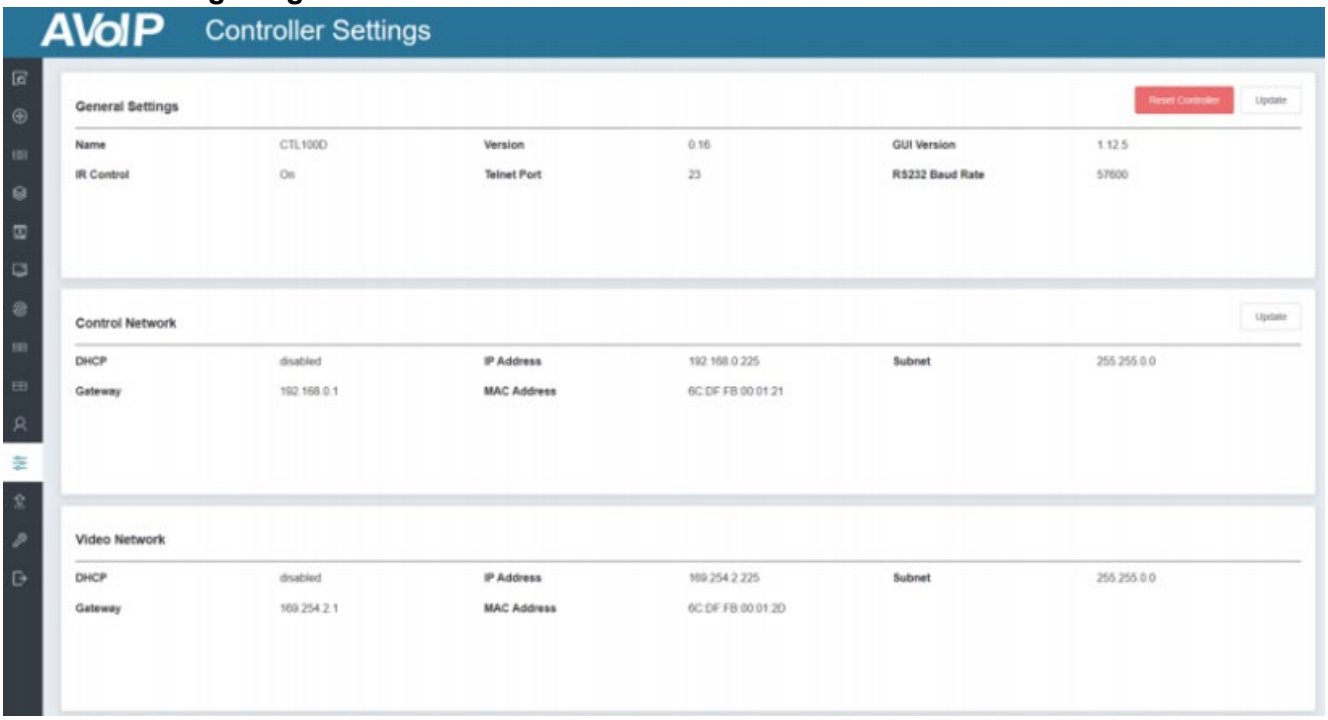


Users Page



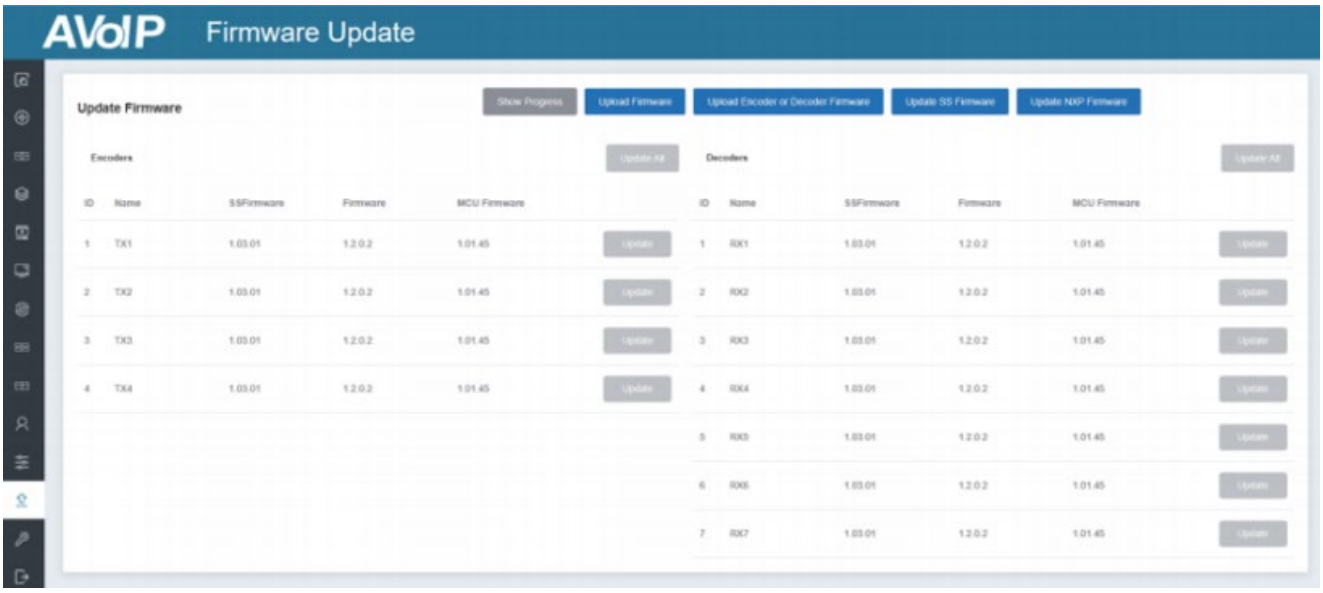
Here is possible to add new user accounts.

Controller Settings Page



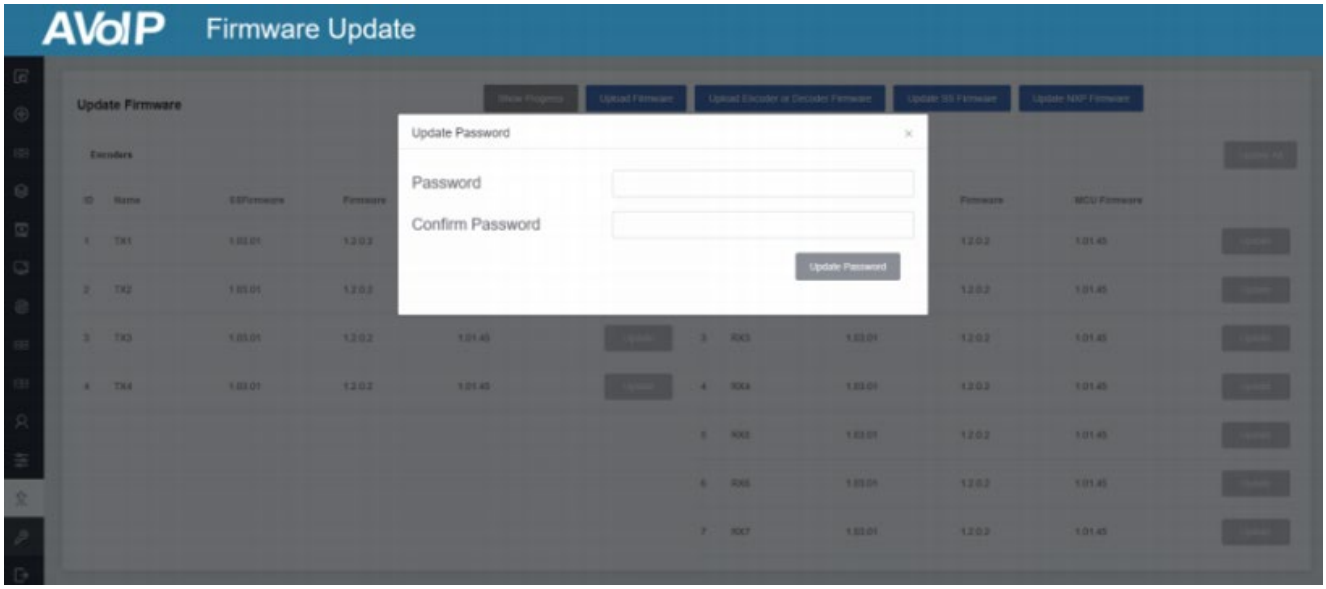
General Settings: Shows the basic settings of the Controller.
Control Network: Shows the network port configuration of the Controller connected to the Switch.
Video Network: Shows the network port configuration of the Controller connected to the video source devices.
Is possible to **Update** the settings or **Reset Controller**.

Firmware Update Page



Here is possible to update separately the firmware of any Encoder/Decoder by clicking the corresponding **Update** button on the right or update all the firmware simultaneously by clicking the corresponding **Update All** button. Is also possible to **Update SS Firmware** (Second Stream chip) and **Update NXP Firmware**.

Password Update Page

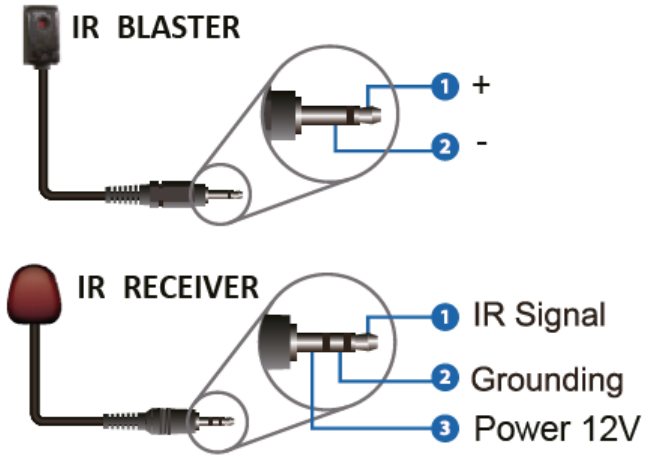


Here is possible to change the password. Please note that after changing, it will skip to the Web browser home page or the Web GUI login interface automatically. Then log in the Web GUI again with the new password.

Log Out Page

Click on **Log Out** on the left, the Web GUI will exit and skip to the login interface automatically.

Infrared Pinout



Network Switch

The network Switch used to set up the system must support the below features:

- Layer 3/managed
- Bandwidth 10 Gigabit
- Support IGMP version 2, snooping enabled
- Filter/Drop unregistered multicast traffic
- Disable unregistered multicast flooding
- Enable fast leave support

Lindy tested this SDVOE Extender with a Netgear XSM4316S Switch, the following Netgear Switches are recommended and optimized for SDVOE AV over IP applications:

XSM4216F-100NAS	M4250-16XF MANAGED SWITCH
XSM4316PA-100NES	M4300-16X POE+ APS299W
XSM4316PB-100NES	M4300-16X POE+ APS600W
XSM4316S-100NES	M4300-8X8F MANAGED SWITCH
XSM4324CS-100NES	M4300-24X MANAGED SWITCH
XSM4324FS-100NES	M4300-24XF MANAGED SWITCH
XSM4324S-100NES	M4300-12X12F MANAGED SWITCH
XSM4348CS-100NES	M4300-48X MANAGED SWITCH
XSM4348FS-100NES	M4300-48XF MANAGED SWITCH
XSM4348S-100NES	M4300-24X24F MANAGED SWITCH
XSM4396K0-10000S	M4300-96X NO PORT CARD / NO PSU
XSM4396K1-100NES	M4300-96X 48XSFP+ APS600W BNDL

NETGEAR®
BUSINESS

Recycling Information



WEEE (Waste of Electrical and Electronic Equipment), Recycling of Electronic Products

Europe, United Kingdom

In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process. Each individual EU member state, as well as the UK, has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose of any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.

Germany / Deutschland Elektro- und Elektronikgeräte

Informationen für private Haushalte sowie gewerbliche Endverbraucher
Hersteller-Informationen gemäß § 18 Abs. 4 ElektroG (Deutschland)
Das Elektro- und Elektronikgerätegesetz (ElektroG) enthält eine Vielzahl von Anforderungen an den Umgang mit Elektro- und Elektronikgeräten. Die wichtigsten sind hier zusammengestellt.

1. Bedeutung des Symbols „durchgestrichene Mülltonne“



Das auf Elektro- und Elektronikgeräten regelmäßig abgebildete Symbol einer durchgestrichenen Mülltonne weist darauf hin, dass das jeweilige Gerät am Ende seiner Lebensdauer getrennt vom unsortierten Siedlungsabfall zu erfassen ist.

2. Getrennte Erfassung von Altgeräten

Elektro- und Elektronikgeräte, die zu Abfall geworden sind, werden als Altgeräte bezeichnet. Besitzer von Altgeräten haben diese einer vom unsortierten Siedlungsabfall getrennten Erfassung zuzuführen. Altgeräte gehören insbesondere nicht in den Hausmüll, sondern in spezielle Sammel- und Rückgabesysteme.

3. Batterien und Akkus sowie Lampen

Besitzer von Altgeräten haben Altbatterien und Altakkumulatoren, die nicht vom Altgerät umschlossen sind, sowie Lampen, die zerstörungsfrei aus dem Altgerät entnommen werden können, im Regelfall vor der Abgabe an einer Erfassungsstelle vom Altgerät zu trennen. Dies gilt nicht, soweit Altgeräte einer Vorbereitung zur Wiederverwendung unter Beteiligung eines öffentlich-rechtlichen Entsorgungsträgers zugeführt werden.

4. Möglichkeiten der Rückgabe von Altgeräten

Besitzer von Altgeräten aus privaten Haushalten können diese bei den Sammelstellen der öffentlich-rechtlichen Entsorgungsträger oder bei den von Herstellern oder Vertreibern im Sinne des ElektroG eingerichteten Rücknahmestellen unentgeltlich abgeben.
Rücknahmepflichtig sind Geschäfte mit einer Verkaufsfläche von mindestens 400 m² für Elektro- und Elektronikgeräte sowie diejenigen Lebensmittelgeschäfte mit einer Gesamtverkaufsfläche von mindestens 800 m², die mehrmals pro Jahr oder dauerhaft Elektro- und Elektronikgeräte anbieten und auf dem Markt bereitstellen. Dies gilt auch bei Vertrieb unter Verwendung von Fernkommunikationsmitteln, wenn die Lager- und Versandflächen für Elektro- und Elektronikgeräte mindestens 400 m² betragen oder die gesamten Lager- und Versandflächen mindestens 800m² betragen. Vertreiber haben die Rücknahme grundsätzlich durch geeignete Rückgabemöglichkeiten in zumutbarer Entfernung zum jeweiligen Endnutzer zu gewährleisten.
Die Möglichkeit der unentgeltlichen Rückgabe eines Altgerätes besteht bei rücknahmepflichtigen Vertreibern unter anderem dann, wenn ein neues gleichartiges Gerät, das im Wesentlichen die gleichen Funktionen erfüllt, an einen Endnutzer abgegeben wird. Wenn ein neues Gerät an einen privaten Haushalt ausgeliefert wird, kann das gleichartige Altgerät auch dort zur unentgeltlichen Abholung übergeben werden; dies gilt bei einem Vertrieb unter Verwendung von Fernkommunikationsmitteln für Geräte der Kategorien 1, 2 oder 4 gemäß § 2 Abs. 1 ElektroG, nämlich „Wärmeüberträger“, „Bildschirmgeräte“ oder „Großgeräte“ (letztere mit mindestens einer äußeren Abmessung über 50 Zentimeter). Zu einer entsprechenden Rückgabe-Absicht werden Endnutzer beim Abschluss eines Kaufvertrages befragt. Außerdem besteht die Möglichkeit der unentgeltlichen Rückgabe bei Sammelstellen der Vertreiber unabhängig vom Kauf eines neuen Gerätes für solche Altgeräte, die in keiner äußeren Abmessung größer als 25 Zentimeter sind, und zwar beschränkt auf drei Altgeräte pro Geräteart.

Recycling Information

5. Datenschutz-Hinweis

Altgeräte enthalten häufig sensible personenbezogene Daten. Dies gilt insbesondere für Geräte der Informations- und Telekommunikationstechnik wie Computer und Smartphones. Bitte beachten Sie in Ihrem eigenen Interesse, dass für die Löschung der Daten auf den zu entsorgenden Altgeräten jeder Endnutzer selbst verantwortlich ist.

France

En 2006, l'union Européenne a introduit la nouvelle réglementation (DEEE) pour le recyclage de tout équipement électrique et électronique. Chaque Etat membre de l'Union Européenne a mis en application la nouvelle réglementation DEEE de manières légèrement différentes. Veuillez suivre le décret d'application correspondant à l'élimination des déchets électriques ou électroniques de votre pays.

Italy

Nel 2006 l'unione europea ha introdotto regolamentazioni (WEEE) per la raccolta e il riciclo di apparecchi elettrici ed elettronici. Non è più consentito semplicemente gettare queste apparecchiature, devono essere riciclate. Ogni stato membro dell'EU ha tramutato le direttive WEEE in leggi statali in varie misure. Fare riferimento alle leggi del proprio Stato quando si dispone di un apparecchio elettrico o elettronico. Per ulteriori dettagli fare riferimento alla direttiva WEEE sul riciclaggio del proprio Stato.

España

En 2006, la Unión Europea introdujo regulaciones (WEEE) para la recolección y reciclaje de todos los residuos de aparatos eléctricos y electrónicos. Ya no está permitido simplemente tirar los equipos eléctricos y electrónicos. En cambio, estos productos deben entrar en el proceso de reciclaje. Cada estado miembro de la UE ha implementado las regulaciones de WEEE en la legislación nacional de manera ligeramente diferente. Por favor, siga su legislación nacional cuando desee deshacerse de cualquier producto eléctrico o electrónico. Se pueden obtener más detalles en su agencia nacional de reciclaje de WEEE.

CE/FCC Statement

CE Certification
LINDY declares that this equipment complies with relevant European CE requirements.

CE Konformitätserklärung
LINDY erklärt, dass dieses Equipment den europäischen CE-Anforderungen entspricht

UKCA Certification
LINDY declares that this equipment complies with relevant UKCA requirements.

FCC Certification
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.
This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

The enclosed power supply has passed Safety test requirements, conforming to the US American versions of the international Standard IEC 60950-1 or 60065 or 62368-1.

LINDY Herstellergarantie – Hinweis für Kunden in Deutschland

LINDY gewährt für dieses Produkt über die gesetzliche Regelung in Deutschland hinaus eine zweijährige Herstellergarantie ab Kaufdatum. Die detaillierten Bedingungen dieser Garantie finden Sie auf der LINDY Website aufgelistet bei den AGBs.

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