Simply Better Connections

VE8662

True 4K HDMI H.265 over IP Transceiver with PoE
User Manual

Compliance Statements

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The 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.

FCC Caution
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Warning
Operation of this equipment in a residential environment could cause radio interference.

Achtung
Der Gebrauch dieses Geräts in Wohnumgebung kann Funkstörungen verursachen.

Suggestion
Shield twisted pair (STP) cables must be used with the unit to ensure compliance with FCC & CE standards.

KCC Statement

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Trademark Notice:

The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

RoHS

This product is RoHS compliant.

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://eservice.aten.com

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988 1-949-428-1111

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

Package Contents

Check to make sure that all of the components are in working order. If you encounter any problem, please contact your dealer.

VE8662

1 VE8662 True 4K HDMI H.265 over IP Transceiver with PoE

1 RS-232 terminal block

1 foot pad set (4 pcs)

1 power adapter and power cord

1 user instructions

Contents

4. Browser Web Control

5. Workstation OSD Control

6. Receiver Display and On-screen Indicators

7. CLI Commands

Appendix

About This Manual

This User Manual is provided to help you get the most from your VE8662 device and the ATEN VE Manager. It covers all aspects of installation, configuration, and operation. An overview of the information found in the manual is provided below.

Chapter 1, Introduction and Getting Started, introduces you to the features and purposes of VE8662 True 4K HDMI H.265 over IP Transceiver with PoE.

Chapter 2, Hardware Setup, introduces you to panel components and provides step-by-step instructions for installing and setting up your VE8662 hardware.

Chapter 3, Panel Operation, provides LED indicator information and functions of the panel pushbuttons.

Chapter 4, Browser Web Control, provides an overview of the VE Manager's main screen and step-by-step instructions of creating and editing display lay-outs.**Chapter 5, Workstation OSD Control,** expatiates the local workstation operation.

Chapter 6, Receiver Display and On-screen Indicators, covers the on-screen messages and indicators shown on the receiver display, and explains how the OSD (On-Screen Display) setting affects their visibility.

Chapter 7, CLI Commands, introduces the Command Line Interface (CLI) and explains how administrators use text-based commands to configure, monitor, and control VE8662 devices.

Appendix, provides product safety instructions, technical support details, and product specifications.

Note:

- Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit or any connected devices.
- The product may be updated, with features and functions added, improved or removed since the release of this manual. For an up-to-date user manual, visit http://www.aten.com/global/en

Conventions

This manual uses the following conventions:

`Monospaced`	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
>	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start > Run means to open the *Start* menu, and then select *Run*.
	Indicates critical information.

Chapter 1
Introduction and Getting Started

Overview

The ATEN VE8662 True 4K HDMI H.265 over IP Transceiver with PoE combines transmitter and receiver functions in one unit, offering flexible deployment and easy configuration for various AV solutions.

Powered by standard H.265 encoding and decoding technology for video compression, the VE8662 enables efficient transmission of 3840 × 2160 @ 60 Hz (4:4:4) HDMI video / audio, stereo audio, USB 2.0, and RS-232 signals over a single Ethernet cable for up to 100 meters (point-to-point), with built-in error correction for low latency and reduced bandwidth usage. It also supports embedded and de-embedded audio, allowing audio to be embedded in the HDMI stream or extracted and delivered separately.

The VE8662 also features AV matrix switching with both horizontal and vertical display configurations for video walls. The Transceiver enables seamless collaboration between workstations and video walls with functions such as “push” and “pull” for instant content sharing, boundless switching for easy switching between receivers, and On-Screen Display (OSD) for simple configuration of both units.

With dual power supplies, DC-in, and Power over Ethernet (PoE), the VE8662 ensures continuous operation, even during power failures, making it ideal for mission-critical applications. The transceiver offers multiple control options, including pushbuttons, web GUI, RS-232 and Telnet / Reslink. The user-friendly web GUI enables customizable background and layouts for intuitive management over all video inputs and outputs.

With limitless scalability and flexibility, the VE8662 is perfect for diverse scenarios such as video broadcasting, casinos, sports centers, and smart buildings where managing multiple video feeds over a network is essential and can transmit signals from building to building.

Features

Advanced H.265 Compression with Low Latency

- Extends True 4K HDMI signals over IP with H.265 compression for low latency and improved bandwidth efficiency
- Delivers visually lossless high-quality video up to 3840 × 2160 @ 60 Hz (4:4:4)
- EDID Expert™ selects the optimum EDID settings for smooth power-up, high-quality display and the best video resolution across different screens
- Supports HDR 10 with HDCP 2.3/2.2 compliant for content protection
- Supports individual stereo audio and HDMI audio format of PCM 2 channels
- Supports either PoE or DC in; power redundancy when both are connected
- Supports H.265 / H.264 streams:
  - As a transmitter supports delivering H.265 streams to the ATEN VW754 Stream Decoder Input Card, H.265 Network Video Recorders (NVRs), and PC VLC players
  - As a receiver supports H.265/H.264 streams from mainstream IP cameras compliant with ONVIF-S* and RTSP protocols

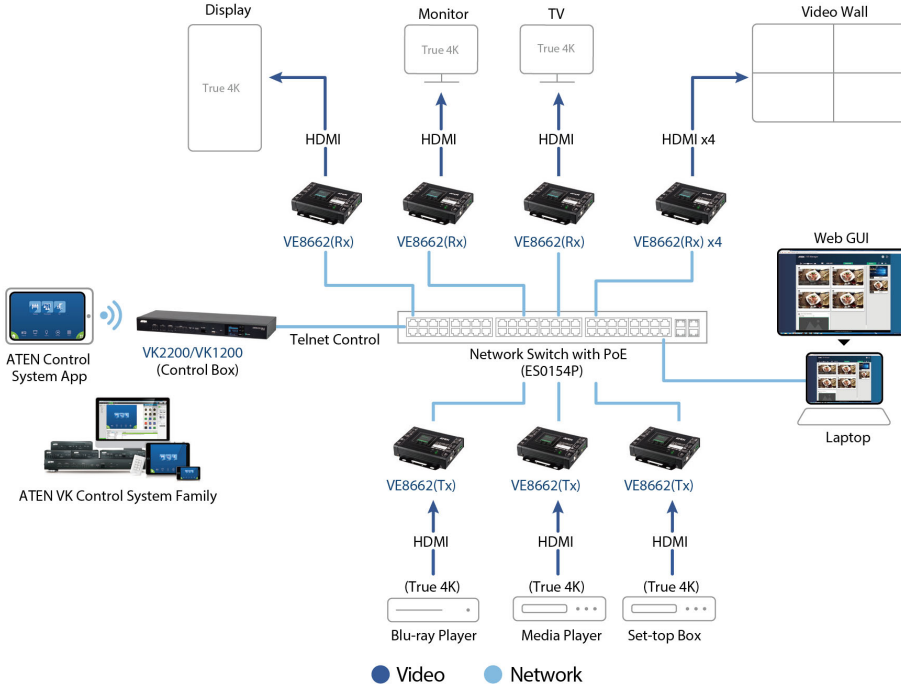
Note: VE8662 supports only audio/video streaming and device discovery under ONVIF-S.

Limitless Scalability and Flexibility

- Extends AV connections from a simple point-to-point to a multi-point to multi-point setup via up to 100 meters (point to point)
- Offers multiple functions for applications such as extenders, splitters, video walls, and matrix switches
- Built-in 8KV/15KV ESD protection
- Rack-mountable

Collaboration with ATEN Control System

- Integrated solution—compatible with ATEN Control System, allowing users to directly operate VE8662 via CLI Telnet, or RS-232 protocol
- Effortless operation—one click to effectively operate VE Manager, TV, projector, source player, and related equipments via touch panel and keypad



Note: VE8662 supports PoE and can be installed in combination with PoE network switches to reduce power cabling and additional power outlets.
Before choosing the Network switch and installation, please refer to the Implementation Guide.

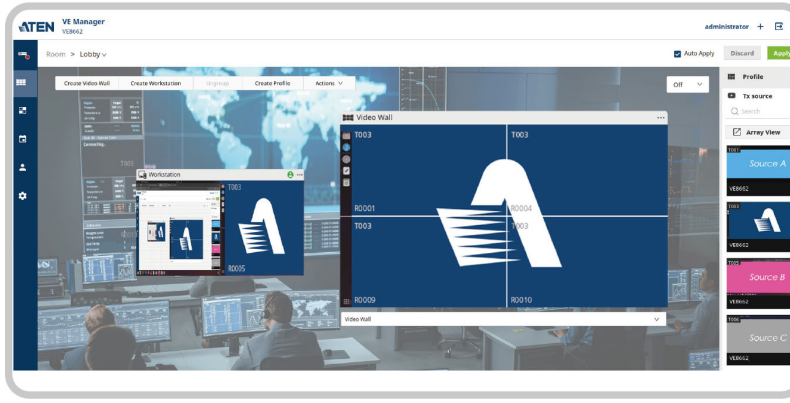
No Complicated IP Setup

- Simple configuration with no extensive IT experience or extra learning required
- Assign ID numbers for fast installation, no complex IP settings required
- Single DIP switch enables easy switching between transmitter / receiver, with 'T' or 'R' shown on the LCM and distinct backlighting for easy identification
- Effortless source switching via pushbuttons

Web GUI-Based Management, No Additional Server PCs or Software Required

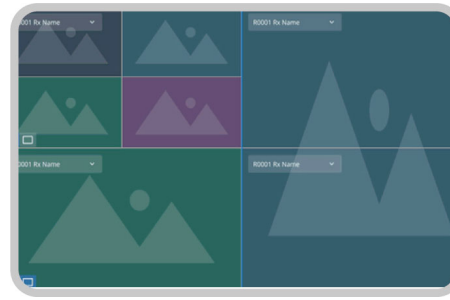
- Drag-and-drop video sources, preview sources, and monitor displays via intuitive web GUI
- Contextualized Web GUI with environmental pictures for intuitive control
- Fast switching enables real-time video streams and stable signal transmission
- User authority control for high-security applications
- Workstation supports quad-view* functionality with boundless switching via keyboard and mouse controls

Note: Each of the four views supports 1080p resolution; the combined display of all four views supports up to 4K resolution.



Video Wall Support

- Real-time video display with “What You See Is What You Get” functionality
- Supports horizontal and vertical display orientations (including 90° and 270° rotations)
- “Push” and “Pull”—shares content instantly to / from a single Rx or video wall by just one click
- Supports customized video wall layouts—users can “combine” multiple receiver screens into a single large display or “divide” them back into separate units, enabling flexible display configurations



Spontaneous Scheduling Management

- User-friendly scheduling management with minute-level event control
- Group VE8662 devices by receivers or video walls for content editing and playback
- Multiple profiles arranged to play in any order over a selected time period

Embedded / De-embedded Audio Support

- Separates audio signal can be embedded into the HDMI stream
- Audio stream can be extracted from the HDMI stream and delivered as a separate audio signal
- Supports Audio Matrix—routes audio from selected transmitters to selected receivers, allowing flexible setup based on different unit requirements

Multiple Control Channels

- LCD screen— top-panel LCD screen and pushbuttons allow for switching input, monitoring the ID & IP address and status of the extender
- Intuitive Web GUI—software independent, simple to operate it on any PC or Notebook
- USB Connectivity—USB 2.0 ports allow for connection of devices such as keyboard, mouse and USB touch panels
- RS-232 Channel—bi-directional RS-232 serial port allows for connection of peripherals such as touch screens and barcode scanners
- Supports CLI access via Telnet, SSH, or a direct RS-232 serial connection for remote control and management
- Remote KVM control—hotkey switching (double-click the Ctrl key), OSD switching on the receiver, and boundless mouse switching

High-Security Protection

- Supports dynamic UDP media multicast ports
- AES 128-bits encryption used for SRTP (Secure Real-time Transport Protocol) to safeguard audio and video streams
- HTTPS for secure communication
- WSS for encrypted real-time data communication
- SRTP for secure audio/video transmission over IP

Note: Supports TCP ports: 22 (SSH), 23 (Telnet), 80 (HTTP), 443 (HTTPS)

Getting Started Tasks

Follow the steps below to install, connect, configure, and get started with your VE8662 devices.

1. Decide your network architecture and configuration. For more information, see the *ATEN HDMI over IP Video Extender System Implementation Guide*.
2. Mount your VE8662 devices on walls or racks. For more information, see *Mounting the VE8662 Device*, page 13.
3. Connect the VE8662 devices to sources, displays, network, and other hardware devices as required. For more information, see the installation diagrams on *Connecting VE8662*, page 14.
4. Assign input sources using one of the following methods:
   - Device panel (LCM)
     See *Assigning Input Video Source to VE8662 Receiver*, page 32.
   - VE Manager
     See *Assigning Sources*, page 64.

Note: In a point-to-point setup, the receiver's source is defined manually on the LCM panel instead of through VE Manager. See *Assigning Input Video Source to VE8662 Receiver*, page 32 for reference.

Supported Browsers

Please see the table below for supported web browsers and the versions.

Web Browser	Supported Versions
Google Chrome	109 or later
Mozilla Firefox	131 or later
Microsoft Edge	128 or later
Opera	113 or later
Safari	18.1 or later

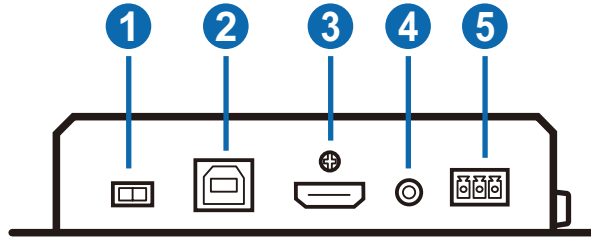
Chapter 2
Hardware Setup

Before you proceed to hardware setup:

1. Please review the safety information regarding the placement of this device in *Safety Instructions*, page 185.
2. Do not power on the VE8662 device until all the necessary hardware is connected.

Components

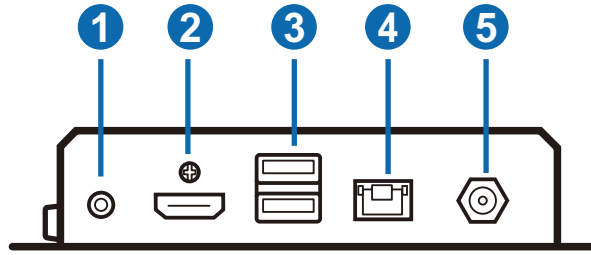
VE8662 Front View



No.	Component	Function
1	Tx / Rx switch	Define the unit as transmitter or receiver by setting the Tx / Rx switch. Once the mode (transmitter / receiver) is changed, you need to manually reboot the unit to make the setting take effect. The VE8662 unit will clear the previous mode settings after the manually reboot, and it automatically reboot again to apply the changed mode.
2	USB Type-B port	Connects to a source (e.g. PC / Mac).

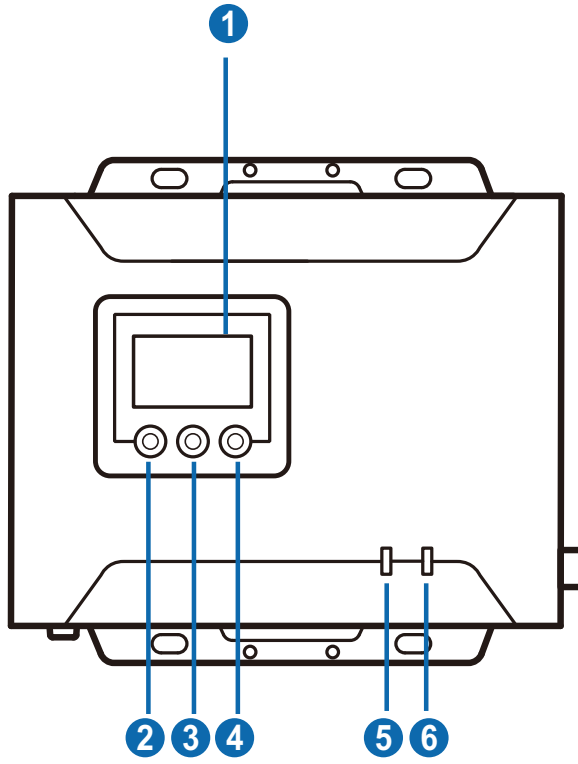
No.	Component	Function
3	HDMI in	Uses an HDMI cable to connect to a source device.
4	audio in	Connects to an audio source device.
5	RS-232 serial port	Connects to an RS-232 serial devices / peripherals.

VE8662 Rear View



No.	Component	Function
1	audio out	Connects to an audio output device.
2	HDMI out	Uses an HDMI cable to connect to a display device.
3	USB Type-A ports	Connects to the USB peripherals such as keyboard and mouse.
4	LAN port with PoE	Uses an Ethernet cable to connect the VE8662 to an Ethernet switch.When both LAN with PoE and the DC power input are connected, the VE8662 supports power redundancy. In this state, both the DC in and PoE LEDs remain steadily lit to indicate active dual power sources. Refer to the description about PoE power LED and DC-in power LED next page.
5	power jack	Connects to the DC power adapter to provide power to the unit.

VE8662 Top View

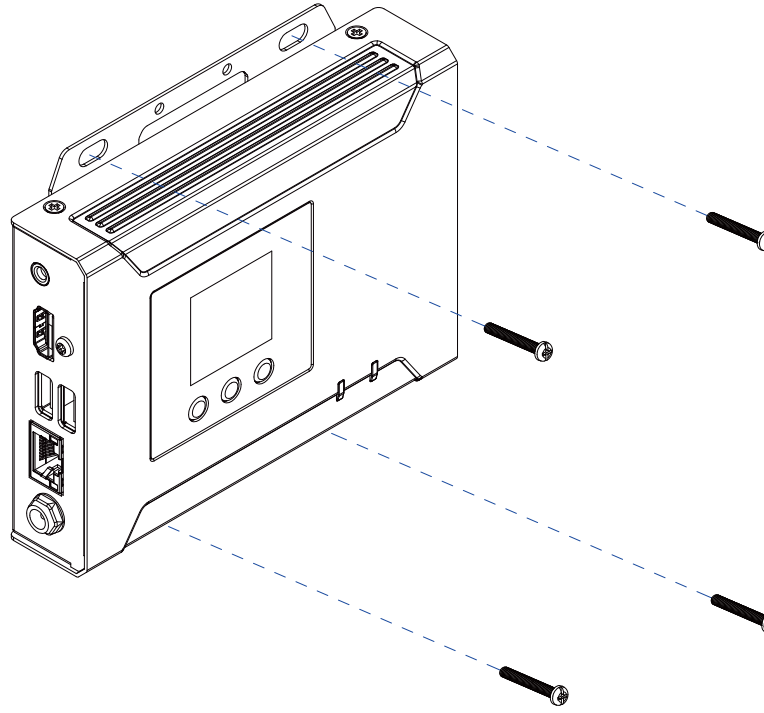


No.	Component	Function
1	LCD display	Shows the unit's basic information including ID, IP address, and firmware version.
2	prev. button	Uses the prev. / next buttons to assign IDs to all VE8662 units and then assign an input source of VE8662 transmitter to VE8662 receiver.
3	next button	
4	enter button	Uses the enter button to confirm the selection.
5	PoE power LED	Lights green to indicate the unit is receiving PoE power.
6	DC-in power LED	Lights green to indicate the unit is receiving DC power from the power supply.

Mounting the VE8662 Device

Wall Mount

Secure or hang the VE8662 device to the wall using the built-in brackets.

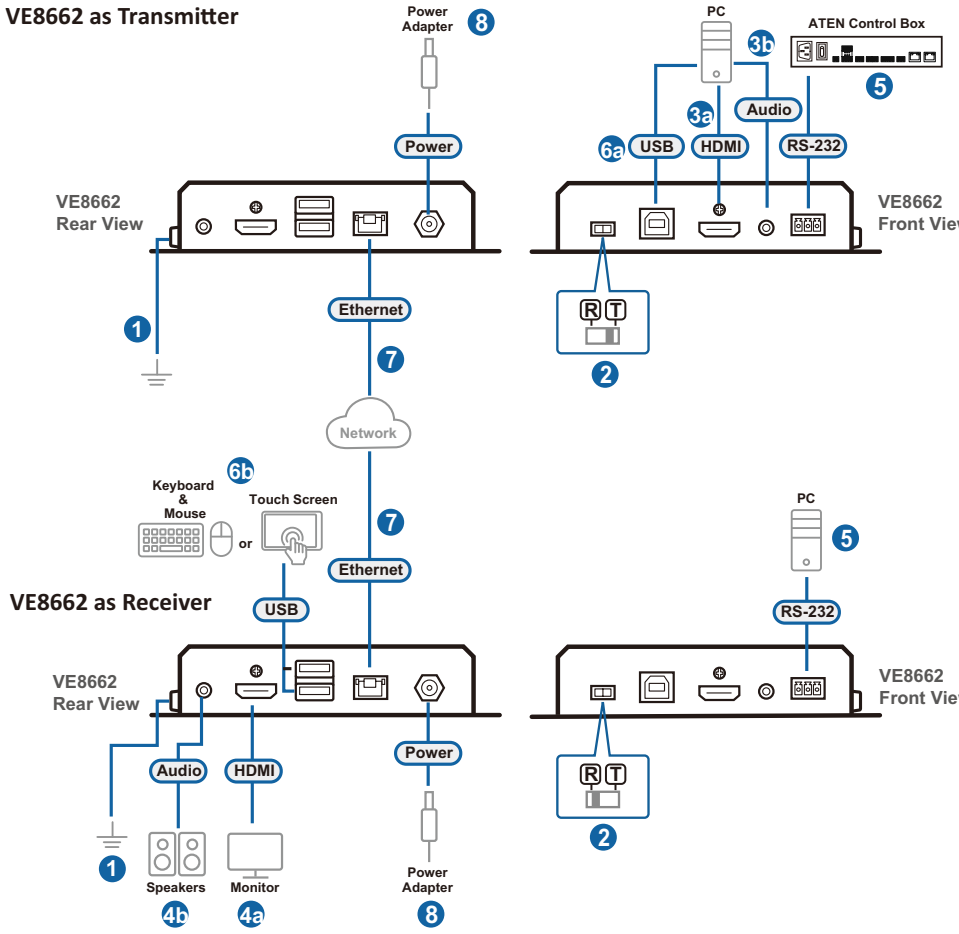


Rack Mount

Use the VE-RMK1U Rack Mount Kit to rack-mount the VE8662. For more information about this accessory, go to www.aten.com/products

Connecting VE8662

Follow the steps below to connect your VE8662 devices with the hardware as required.



Note: The illustrated diagram is based on two VE8662 units.

Note: Make sure all the equipment you are connecting to the unit is turned off and disconnected from the power source.

1. Ground the VE8662 by connecting one end of a grounding wire to the grounding terminal and the other end to a suitable grounded object.

2. Set the Tx / Rx switch to define the units.

3. For VE8662 as transmitter:

   a) Connect your video source device to the HDMI input port using an HDMI cable.

   b) Connect your audio source device to the audio input port using an appropriate audio cable.

4. For VE8662 as receiver:

   a) Connect your video display device to the HDMI output port using an HDMI cable.

   b) Connect your audio device to the audio output port using an appropriate audio cable.

5. (Optional) To remotely control a PC through serial controller, connect the RS-232 port of the transmitter to a serial controller, and then connect the RS-232 port of the receiver to a PC, and vice versa.

6. (Optional) To connect a USB host and USB devices:

   a) Connect a USB host (e.g. PC) to the transmitter’s USB Type-B port.

   b) Connect your USB HID devices such as keyboard and mouse to the receiver's USB Type-A ports.

7. Set up the VE8662 units as followings:

   - **Point-to-point setup**

     Connect one end of an Ethernet cable to the transmitter's LAN port and the other end of the cable to the receiver's LAN port.
     When using a point-to-point setup, configure the Tx and Rx IDs and assign the receiver’s corresponding video source (Tx) directly through the LCM panel. See *Setting Device ID*, page 26 and *Assigning Input Video Source to VE8662 Receiver*, page 32 for reference.

Note: Point-to-point connection doesn't support Power over Ethernet.

- **Multipoint-to-multipoint setup**

  Install the transmitter(s) and the receiver(s) to the same local area network by connecting the LAN ports with PoE to an Ethernet switch using Ethernet cables.

  Note: By connecting to a PoE-supported Ethernet switch, the VE8662 can be powered through an Ethernet cable.

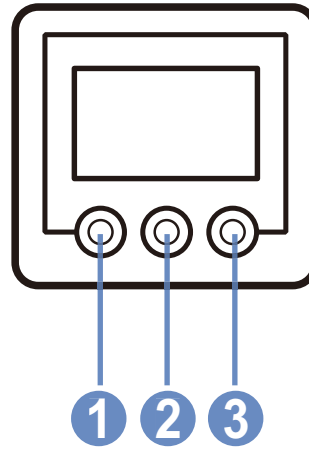
8. Connect the supplied power adapter to the unit's power jack after powering on all other connected equipment.

Note: To enable power redundancy, operate both VE8662 transmitter and receiver with PoE power source, and connect the units with the power adapters for the external power source.

Chapter 3
Panel Operation

Overview

The readout section on VE8662 unit contains an LCD display for users to check the settings of the unit, and 3 buttons that deliver the following functions:



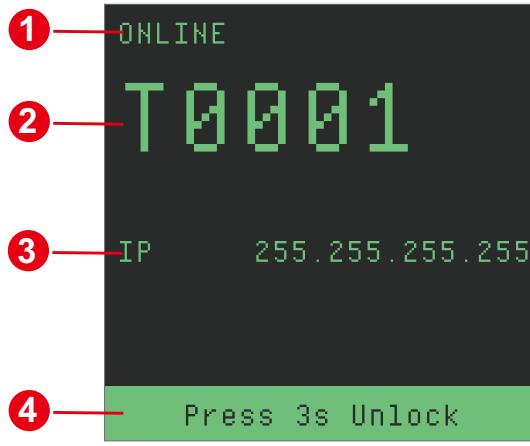
No.	Button	Description
1	prev	The prev button functions as a navigation button to cycle through the options listed on the LCD display. Press the button once to select the previous item, and continue pressing it to scroll upward through the options.
2	next	The next button functions as a navigation button to cycle through the options listed on the LCD display. Press the button once to select the next item, and continue pressing it to scroll downward through the options.
3	enter	The enter button is used to confirm your selection. Press the button to enter the page of the selected item for more information or operation.

Basic Operation

Lock Screen

VE8662T

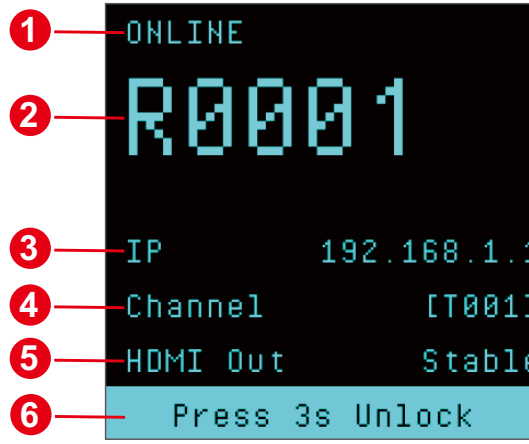
On the lock screen of VE8662T, it displays the following information:



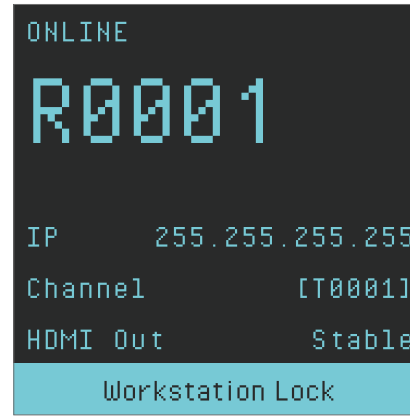
No.	Item	Description
1	connection status	Displays the network connection status of this VE8662T unit: ◆ ONLINE: The unit is currently connected to the network.
2	device ID	Shows the device ID of this VE8662T unit.
3	device IP address	Shows the IP address of this VE8662T unit.
4	screen lock indicator	Indicates that the unit's OSD is currently locked. To unlock the screen, press any button for 3 seconds.

VE8662R

The VE8662R unit shows the information on the lock screen as following:



No.	Item	Description
1	connection status	Displays the network connection status of this VE8662R unit: ◆ ONLINE: The unit is currently connected to the network.
2	device ID	Shows the device ID of this VE8662R unit.
3	device IP address	Shows the IP address of this VE8662R unit.
4	channel	Shows the input video source. N/A means the unit is disconnected with the video input source.
5	HDMI out	Displays the status of the HDMI out: ◆ Stable ◆ Unstable ◆ Unplugged

No.	Item	Description
6	screen lock indicator	◆ Press 3s Unlock: Indicates that the unit's OSD is currently locked. To unlock the screen, press any button for 3 seconds. ◆ Workstation Lock: When the VE8662R is assigned to a workstation, it enters a permanently locked state. The unit cannot be unlocked, and all OSD settings are disabled. 

Lock / Unlock the OSD

When the VE8662's on-screen display (OSD) is locked, the lock icon appears on the LCD panel with the message **Press 3s Unlock**.

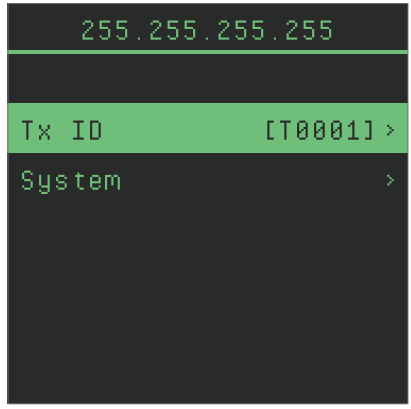
To unlock the OSD, press and hold any button for 3 seconds.

Note: The OSD automatically locks when no operation is detected within the timeout duration specified in ATEN VE Manager.

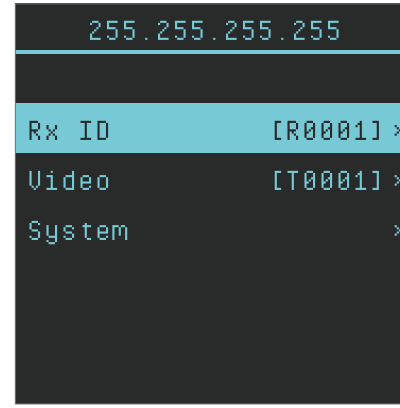
To manually lock the OSD:

- You can only perform manual lock from **Tx / Rx Main Menu**.

VE8662 Transmitter Main Screen



VE8662 Receiver Main Screen



- On **Tx / Rx Main Menu** page, press and hold any button for 3 seconds to lock the screen.
- On other pages, press and hold the **Enter** button for 3 seconds to perform a Back action instead of locking the OSD.
- If no operation is detected until the timeout expires, the OSD will automatically lock regardless of the current page.

Backlight Behavior

The VE8662's LCD backlight automatically turns off after 10 seconds of inactivity while the OSD is locked.

To turn the backlight back on:

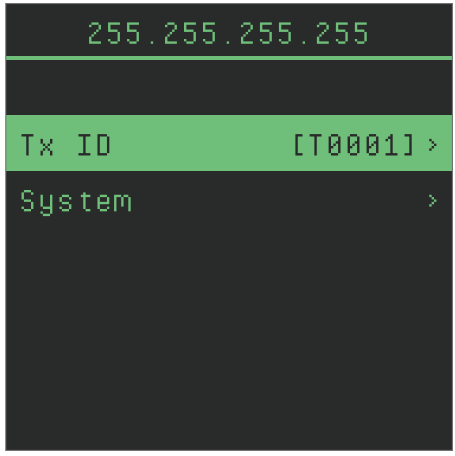
- Press and hold any button for 3 seconds to unlock the OSD (if it is locked).
- Press any button once to wake up the backlight and display the OSD. The screen backlight goes off again only if the OSD is locked and no operation occurs for 10 seconds.

Note: When the screen is unlocked, the backlight remains on during normal operation and does not turn off after 10 seconds of inactivity.

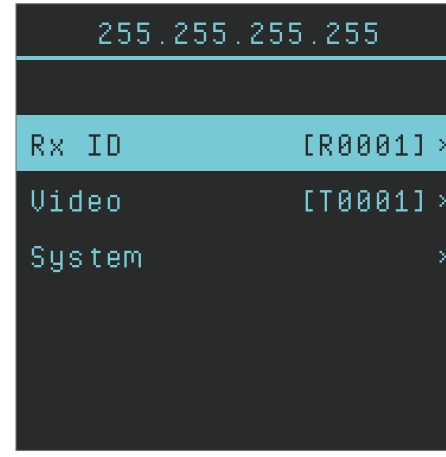
Main Menu

Once the LCD display is unlock, the main menu shows up.

VE8662 Transmitter Main Screen

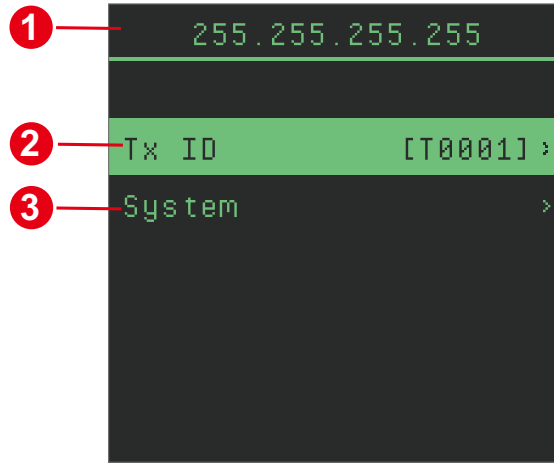


VE8662 Receiver Main Screen



VE8662T

The VE8662T main menu displays the unit's IP address and provides two menu options:

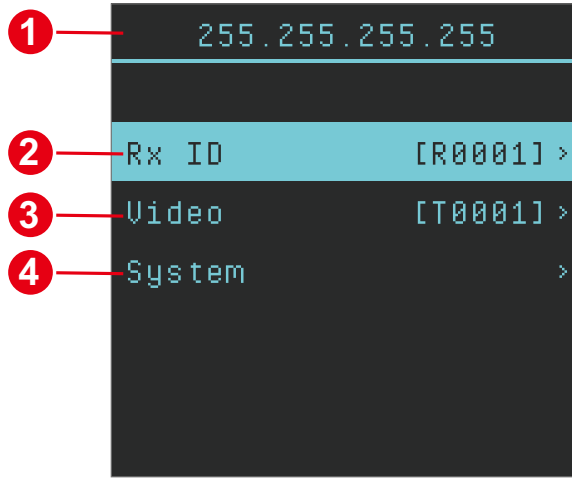


No.	Item	Description
1	IP address	The IP address of this VE8662T.
2	Tx ID	The device ID of this VE8662T. Enter the option menu to change the unit's ID.
3	System	A set of system configuration options available for users to view and perform. Access the options menu for further actions

Use the navigation buttons (prev. / next) to select a main menu option, then press **Enter** to access the option menu.

VE8662R

The VE8662R main menu shows the unit's IP address and provides three selectable menu options:



No.	Item	Description
1	IP address	Shows the IP address of this VE8662R.

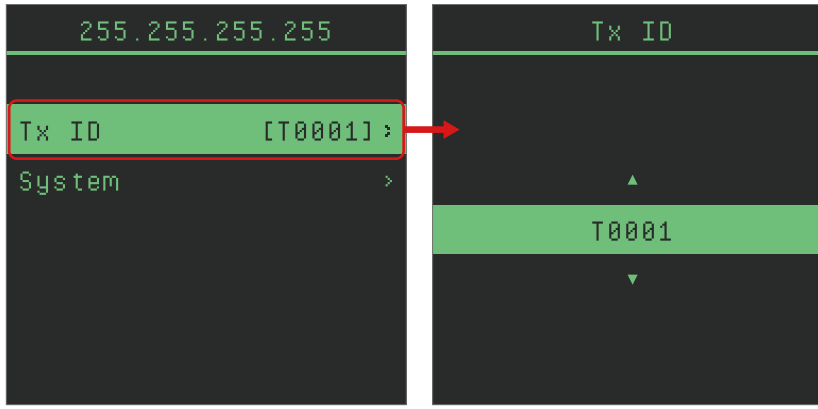
No.	Item	Description
2	Rx ID	Shows the device ID of this VE8662R. Enter the option menu to change the unit's ID.
3	Video	Displays the current input video source to which the VE8662R is connected. Enter the options menu to set the layout mode to either **Quadview** or **Single View**. When **Single View** is selected, you can further choose an available input video source.
4	System	Offers a set of system settings for user to check and execute. Enter the option menu for more operation.

Use the navigation buttons (prev / next) to select a main menu option, then press **Enter** to access the options menu.

Setting Device ID

To set the ID for the VE8662, do the followings:

1. From the main menu screen, select ID to enter the Tx / Rx ID screen.



2. The available IDs are listed incrementally. Use the navigation buttons (prev / next) to select an IDs, and press the enter button.

> **Note:** Press and hold the navigation button to boost the speed of menu selection.

3. Select **OK** and press the enter button to confirm your setting, or select **Cancel** to discard the change.

Note: If no available Tx IDs are detected, the OSD displays the message **No available ID**.

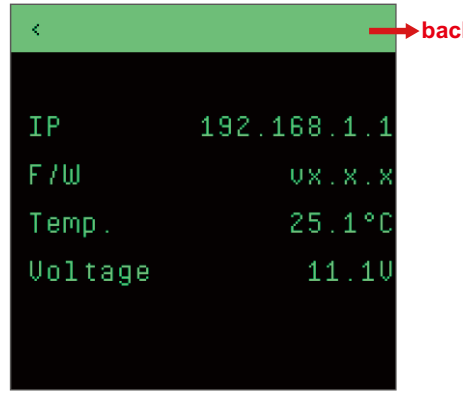
System

The system option menu contains the four options:

No.	Item	Description
1	back	Return back to the previous page.
2	Info	Check the following information of this unit: ◆ IP address ◆ firmware version ◆ device temperature ◆ voltage
3	Reset to default	Restore the unit to the factory default.
4	Reboot	Switch off the unit and then immediately start it again.

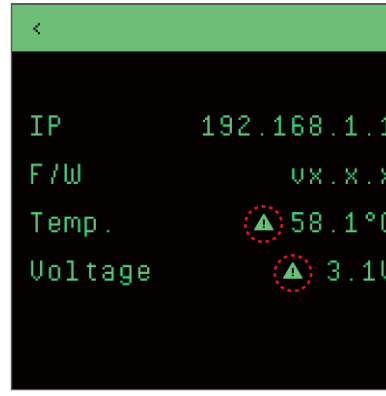
Info

Access the info page to check the unit's information.



Item	Description
back	Select the option **<** (back) to go back to the previous page.
IP	Shows the unit's IP address.
F/W	Shows the current firmware version of this unit.
Temp.	Shows the current temperature of this unit.
Voltage	Shows the current voltage of this unit.

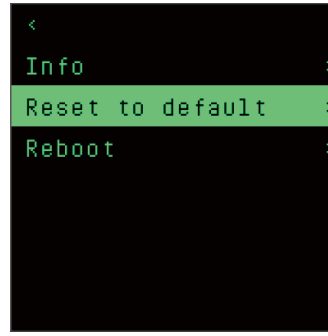
Please note that a warning sign will be displayed if a temperature or voltage anomaly is detected.



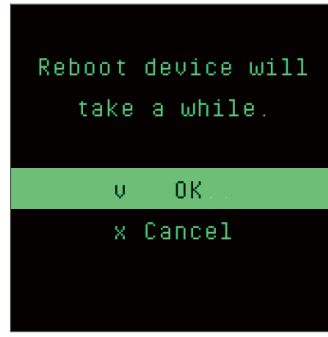
Reset to default

To restore the VE8662 to the factory default, do the following:

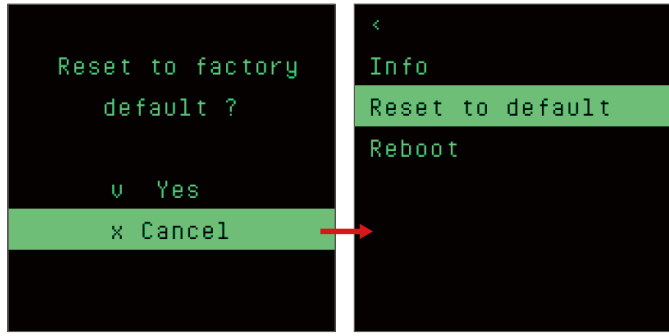
1. Use the navigation buttons (prev / next) to select the option **Reset to default**, and then press the enter button.



2. On the confirmation screen, select **OK** to perform the reset.



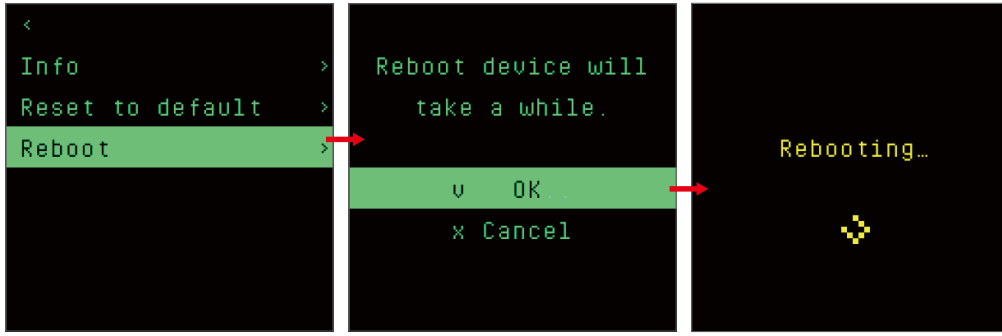
Note: By selecting **Cancel**, you will go back to the system option menu screen.



3. The reset process begins and will take a few seconds to complete. Once finished, the unit will reboot and you will be taken to the main menu screen.

Reboot

To reboot the VE8662 unit, access the system option menu, select **Reboot**, and confirm your selection.

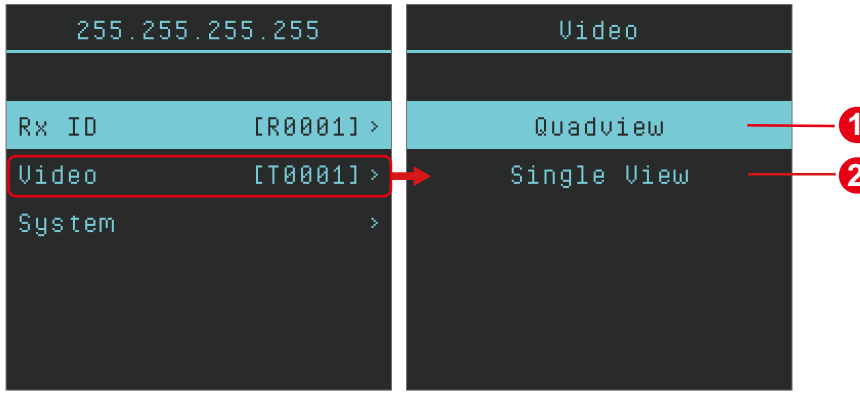


Assigning Input Video Source to VE8662 Receiver

The VE8662R supports two layout modes for displaying video sources—**Quadview** and **Single View**. Go through the following sections to learn how to select or change the layout mode and assign input sources.

Selecting the Layout Mode

From the main menu, select **Video** to enter the layout selection screen. Use the navigation buttons (prev / next) to choose between **Quadview** and **Single View**, then press Enter.

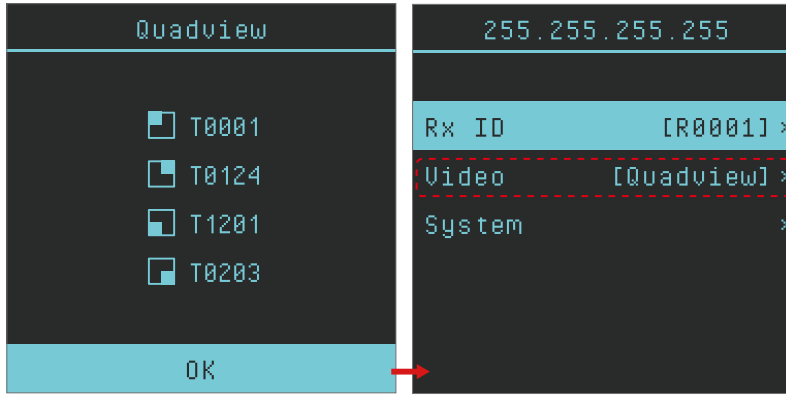


No.	Item	Description
1	Quadview	Displays up to four available video sources simultaneously.
2	Single View	Displays a single selected source, which can be from a VE8662T or an IP Camera.

Note: When **Quadview** is selected, the layout is fixed. You cannot switch to another layout until it is manually changed to **Single View**.

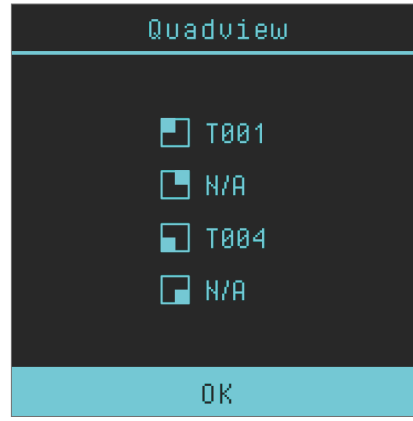
Quadview Layout

When entering the **Quadview** page, the layout mode is automatically set to **Quadview**, and the OSD lists the four available sources currently linked to the receiver.



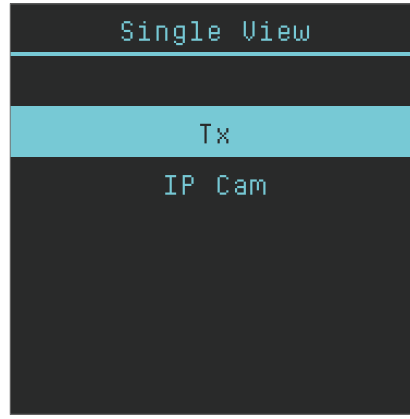
In **Quadview** mode, the video arrangement is defined by the **VE Manager**. The OSD only allows confirmation, not individual source assignment.

- If no predefined Quadview layout has been configured from the **VE Manager**, the LCM displays **N/A** for the unavailable channels.



Single View Layout

When entering the **Single View** page, the layout mode is automatically set to Single View. Once **Single View** is selected, you can choose to display video from either a VE8662T transmitter or an IP Camera source. Enter the **Single View** menu, and select **Tx** or **IP Cam**.



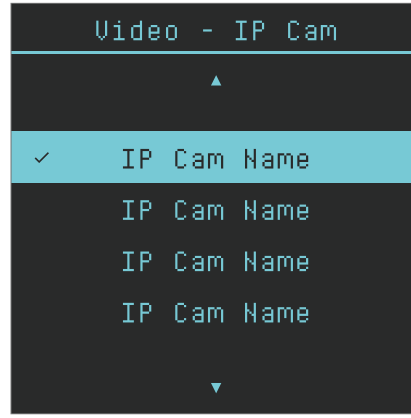
TX List

If **Tx** is selected, the **Tx** list screen appears, showing available transmitter device IDs.

- Use the navigation buttons (prev / next) to select a source, then press **Enter** to confirm.The currently-connected video source is marked with a tick.

Note: Press and hold the navigation button to boost the speed of menu selection.

IP Camera Source



If **IP Cam** is selected, the **IP Cam** list screen appears, showing registered IP camera sources.

Select one and press **Enter** to confirm.

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Chapter 4
Browser Web Control

Overview

The VE8662 transceiver can be remotely and centrally managed using **ATEN VE Manager**, a built-in web-based graphical user interface (web GUI). Accessed through a standard web browser, the **VE Manager** provides a central platform that allows you to configure transmitter and receiver settings.

Note: The **VE Manager** and the web GUI refer to the same management interface.

Supported Browsers

Please see the table below for supported web browsers and the versions.

Web Browser	Supported Versions
Google Chrome	109 or later
Mozilla Firefox	131 or later
Microsoft Edge	128 or later
Opera	113 or later
Safari	18.1 or later

Getting Started

Go through this section to learn about how to access the **VE Manager** and manage your VE8662 transceivers.

Looking Up the Device IP Address

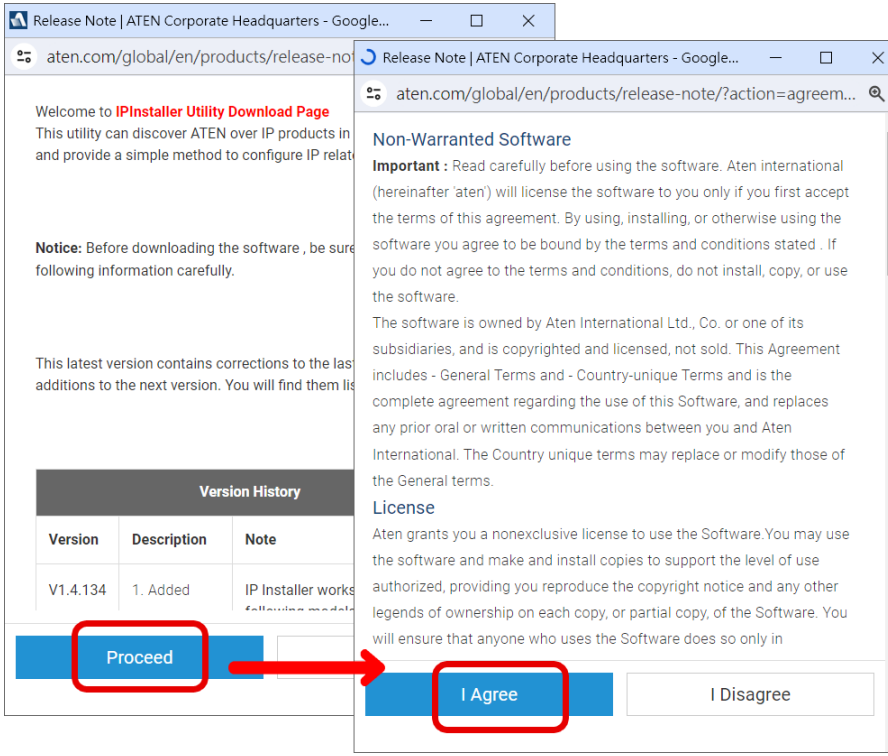
To access **ATEN VE Manager**, you need to get the device IP address first.

Note: No matter which unit you log in to, you will redirect to the current master unit.

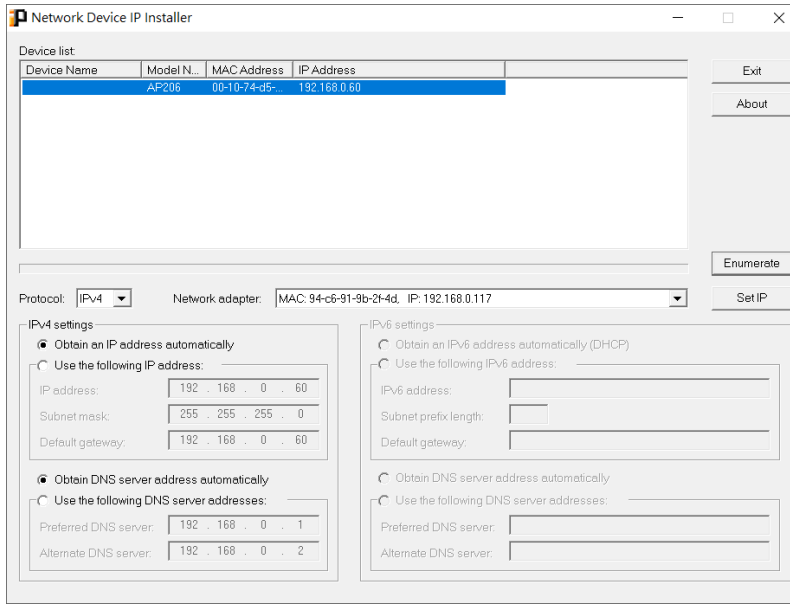
IP Installer

Follow the steps below to get the device IP address using the ATEN utility program, **IP Installer**.

1. Download the utility **IP Installer** from the *Support and Download* tab of the product page.

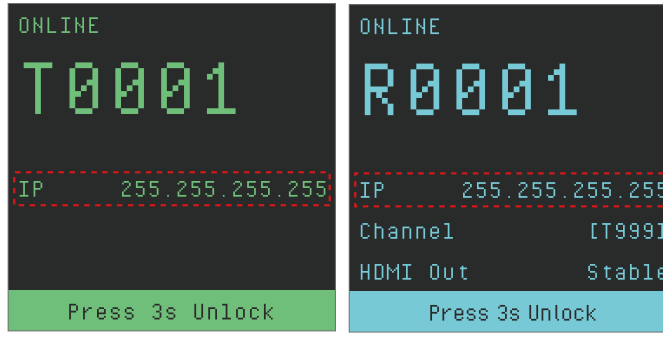


2. Unzip the .zip file of the IP Installer and then run the .exe file.
3. Obtain the IP address of the unit from the Device List, and use this IP address to access the unit's VE Manager.



Device OSD

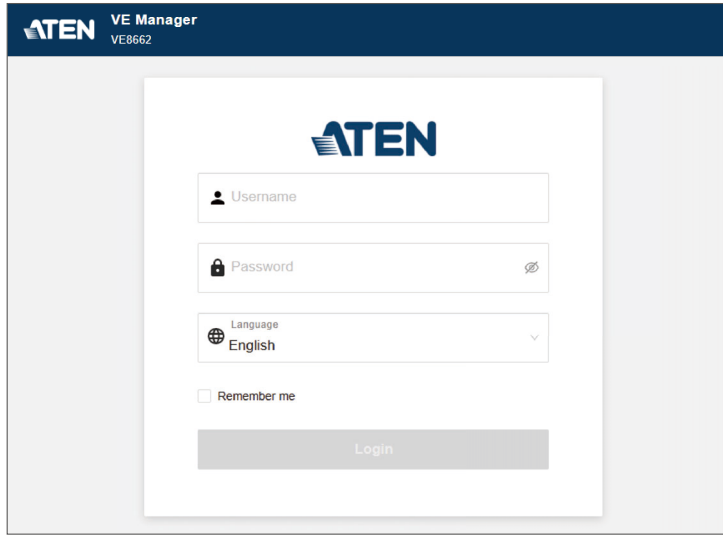
The device IP address is shown on the OSD. Check your device to obtain the IP address:



Logging In

Follow the steps below to log in to the **VE Manager**:

1. Start up the supported web browser, and then input the unit's IP address into the address bar.
2. The login page shows up. Enter your username and password (the default credentials are **administrator** and **password**), select the display language, and then click on **Login** button to continue.



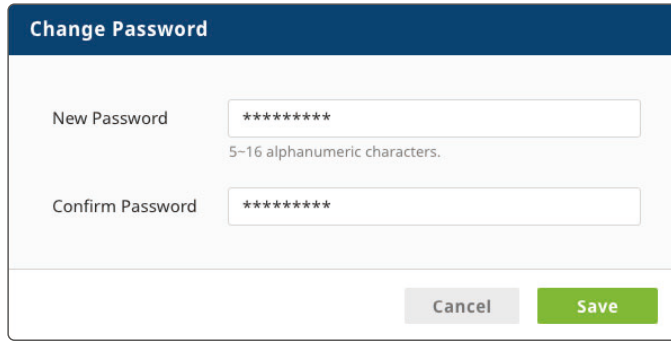
First Login

Upon first login (including the first time you log in to the **VE Manager** after resetting the unit), you are required to set up the following settings:

1. Changing Password

   a) You are prompted to change the login password. Click **OK** to proceed.

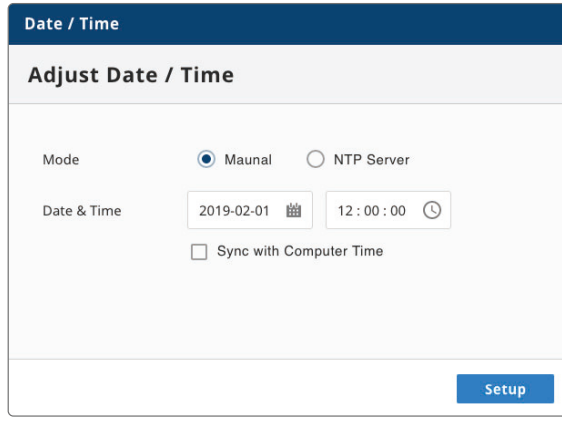
b) Enter the new password and confirm your changed password in the relevant fields. Click **Save**.



c) A message “Password changed successfully” will be displayed. Click **OK** to log in again using the new password.

2. Updating Date & Time

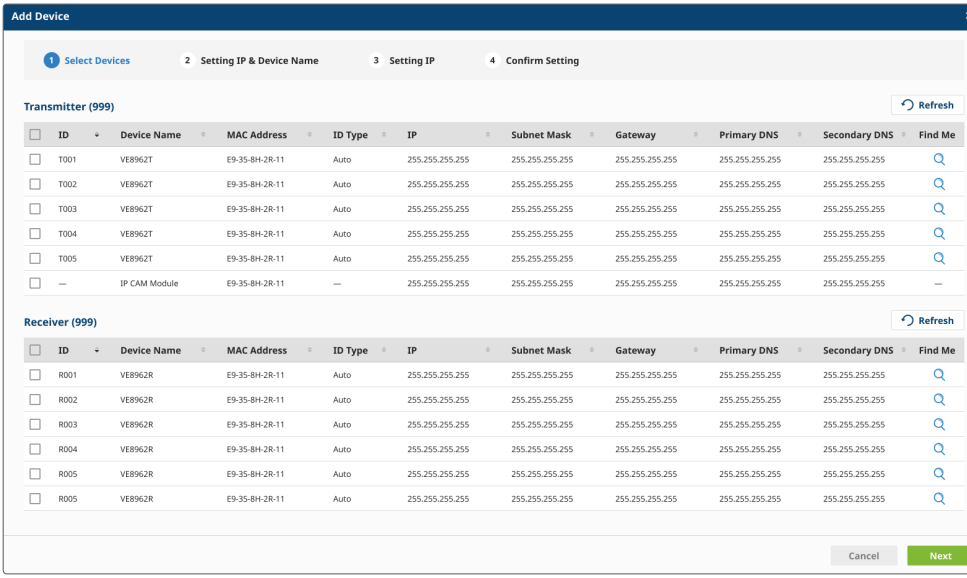
Select the mode to set up the date and time.



Settings	Description
Mode	Select between the two modes: ◆ Manual: Set the date and time manually. By selecting **Manual**, the function **Date & Time** below becomes available. Choose the date and time from the date picker and time picker. ◆ NTP Server: Set the Network Time Protocol (NTP) to synchronize the clock between the unit and the server.
Date & Time	Set the date and time from the date picker and time picker. **Note:** The function is only available when Manual mode is enabled.
Sync with Computer Time	If you wish to synchronize the time with the computer's time, click the button to process the settings.

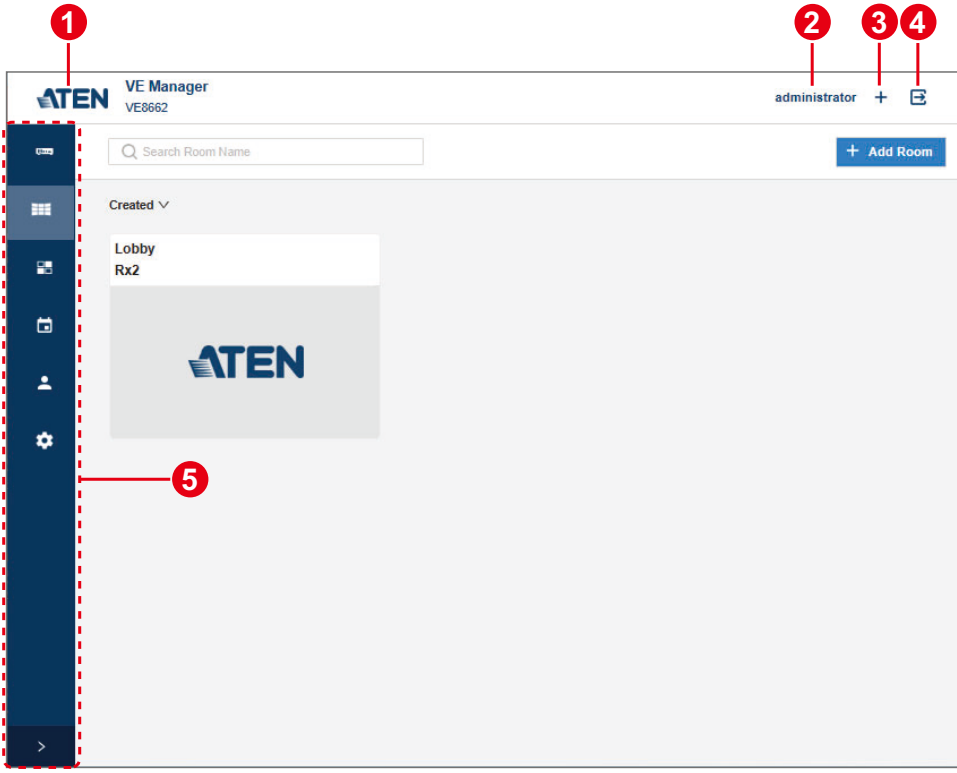
3. Adding Devices

Follow the on-screen instructions to add device(s) to be controlled and managed. See *Adding Device*, page 46 for details.



Main Screen

Once you log in to the unit's **VE Manager**, you will enter the **Room** page. The main screen features the following functions:

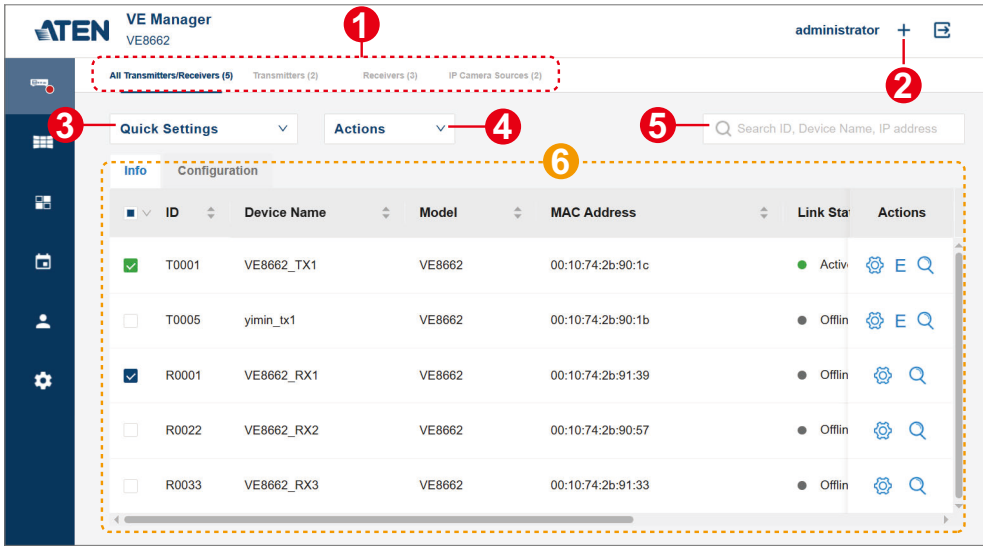


No.	Item	Description
1		Click on the ATEN logo that takes you straight to ATEN's official website.
2	signed-in account	Shows the account you use to log in to the VE Manager.
3	device list	Click to open the device list
4	logout	Click to log out and you will redirect to the login page.

No.	Item	Description
5	side menu	Click to access other pages: ◆  **Device**: Displays all connected VE8662 transceivers and added IP camera sources for status monitoring, configuration, and batch management. ◆  **Room**: Provides an overview of all virtual rooms, including the default Lobby and user-created rooms. Administrators can create, rename, or delete rooms, assign receivers or video walls, and access detailed configuration pages for device layout and routing control. ◆  **Matrix**: Provides configuration of audio routing in the Audio tab and RS-232 data routing in the CLI-Bypass tab. ◆  **Schedule**: Lets you create and manage scheduled tasks in calendar or list view, with options for time range, repeat, and profile selection. ◆  **User**: Enables administrators to create and manage user accounts with different access levels for system functions. ◆  **Maintenance**: Allows administrators to configure system time, manage device settings, upgrade firmware, perform data backup and restore, and upload SSL certificates for secure connections.

Device

The Device page lists your VE8662 units as illustrated below.



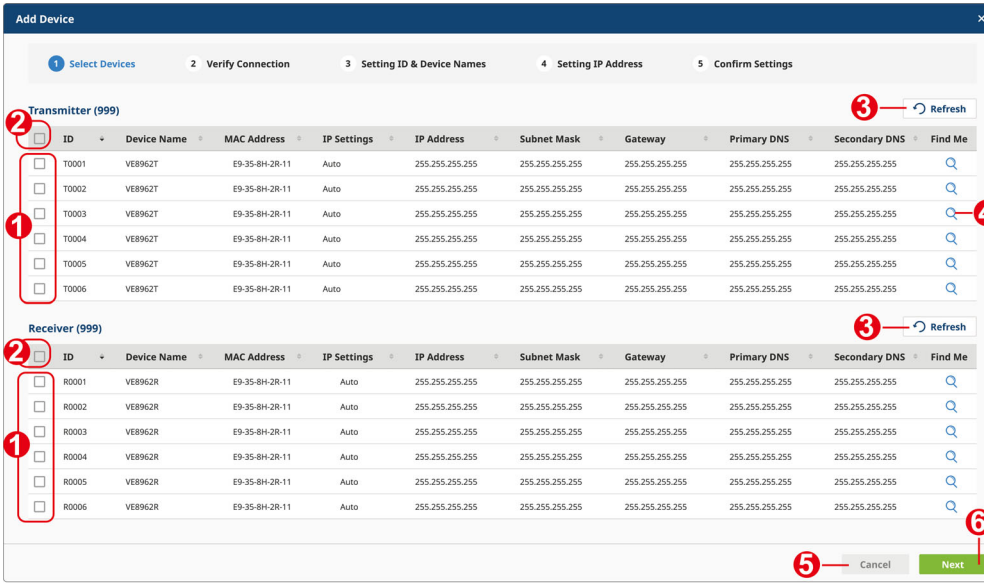
No.	Item	Description
1	tab bar	Click to enter the tab page to list your devices by: ◆ **All Trasmitters / Receivers**: all the VE8662 units ◆ **Transmitter**: only the VE8662 transmitters ◆ **Receiver**: only the VE8662 receivers ◆ **IP Camera Source**: the IP camera streams
2	add device	Click on the add device button + to open **Add Device** popup to select the VE8662 unit(s) you'd like to add to your VE Manager.
3	quick settings menu	Select your VE8662 unit(s) from the device list and then choose the setting to be configured for the selected device(s).
4	actions menu	Select your VE8662 unit(s) from the device list and then choose the action to be taken on the selected device(s).

No.	Item	Description
5	search bar	Enter a keyword to find the VE8662 unit or an IP camera source you need.
6	device list	Displays all VE8662 units along with their information, or lists the IP camera sources. The **Info** tab shows the device or stream information, while the **Configuration** tab (for VE8662 units only) provides editable details and settings.

Adding Device

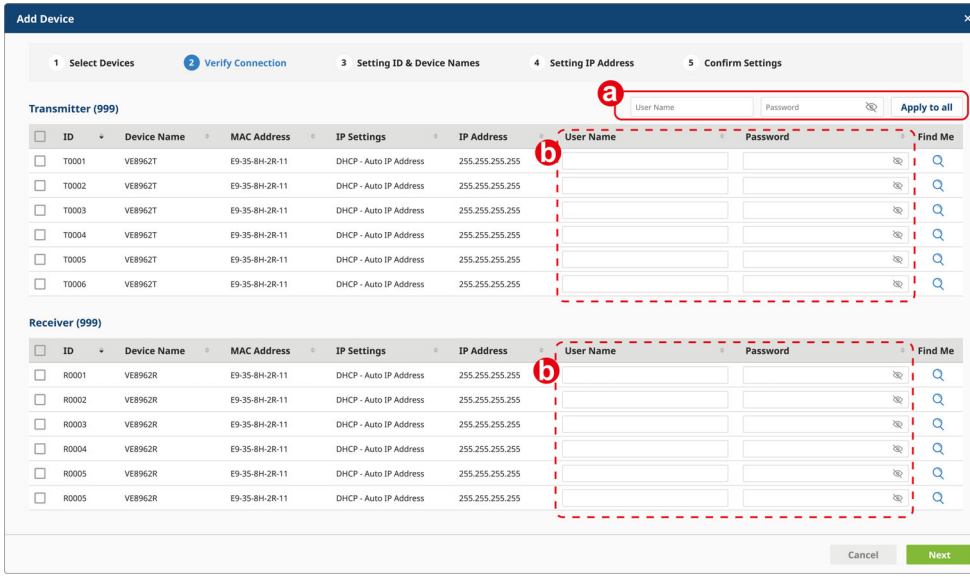
To add more VE8662 units to the VE manager for centralized management, do the following:

1. Click on the add device button + to open **Add Device** popup.
2. Select the device(s) to be added by checking the checkbox(es), and then click **Next**.



No.	Item	Description
1	checkbox	Selects the transmitter(s) / receiver(s) you'd like to add to the VE Manager.
2	select all	Selects all the transmitter(s) / receiver(s).
3	refresh	Updates the available device list.
4	find me	Makes the LED of the selected unit(s) blink to help user find where the unit(s) is located.
5	cancel	Discards the adding device process and close the adding device popup.
6	next	Goes to the next step.

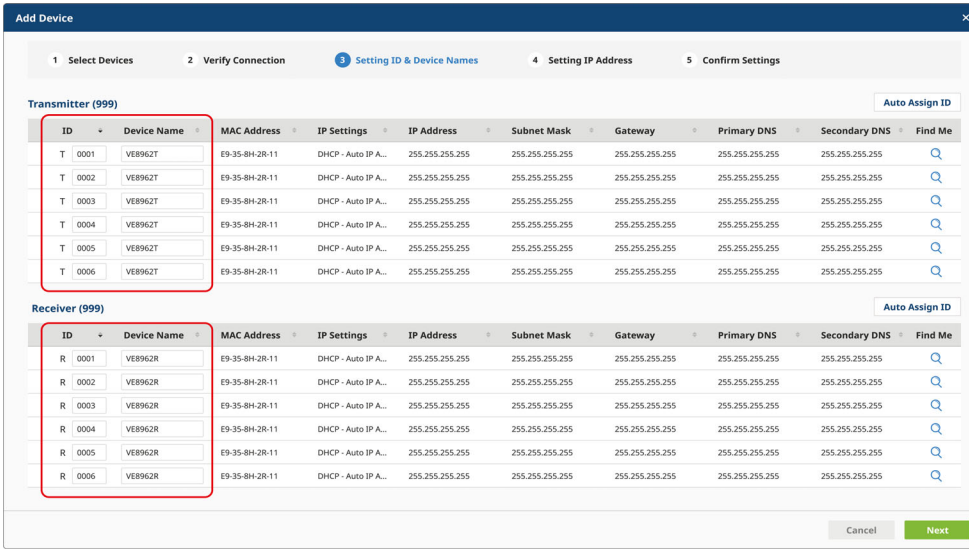
3. Enter the VE Manager login credentials (user name and password) to verify the connection.



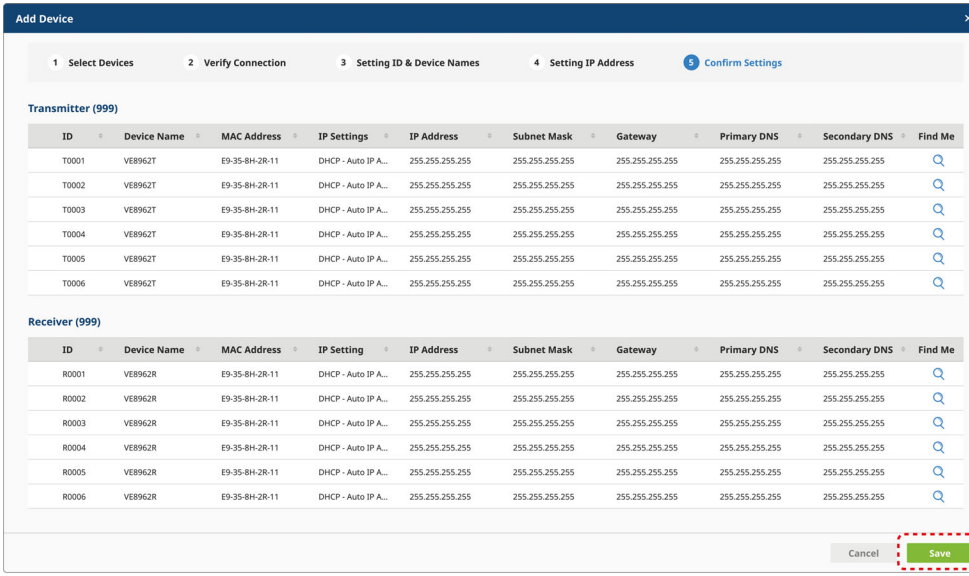
a) Enter the credentials in the top fields and click **Apply to all** to automatically fill in the same credentials for all VE8662 units.

b) Alternatively, enter the credentials individually in each row. You can assign different accounts and passwords to different VE8662 units.

4. Follow the on-screen instruction to configure the device ID, the device name, and device IP address.



5. Confirm your configuration and click **Save** to add the selected device(s).

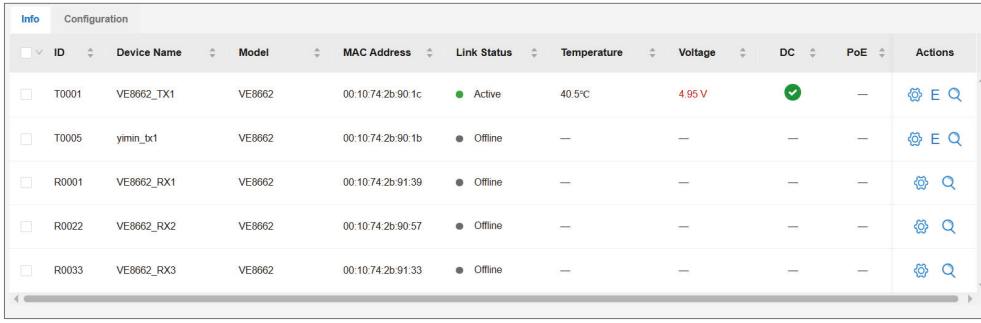


6. Now you can find the VE8662 units you just added on the device list.

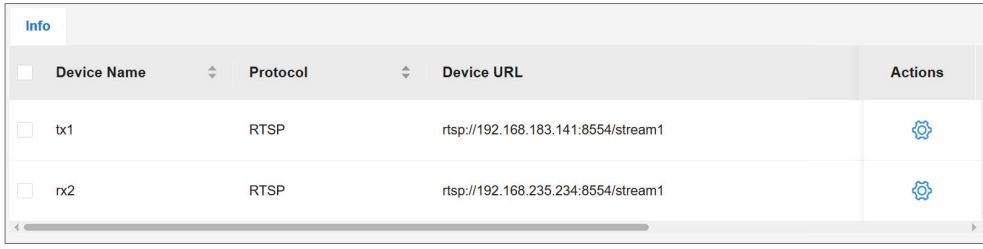
Device List

The device list itemizes all VE8662 units and IP camera sources for you to check and manage. The **Info** tab provides the device or stream information, while the **Configuration** tab (available for VE8662 units only) contains the editable settings.

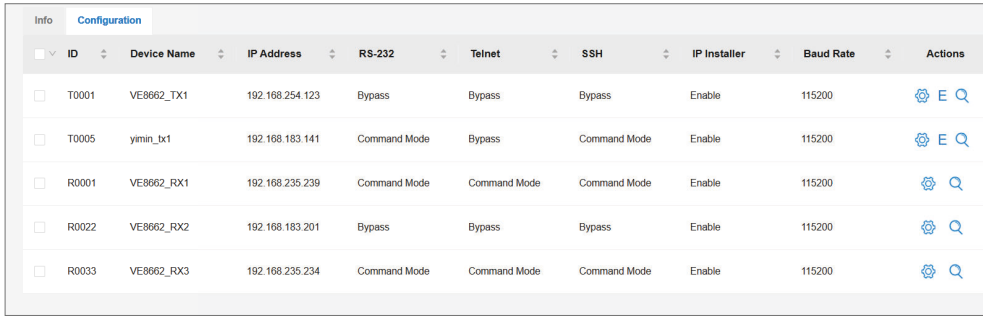
- **Info Tab:** VE8662 Units



- **Info Tab:** IP Camera Source

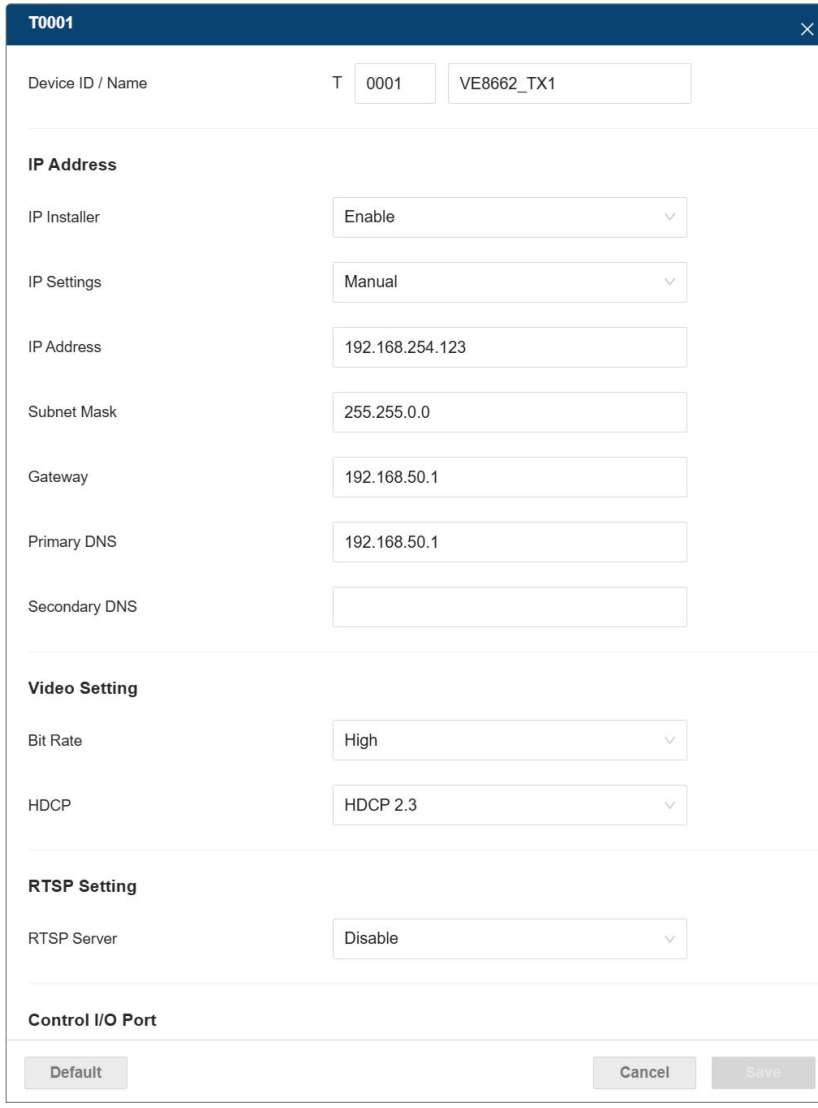


Configuration Tab: VE8662 Units Only



VE8662 Unit Configuration Window

Double-click on a unit to open the unit's configuration window. Make change of this unit and save to apply the changes.

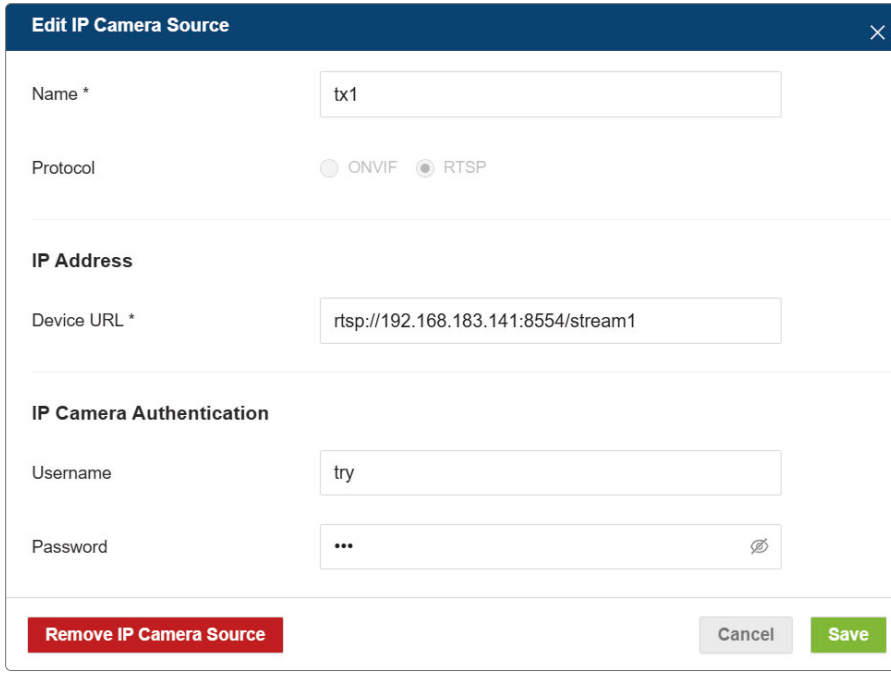


Note: If a device is offline, its configuration window cannot be opened.

Edit IP Camera Source Window

Double-click an IP camera source to open its configuration window.

You can edit the source information and authentication details, then click **Save** to apply the changes to the **VE Manager**.



These settings are stored within the VE Manager and do not depend on the IP camera's online status.

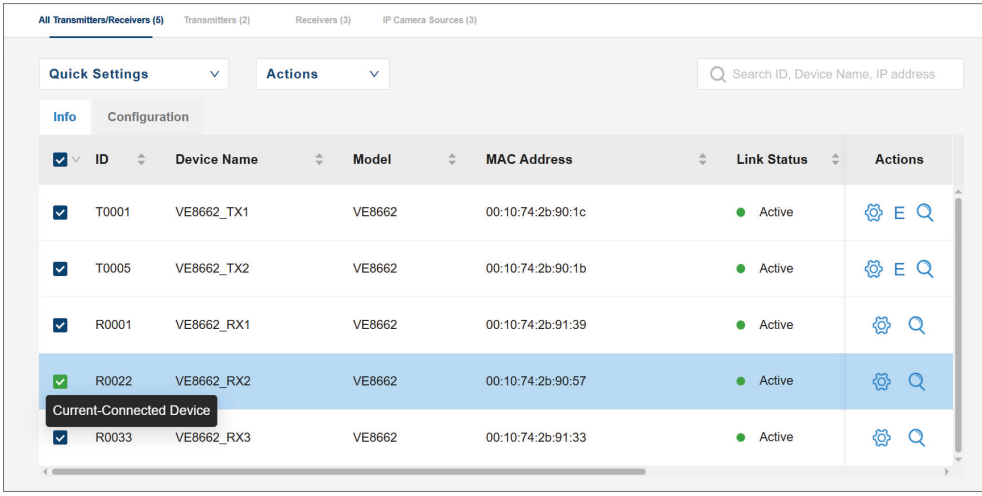
Action Buttons

You can click on the action buttons to directly perform the following actions:

Action		Description
	Edit Device	Opens the device's configuration window to make changes.
	EDID	Opens the EDID configuration window for the selected transmitter. You can choose to apply the **ATEN Default** EDID or copy the EDID from a connected receiver display device.
	Find Me	Makes the LED of the selected unit(s) blink to help user find where the unit(s) is located.

Checkbox Color Indication

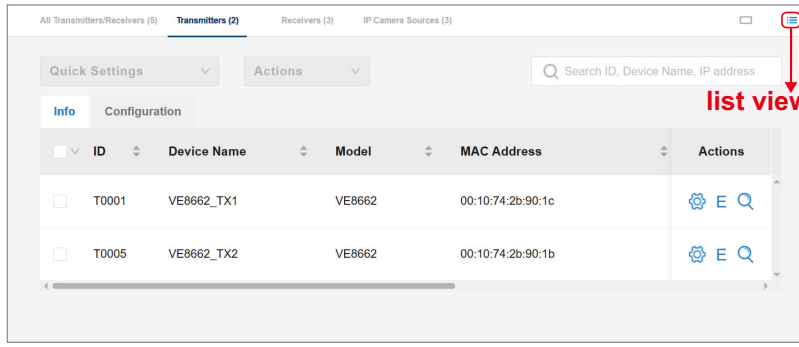
Please note that if the current-connected device (the current master unit) is selected, its checkbox is presented in green.



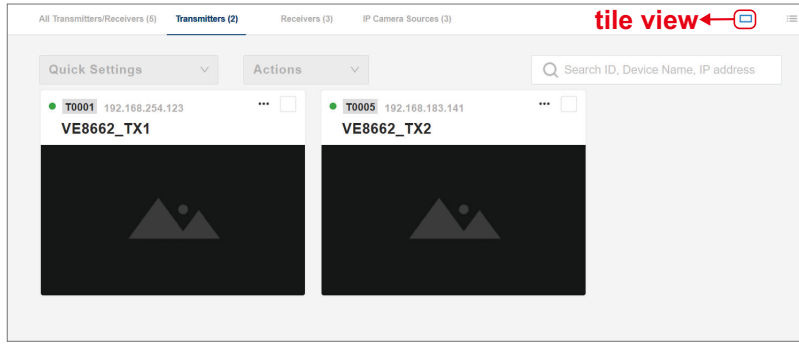
Transmitter Tab Page

On **Transmitter** tab page, you can switch the device list display between list view and tile view:

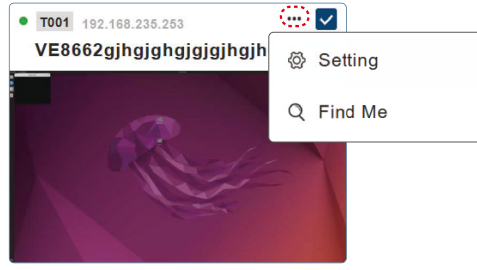
- List View :



- Tile View :



In the tile view, click the more button on the tile card of the transmitter to open an option menu for the following operation:

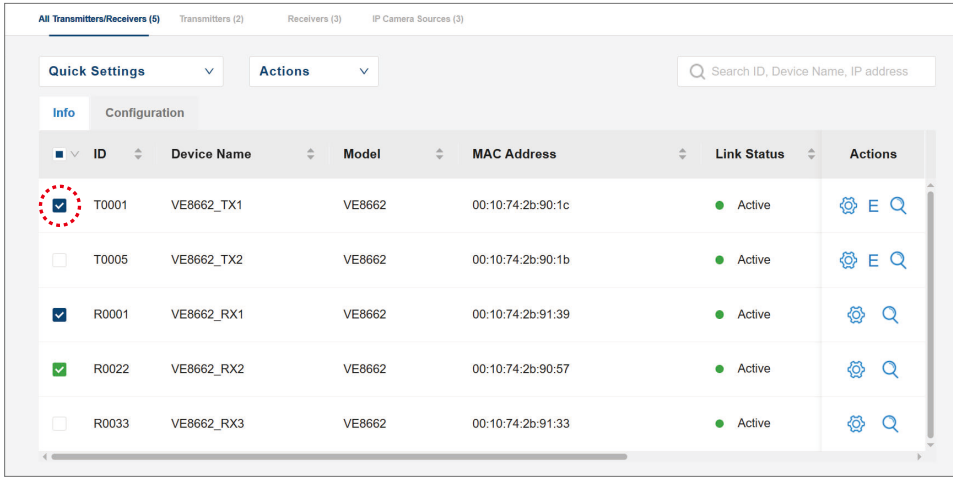


Item	Description
Setting	Opens the unit's configuration window to make changes.
Find Me	Makes the LED of the selected unit(s) blink to help user find where the unit(s) is located.

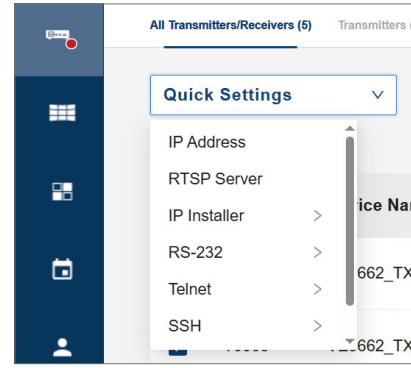
Quick Settings Menu

To quickly get a specific setting done on the VE8662 unit(s), do the following:

1. Select one or more units by checking the checkbox(es) from the device list.

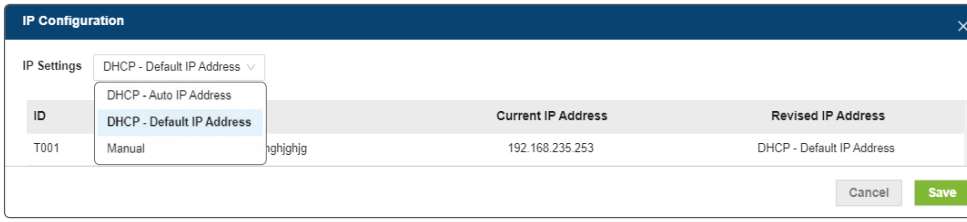


2. From **Quick Settings** drop-down menu, select the setting option you'd like to configure.



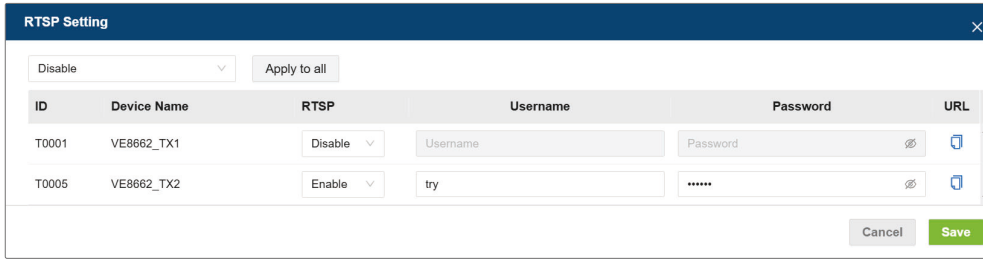
IP Address

Specifies how the transmitter obtains its IP address. Options on **IP Settings** drop-down menu are:



- DHCP–Auto IP Address:
  Select this option to have the IP address automatically assigned by a DHCP server.
- DHCP–Default IP Address:
  Select this option to have the IP address automatically assigned by the VE Manager.
- Manual:
  Select this option to designate an IP address for the device. Manually type the IP Address, Subnet Mask, and Gateway for the device.

RTSP Server



Enables or disables the RTSP streaming service on the selected transmitter(s).

When enabled, each transmitter functions as an RTSP server and provides a streaming URL that can be used by the third-party RTSP clients to access its video stream.

The default status is **Disable**.

IP Installer

Select the mode to define how the selected device(s) works with the ATEN's utility, IP Installer.

- Enable:
  The unit's IP address can be found by IP Installer and configured through the Set IP function of IP Installer.
- View Only:
  The unit's IP address can be found by IP Installer, but it cannot configured through IP Installer.

RS-232

Enable or disable the configuration and control of the VE8662 unit via RS-232 commands when connected to a host computer or other device, such as a control system. Select the operating mode of the input interface.

- Command Mode: Used for receiving command input.
- Bypass: Used for forwarding input data.

Telnet

Enable or disable the configuration and control of the VE8662 unit via Telnet commands when connected to a host computer or other device, such as a control system. Select the operating mode of the input interface.

- Command Mode: Used for receiving command input.
- Bypass: Used for forwarding input data.

SSH

Enable or disable SSH control of the VE8662 unit. Select the operating mode of the input interface.

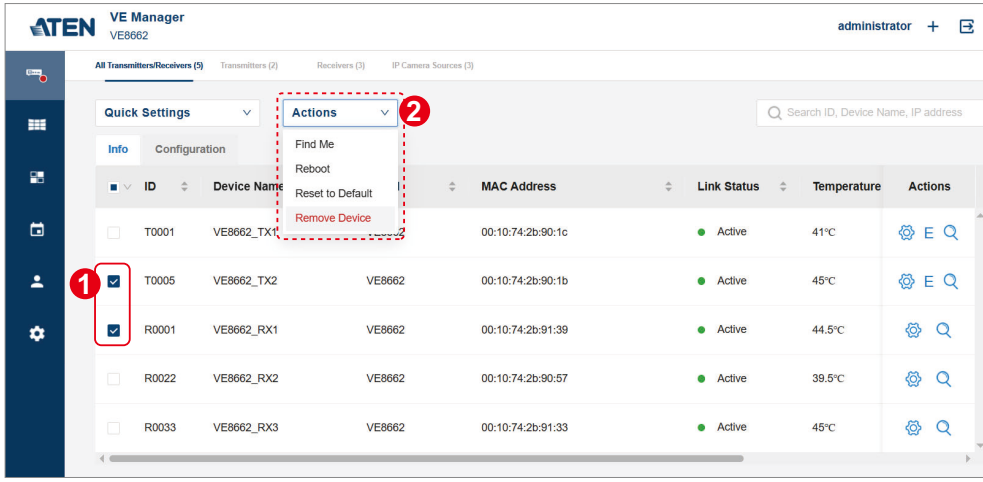
- Command Mode: Used for receiving command input.
- Bypass: Used for forwarding input data.

Baud Rate

Select a suitable baud rate between 115200 and 9600.

Actions Menu

To take an action on the selected device(s), do the following:



1. Select the VE8662 unit(s) by checking the checkbox(es).
2. Choose the action to be taken from the **Action** drop-down menu.

Action	Description
Find Me	Makes the LED of the selected unit(s) blink to help user find where the unit(s) is located.
Reboot	Turn off the selected unit(s) and then immediately start it again.
Reset to Default	Restore the selected unit(s) to the factory default.
Remove Device	Remove the selected unit(s) from the VE Manager.

IP Camera Sources Tab

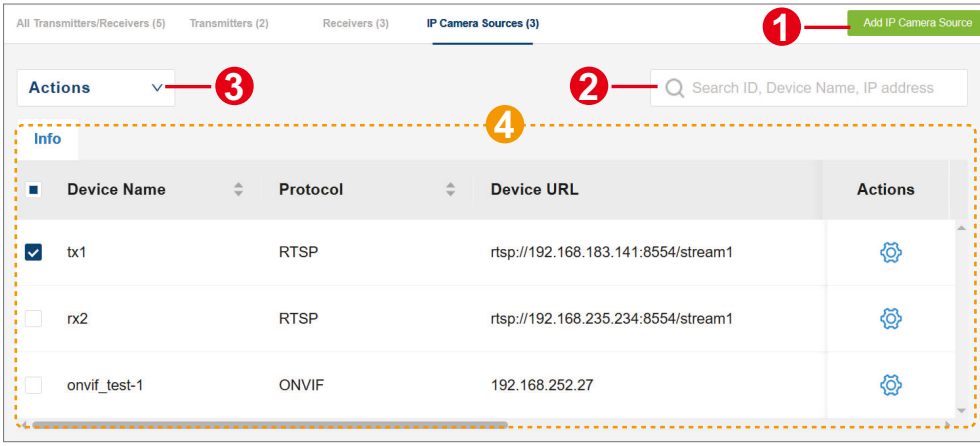
The **IP Camera Sources** tab lists the manually added video streams that are located within the same network segment as the VE8662 units.

The **VE Manager** discovers and connects to IP cameras through local network communication protocols (RTSP/ONVIF). If a camera is on a different subnet or VLAN, it may not be detected or accessed properly.

All IP streams must comply with the H.265 standard for compatibility. B-frames and HEVC tile encoding are not supported. H.264/H.265 streams that use these features cannot be decoded or displayed.

Overview

This tab page allows you to view, add, or manage IP camera streams detected within the same network.

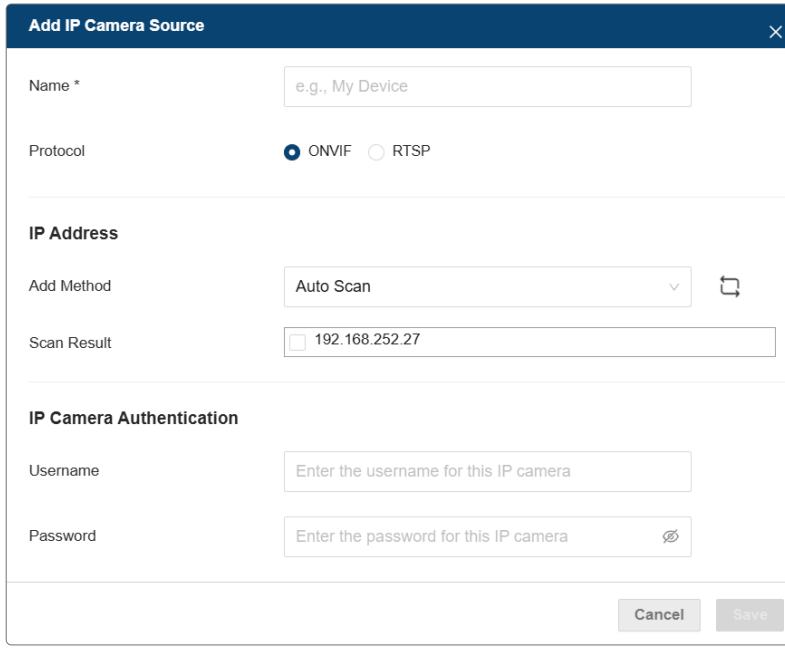


No.	Item	Description
1	Add IP Camera Source	Click the button to add a new IP stream.
2	search bar	Enter a keyword to filter IP streams in the device list.
3	action menu	Select one or more IP streams from the device list and choose an action from the menu.

No.	Item	Description
4	device list	Displays all manually added IP camera sources and their connection details.

Adding a New IP Camera Source

Click **Add IP Camera Source** to open the configuration window and register a new IP camera stream. You can choose between **ONVIF** and **RTSP** protocols, depending on the supported communication method of your camera.

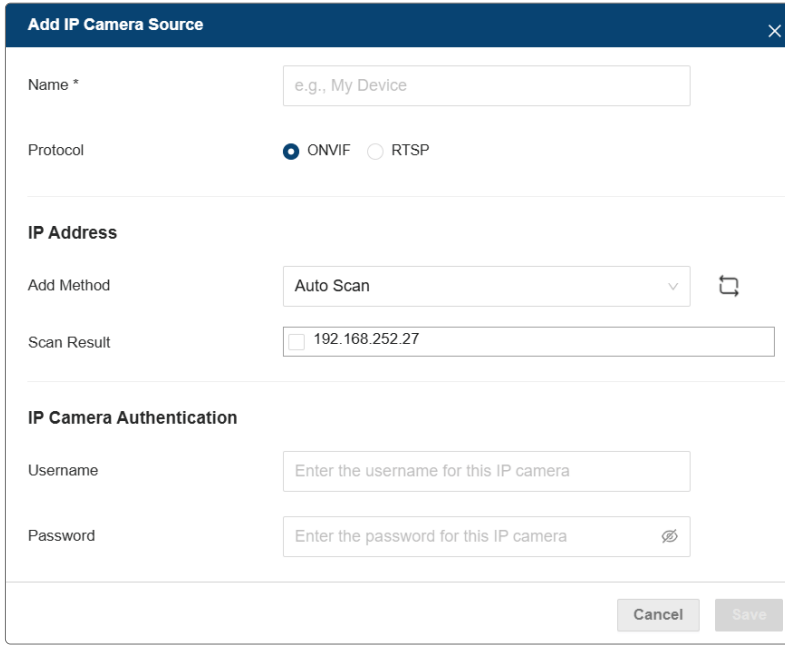


Item	Description
Device Name	Enter a custom name for the camera (up to 30 characters).
Protocol	Select the protocol used for connecting to the camera (**ONVIF** or **RTSP**).

Item	Description
Add Method	Choose how to add an IP address. When **Auto Scan** is selected, the VE Manager detects available ONVIF cameras automatically. For manual input, enter the IP address directly.
Scan Result / Device URL	Displays the detected IP address (ONVIF) or allows manual entry of the RTSP URL.
Username / Password	Enter the login credentials required by the camera for authentication.
Save / Cancel	Click Save to confirm the configuration or Cancel to close the window without saving.

■ ONVIF

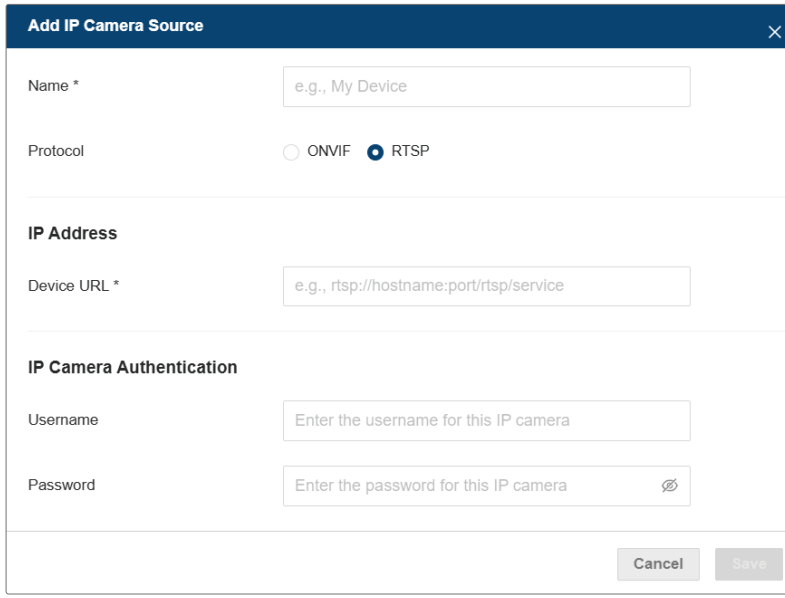
When **ONVIF** is selected, the VE Manager automatically scans for IP cameras within the same network segment.



You can assign a custom device name, verify the detected IP address, and enter the authentication information if required.

■ RTSP

When **RTSP** is selected, you need to manually enter the device URL in the format **`rtsp://hostname:port/rtsp/service`**, along with the username and password for authentication.

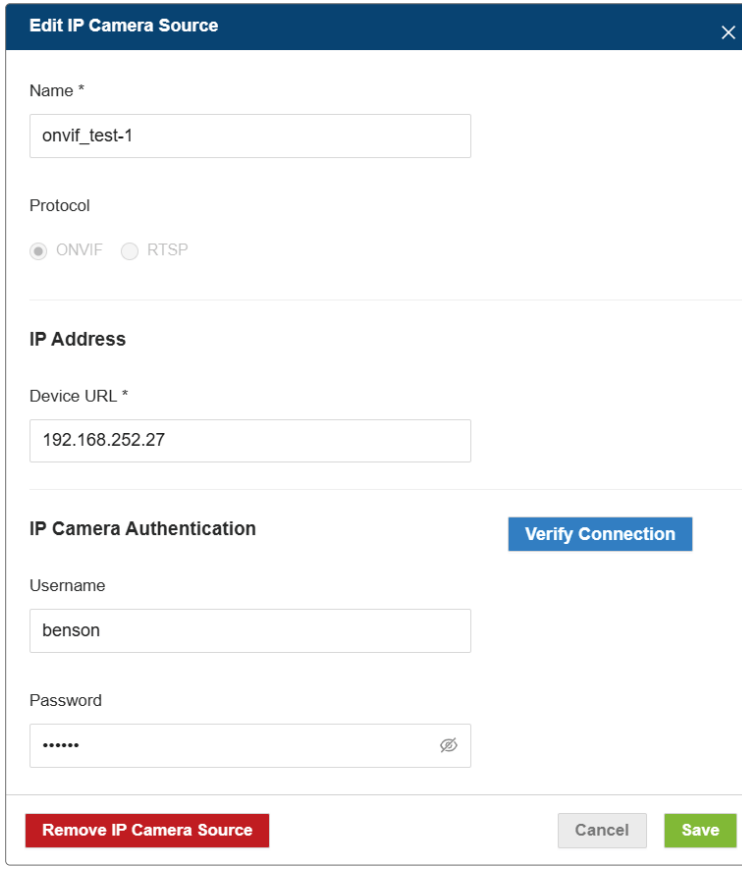


Editing or Deleting an Existing IP Camera Source

You can manage existing IP camera sources from the **IP Camera Sources** tab.

■ **Edit an IP Camera Source**

To edit an IP camera source, double-click the target entry in the device list or click the **Edit IP Camera Source** button under the **Actions** column.

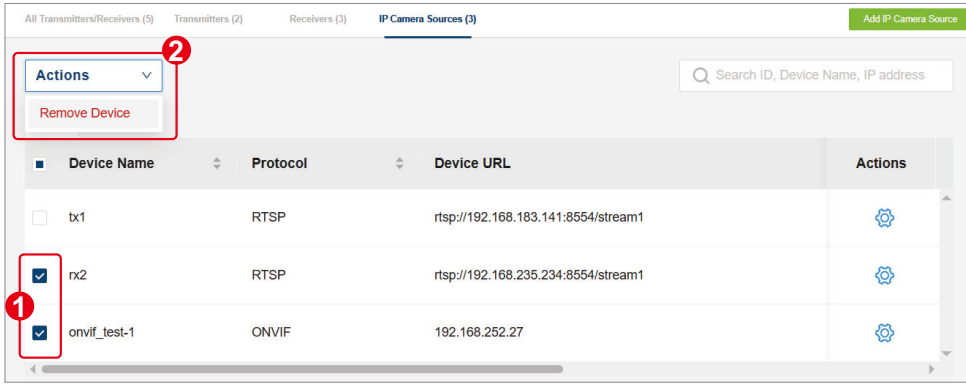


The **Edit IP Camera Source** window will appear, allowing you to modify the device name, IP address, and authentication credentials.

Note:
- The Protocol field cannot be changed once the device has been created.
- The **Verify Connection** button is available only for ONVIF sources. RTSP sources do not support connection verification.

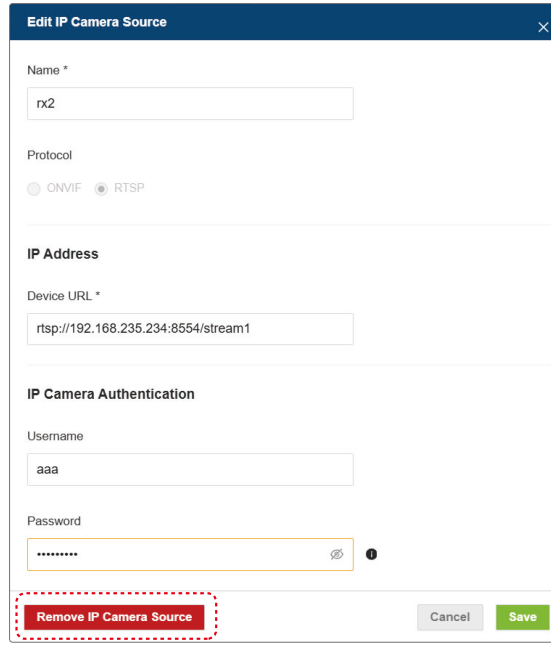
■ Delete an IP Camera Source

To remove one or more IP camera sources:



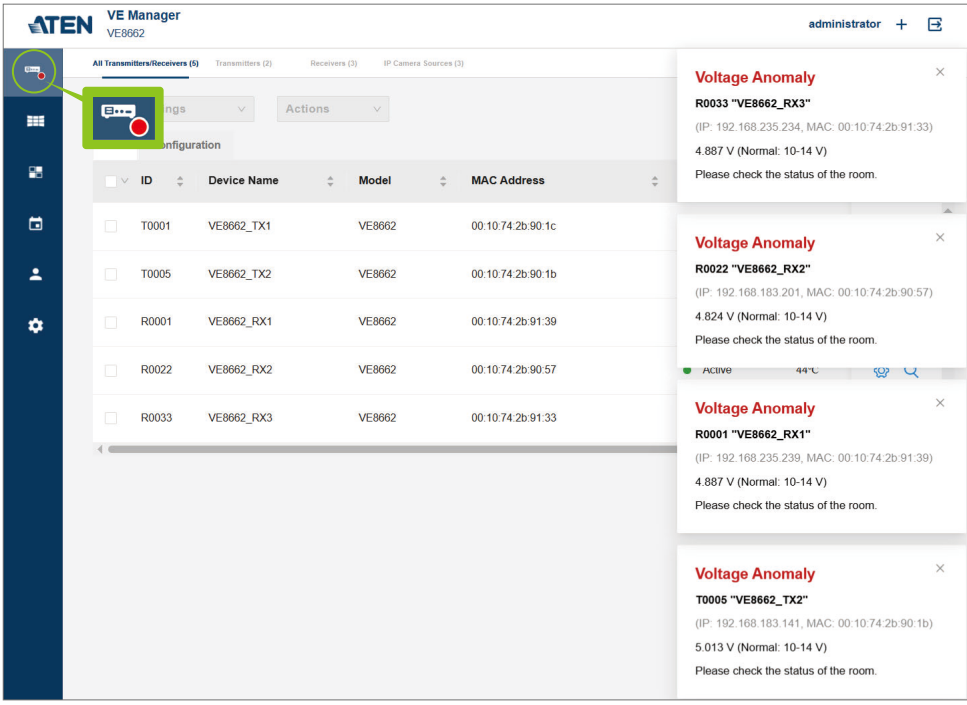
1. Select the desired entries from the list and open the **Actions** drop-down menu.
2. Click **Remove Device** to delete the selected sources from VE Manager.

Alternatively, you can also click **Remove IP Camera Source** at the bottom of the window to delete the currently opened entry.



Critical Notifications

When error occurs on your device(s), a red badge appears next to **Device** icon on side menu. Access **Device** page to check the critical notification.

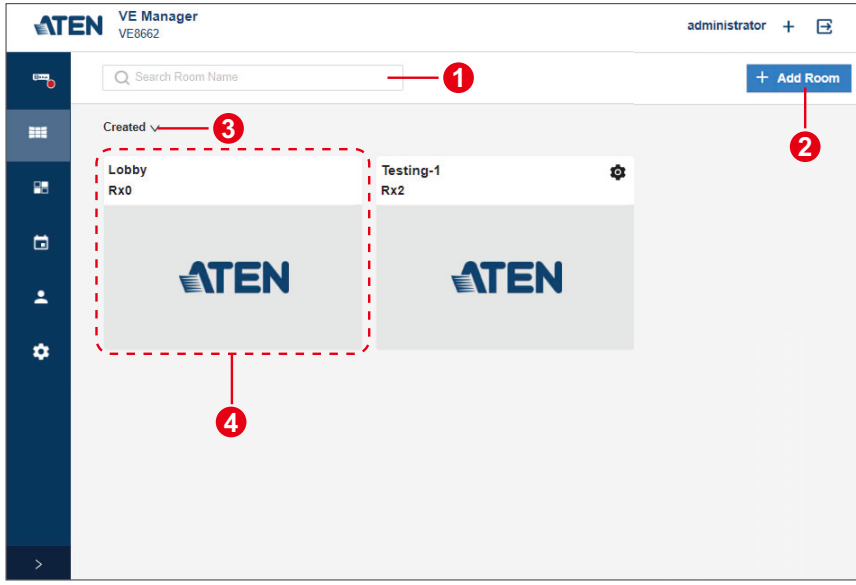


Room Management

A room in ATEN VE Manager is similar to the room mailbox in Microsoft 365. It is virtual and created in the VE Manager, and assigned to a physical location, such as a meeting room, to helps users to manage, operate, and configure the resources (transmitters, receivers, and monitors) that belong to this room.

Room main page displays all the rooms, including the default room **Lobby** and the user-created room. Access the **Room** main page to organize the use of virtual rooms and manage the VE8662 devices.

Note: The default room **Lobby** cannot be deleted and renamed.

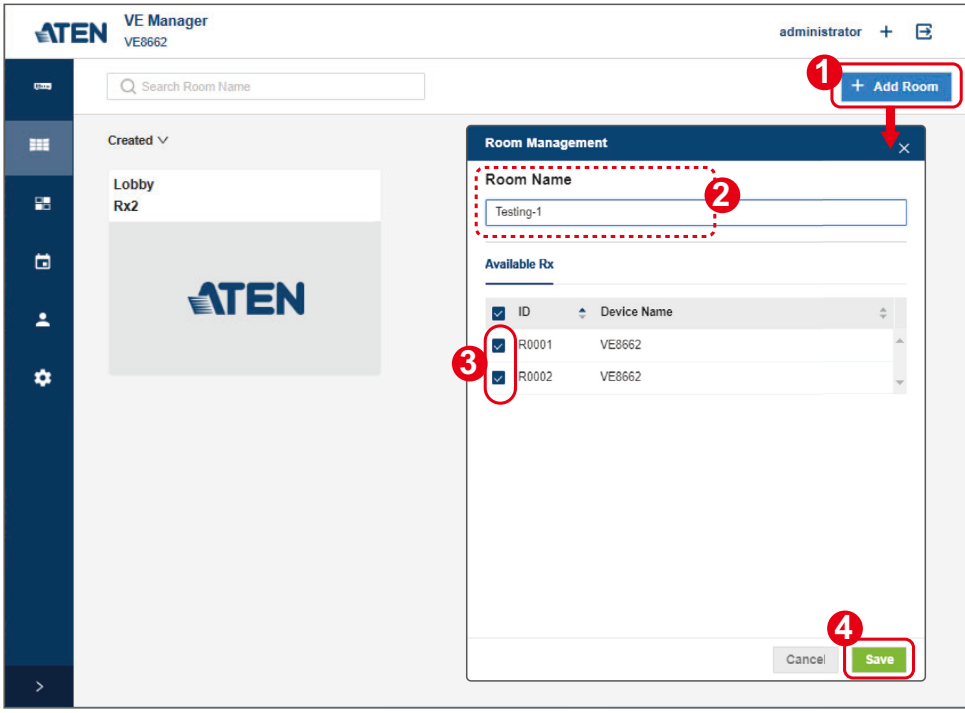


No.	Item	Description
1	search bar	Enter the keyword of the room you'd like to find to quickly display the room cards that fit the keyword.
2	add room	Click the add room button to create a new room.
3	sorting dropdown menu	Select the sort order to display your rooms: ◆ **Created**: Sorting the rooms by their created time. ◆ **A to Z**: Sorting the rooms in A–Z order.

No.	Item	Description
4	room card	Display the basic information of the virtual room. Click on the room card to access the configuration page of this room.

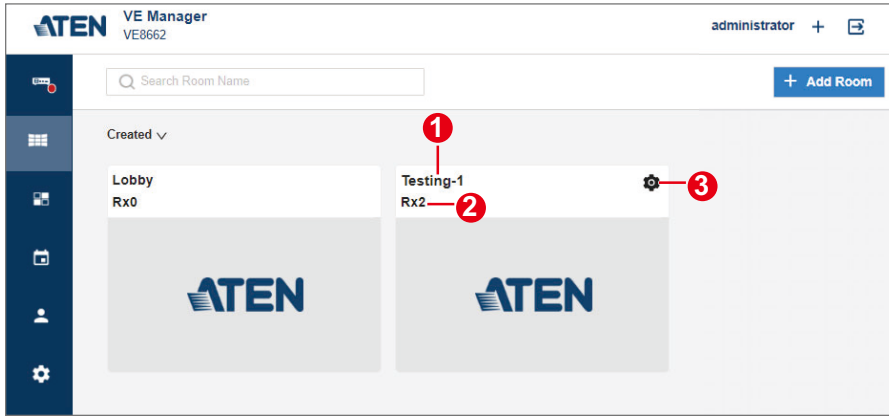
Create a New Room

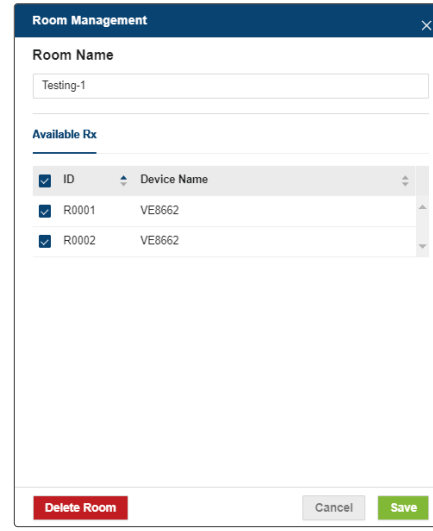
To create a new room, do the following:



1. Click on **Add Room** button to open **Room Management** popup.
2. Name for the room.
3. Assign the available receiver(s) to the room.
4. Click the save button to complete the new room settings.

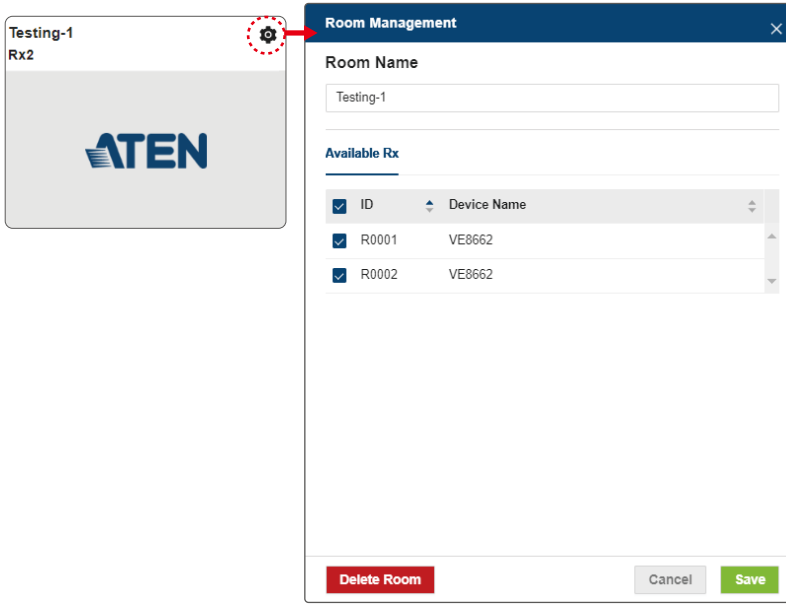
The room is successfully created and its room card is displayed on room list:



No.	Item	Description
1	room name	The name you specify for this room.
2	receiver quantity	The amount of the receiver belongs to this room.
3	room settings button	Opening the room management popup to edit the room or delete the room.  **Note:** This function is not available to the default room, Lobby.

Edit / Remove an Existing Room

To edit the room settings or remove an existing room, click on the setting button to open the room management popup.

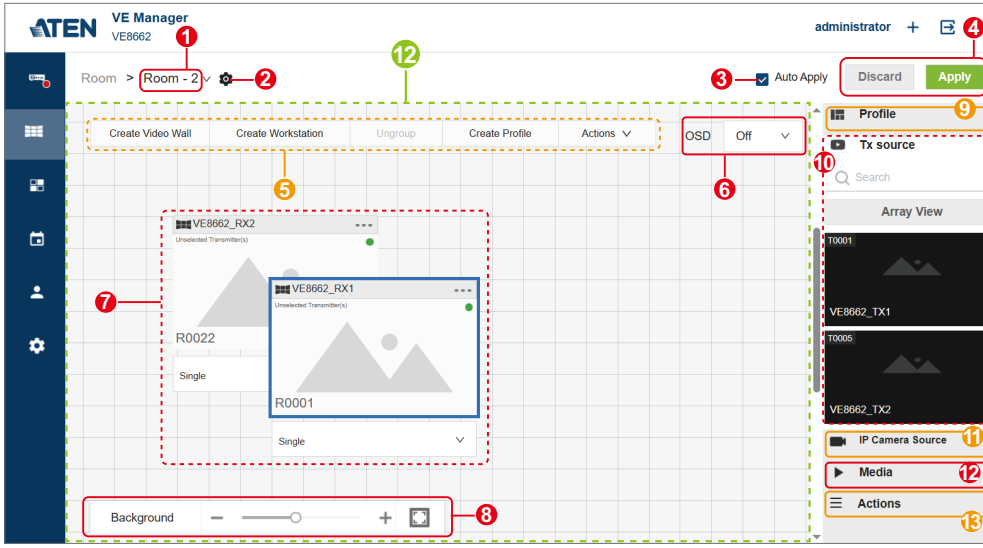


- Make changes and save.
- To delete the room, click on the delete button and confirm your action.

Note: Once the room is deleted, the receiver(s) belongs to this room will be dispatched to the default room, Lobby.

Room Configuration

Click on the room card of the room you'd like to access to enter the room's configuration page for further editing.



No.	Item	Description
1	room selections	Clicks to expand the drop-down menu that lists all the room options. Select the room you'd like to access to switch to its room configuration page.
2	settings	Clicks to open the room management popup for the options: ◆ Rename the room ◆ Add or remove receiver ◆ Delete the room **Note:** This function is not available for the default room, Lobby.
3	auto apply	Enable the function **Auto Apply**, and the changes you made in this room take effect immediately.

No.	Item	Description
4	apply / discard	If **Auto Apply** is disabled, you can: ◆ **Apply**: Apply the changes you just made. ◆ **Discard**: Cancel your changed settings.
5	toolbar	Provides a set of buttons and an action menu that allows user to manage the receivers belong to this room. See *Toolbar*, page 72 for details.
6	OSD setting	Sets whether to present the receiver information, including receiver ID, model name, device IP address, and anomaly warning on the output displays. The options are: ◆ **Off**: Disable the function. ◆ **On**: Enable the function. ◆ **10 Sec.**: Display the receiver information for 10 seconds everytime an event occurs.
7	receiver / video wall / workstation card	The receiver(s) / video wall(s) / workstation belongs to this room. Drag the card to a preferred position and release it to have it placed.
8	background settings	With the background settings tool, you can: ◆ Resizes the receiver / video wall / workstation cards displayed on the room configuration page. ◆ Allows you to upload a background image such as a site layout of this room to help you organize the devices.
9	profile panel	Select an existing profile to apply. Refer to profile management for details.

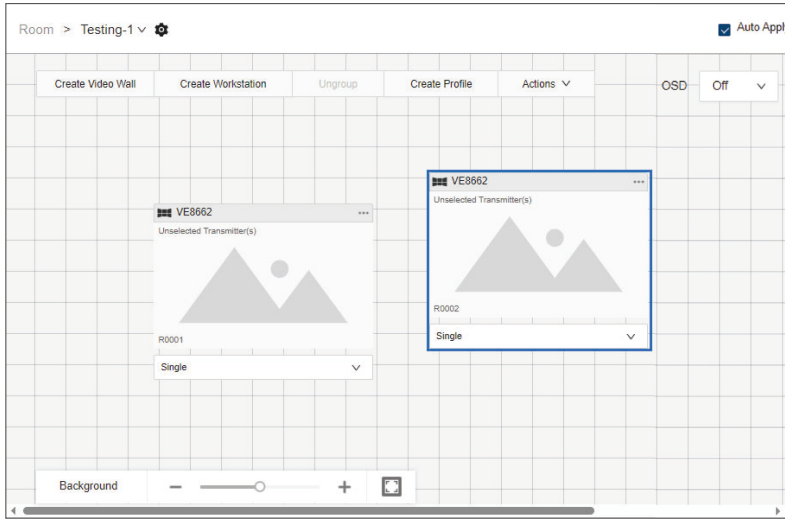
No.	Item	Description
10	Tx source panel	The Tx source panel contains the following: ◆ search bar: Enter the keyword (device ID or device name) to find the transmitter(s) you need. ◆ transmitter list: Only the available transmitter(s) is displayed. Drag the transmitter video source to the receiver / video wall / workstation, and then release it to have it output to the correspond display monitor(s). ◆ array preview: Click to open a window that displays the available video sources.
11	IP camera source panel	The IP camera source panel contains the following: ◆ search bar: Enter the keyword (device ID or device name) to find the IP stream(s) you need. ◆ stream list: Drag the source to the receiver / video wall / workstation, and then release it to have it output to the correspond display monitor(s). ◆ add IP camera source button: Click to open a popup window to add a new IP video sources.
12	media panel	The media panel contains the following: ◆ list: Displays the uploaded images. Drag the image to the receiver / video wall / workstation, and then release it to have it output to the correspond display monitor(s). ◆ upload: Upload up to 3 image files in .jpg or .png format with a maximum size of 5MB per file. Supported resolution is 1024 × 1024 to 3840 × 2160.
13	actions panel	Allows users to perform actions by dragging the desired function onto a receiver or video wall. Workstations do not support actions.

No.	Item	Description
14	arrangement area	The place where the receiver / video wall / workstation card(s) is placed on.

Toolbar

Toolbar brings you a set of buttons to perform functions on the receiver(s) / video wall / workstation.

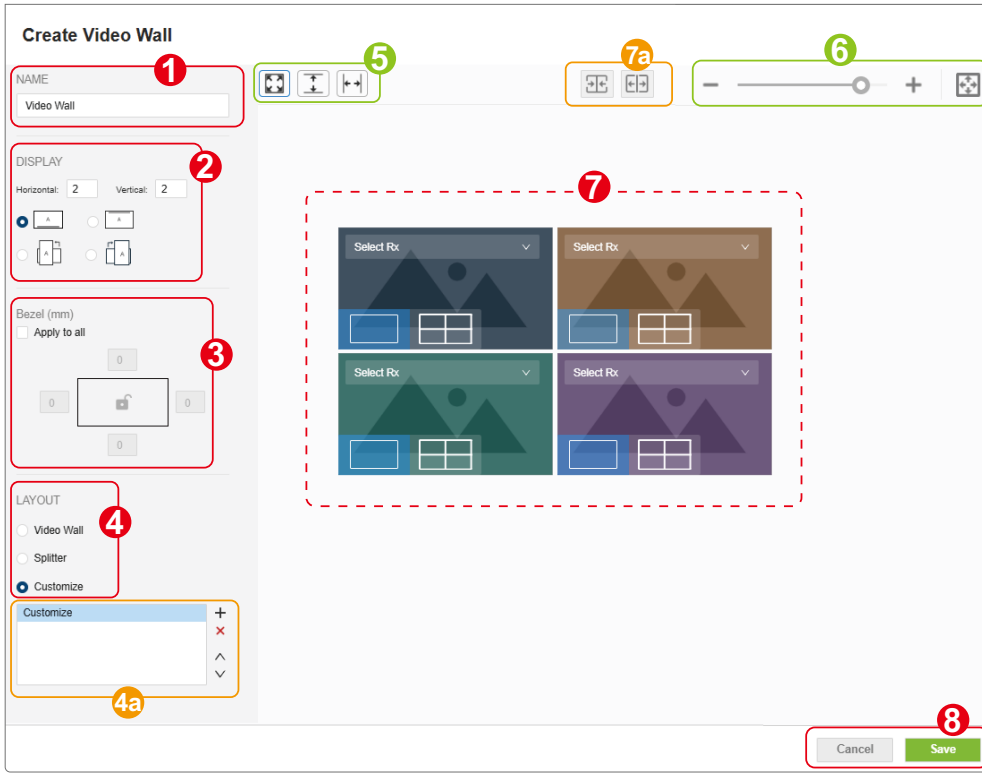
For the function **Group** / **Ungroup** and the **Actions** menu items, you need to select the target receiver(s) / video wall / workstation first. Simply click on a receiver / video wall / workstation card to select it, and the card frame will be highlighted in blue.



To deselect the target card, please click on it again.

Create Video Wall

Click on the **Create Video Wall** button to open the **Create Video Wall** popup. Follow the steps below to create a video wall:

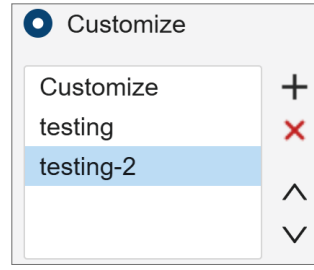


1. Define the name for this video wall.
2. Enter the number of the display monitors belong to this video wall, and select the display orientation.
3. Set the bezel (the borders around the screen) in millimeter. Enable **Apply to all** to apply the bezel settings to all four borders.
4. Select an operation mode for your video wall.

Layout	Description
Video Wall	Set up a video wall composed of multiple receivers to display a single enlarged image across all monitors.

Layout	Description
Splitter	Set up a display of identical content on multiple monitors.
Customize	Create a user-defined layout where receivers can be freely grouped or divided to form irregular or non-standard display arrangements. This mode allows flexible composition beyond traditional video wall or splitter structures.

a) **Additional Layout Option: Customize**
The **Customize** layout mode allows you to create user-defined display configurations beyond standard Video Wall and Splitter modes.
When **Customize** is selected, you can add multiple layout options and freely combine or divide display groups to form irregular video wall patterns.
Each customized layout can be saved and recalled for future use.



Item	Description
+ / – buttons	Add or remove customized layout options.
Double-click a layout name	Rename the selected layout.
Single-click a layout name	Load the selected customized layout for editing

Note:
- Displays your customized arrangement. You can visually adjust receiver groups and define unique display shapes or ratios.
- Once saved, customized layouts will be listed under the Layout section and can be reused or edited at any time.

5. Optionally use the buttons to resize the layout preview:

Item		Description
	fill screen	Makes the layout preview fit the entire preview area in this popup window.
	fit height	Fits the layout preview to the height of the preview area.
	fit width	Fits the layout preview to the width of the preview area.

6. Optionally use the zoom slider to change the zoom level of the layout preview, and use the zoom to fit button to automatically resize the layout preview to fit the preview area in this popup window.
7. The layout preview help you visualize the configurations. From the drop-down menu, select the output receiver for each display monitor.
   a) In **Customize** layout mode, you can combine multiple receiver screens into a single display region or divide them back into separate units. Use the **Combine** / **Divide** tools on the toolbar above the layout preview to manage these display groupings.

      - **Combine**  :

        Select two or more adjacent receiver screens in the preview area, then click the **Combine** button to merge them into a single logical display region.

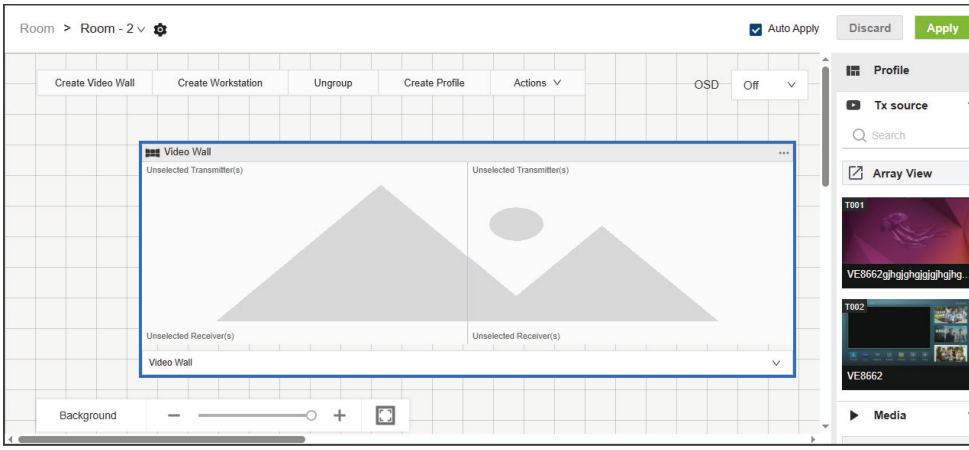
Note: The selected screens must form a rectangular shape in order to execute the **Combine** function. Non-rectangular selections are not supported. The combined displays function as one unified video wall section.

      - **Divide**  :

        Select a grouped region and click the **Divide** button to divide it back into individual receiver screens.

8. Click on **Save** button to create a video wall while **Cancel** to discard the settings.

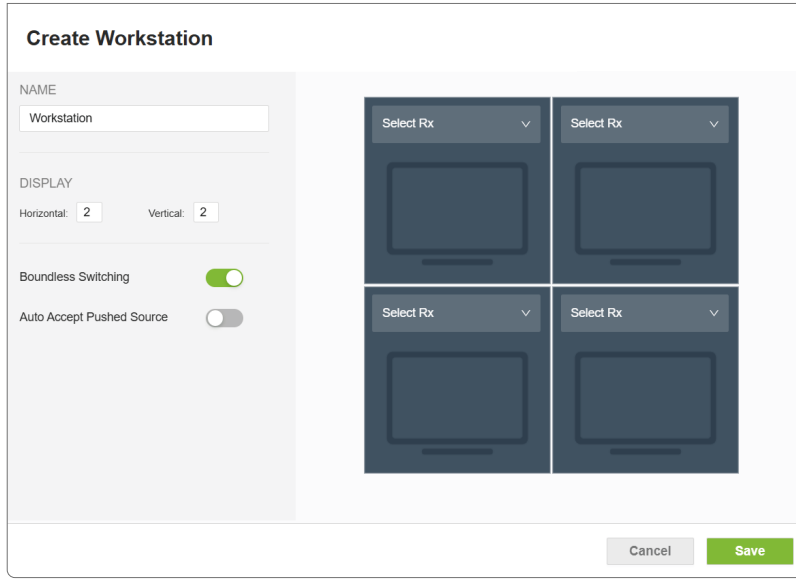
The successfully-created video wall is now on the room arrangement area. You can edit its displayed content by dragging the video / media from Tx source list and media list. See *Assigning Sources*, page 87 for details.



Create Workstation

To create a workstation:

1. Click the **Create Workstation** button on toolbar to open **Create Workstation** window.



2. Enter a name for this workstation.
3. Enter the number of the display monitors belong to this workstation.
4. Enable or disable the function **Boundless Switching** which is an intuitive way to switch control to another computer by simply moving your mouse across your display or window borders.
5. Enable or disable the function **Auto Accept Pushed Source**. When enabled, any pushed source will be automatically switched to the workstation display without requiring user confirmation. This applies regardless of whether the workstation is logged in.
6. The layout preview helps you visualize the configurations. From the drop-down menu, select the output receiver for each display monitor.
7. Click on **Save** button to create a workstation while **Cancel** is to discard the settings.

The successfully-created workstation is now on the room arrangement area. You can edit its displayed content by dragging the video / media from Tx source list and media list. See *Assigning Sources*, page 87 for details.

Ungroup

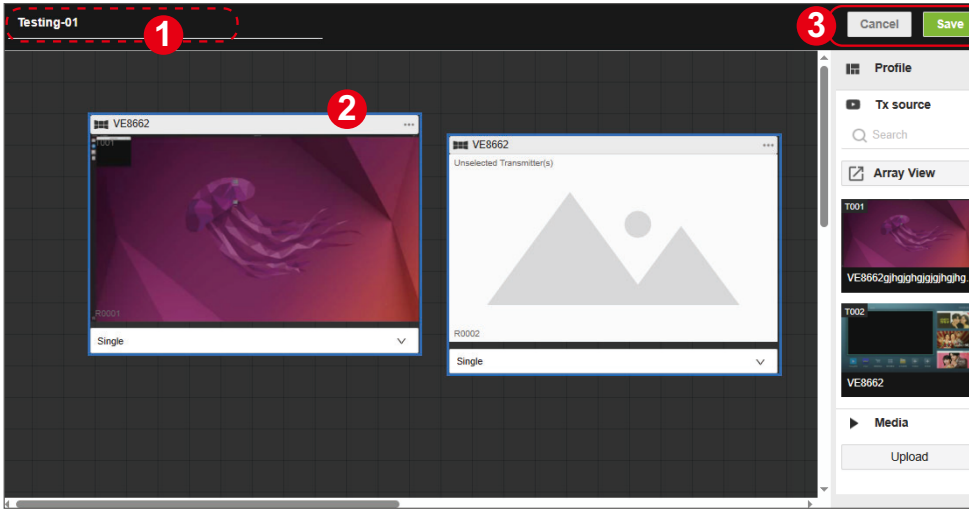
To ungroup a workstation or a video wall, do the following:

1. Select an existing workstation / video wall you'd like to ungroup.
2. Click the **Ungroup** button on the toolbar.
3. The workstation / video is now decomposed into receivers.

Create Profile

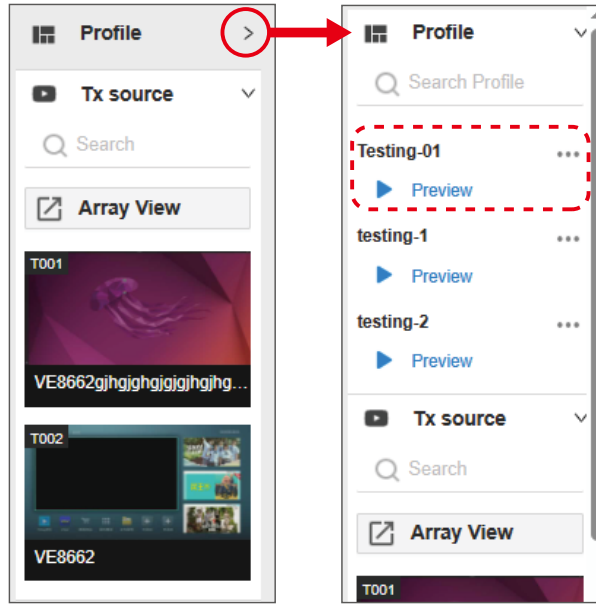
Click **Create Profile** button to save your current configuring video receiver / video wall / settings to be a profile.

Note: Workstation settings cannot save to be a profile.



1. Enter a name for the profile to be created.
2. Click to select the receiver(s) / video wall(s).
3. Click **Save** to create a new profile while **Cancel** to discard changes.

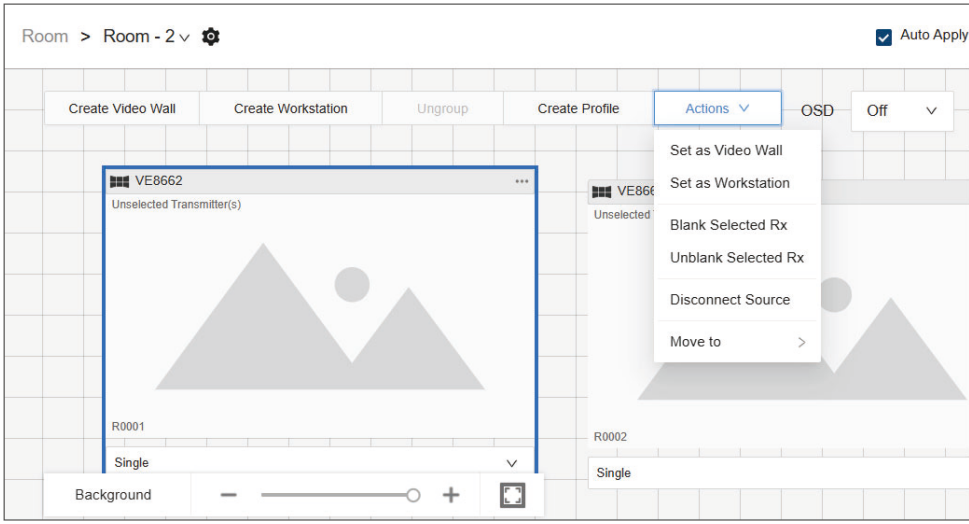
Click to unfold the profile panel and you'll find the newly-created profile is listed.



For more profile operations, please refer to *Profile Management*, page 100.

Actions

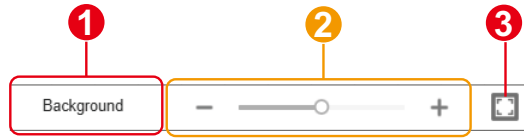
Actions menu is available once the existing receiver / video wall / workstation card(s) is selected. The options are:



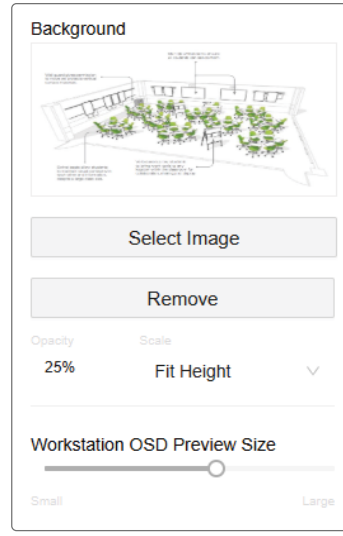
Item	Description
set as video wall	Sets the selected target(s) to be a video wall.
set as workstation	Sets the selected target(s) to be a workstation.
blank selected Rx	Disables the monitor display content of the selected target receiver, and the monitor screen of the target(s) goes blank. **Note:** This function is inapplicable to workstation.
unblank selected Rx	Enable the blanked monitor display of the selected target receiver. **Note:** This function is inapplicable to workstation.
disconnect source	Disconnect the source video from the transmitter. **Note:** This function is inapplicable to workstation.
move to	Move the target(s) to other room. The available rooms is on the next option menu.

Background Settings

The background settings tool offers the following functions:



1. background image settings
   Click to open the setting menu to set a background image for this room, such as a site layout, to help locate the device(s).



Item	Description
thumbnail preview	Shows the small image representation of the current / selected background image.
select image	Selects an image to be uploaded as the room background image. Upload a .jpg or .png file up to 5MB; resolution is not restricted.
remove	Deletes the background image.
opacity	Defines the background image opacity-level by percentage.

Item	Description
scale	Choose a fit for the background image. ◆ **Fill Screen**: Makes the background image fit the entire room arrangement area. ◆ **Fit Height**: Fits the background image to the height of the room arrangement area. ◆ **Fit Width**: Fits the background image to the width of the room arrangement area.
workstation OSD preview size	Adjusts the preview screen size of all the receiver(s) / video wall(s) / workstation(s) on the room arrangement area using the slider.

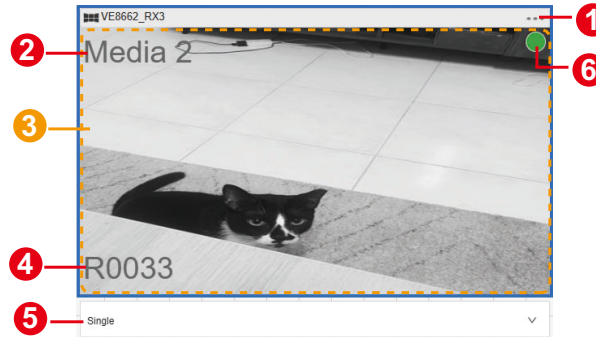
2. zoom slider
   Use the zoom slider to change the zoom level of the room arrangement area as well as the receiver / video wall / workstation card(s) on it.

3. zoom to fit
   Use the zoom to fit button to automatically resize the arrangement area and the card(s) on it.

Receiver / Video Wall / Workstation Management

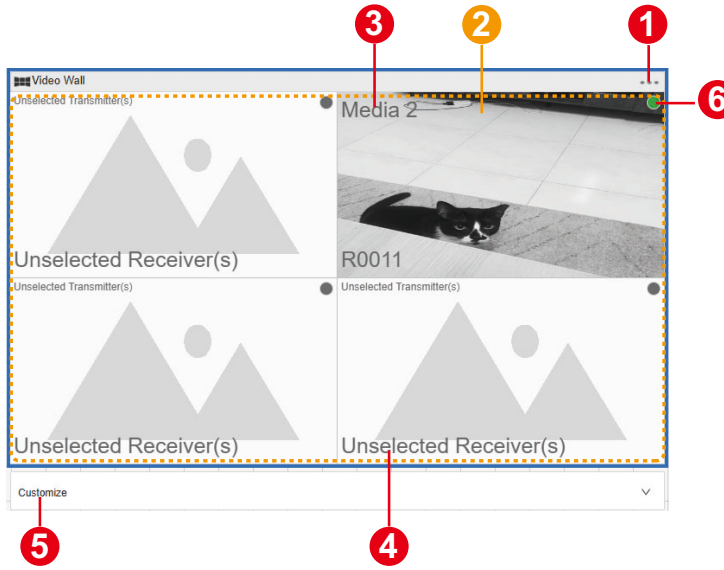
The receiver(s), the video wall(s), and the workstation(s) are presented as cards on the room arrangement area as the figures show below:

- **Receiver**



No.	Item	Description
1	more button	Click on the more button to open the configuration menu for more operations. See *Configuration Menu*, page 88 for details.
2	input source Tx ID	Displays the transmitter ID of the current input video source.
3	preview	Represents the video content on the receiver.
4	connected Rx ID	Shows the receiver ID.
5	operation mode	Select an operation mode for this receiver. ◆ **Single**: Displays one video source on the receiver screen. ◆ **Quad View**: Divides the receiver screen into four sections to display up to four video sources simultaneously.
6	receiver status	Indicates the receiver status: ◆ : active ◆ : inactive

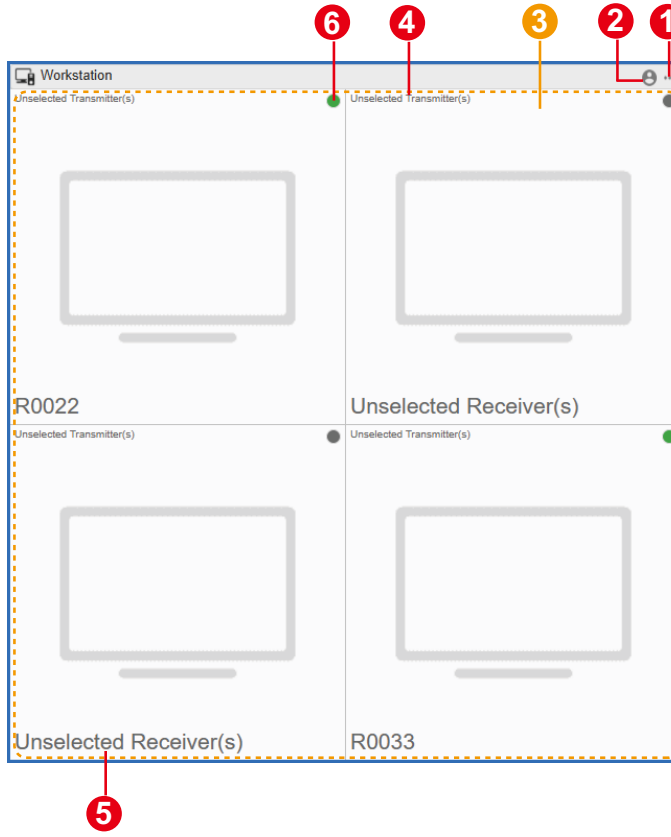
- **Video Wall**



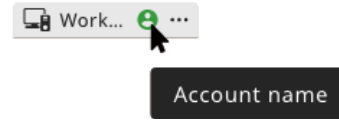
No.	Item	Description
1	more button	Click on the more button to open the configuration menu for more operations. See *Configuration Menu*, page 88 for details.
2	preview	Represents the video content on the video wall.
3	input source Tx ID	Displays the transmitter ID of the current input video source.
4	connected Rx ID	Shows the receiver ID(s).
5	operation mode	Select an operation mode for your video wall. ◆ **Video Wall**: Select this option to set up a video wall. ◆ **Splitter**: Select this option to set up a display of identical content on multiple monitors. ◆ **Customize**: Apply a user-defined layout. The drop-down menu lists the customized layout names.

No.	Item	Description
6	receiver status	Indicates the receiver status: ◆ ● : active ◆ ● : inactive

◆ **Workstation**



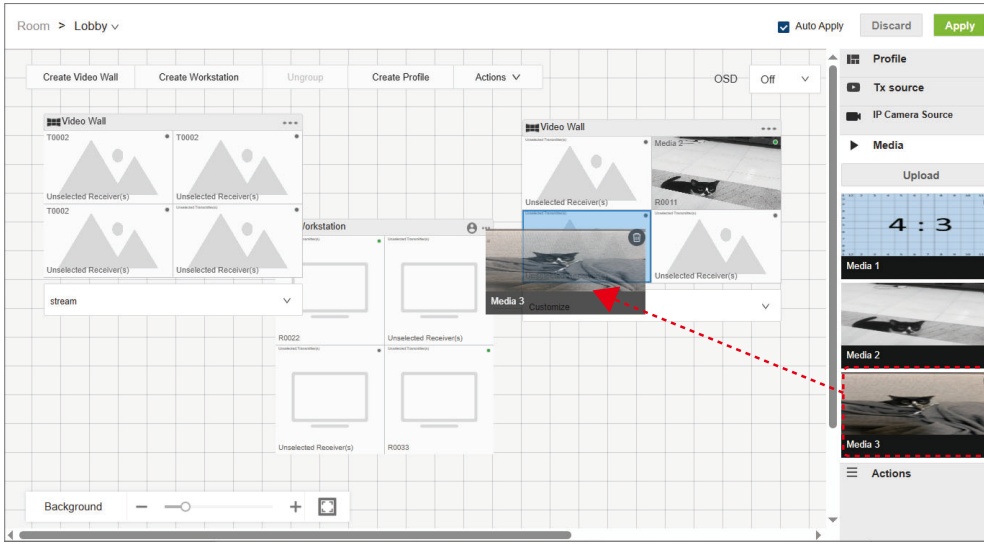
No.	Item	Description
1	more button	Click on the more button to open the configuration menu for more operations. See *Configuration Menu*, page 88 for details.

No.	Item	Description
2	login status	Shows whether there is a user is logged in to this workstation. ◆  No user is signed into the workstation.  ◆  A user is signed into the workstation. Move your cursor to the login status icon to see the logged-in user account. 
3	preview	Represents the video content on the workstation.
4	input source Tx ID	Displays the transmitter ID of the current input video source.
5	connected Rx ID	Shows the receiver ID.
6	receiver status	Indicates the receiver status: ◆ : active ◆ : inactive

Assigning Sources

Follow the steps below to assign input sources:

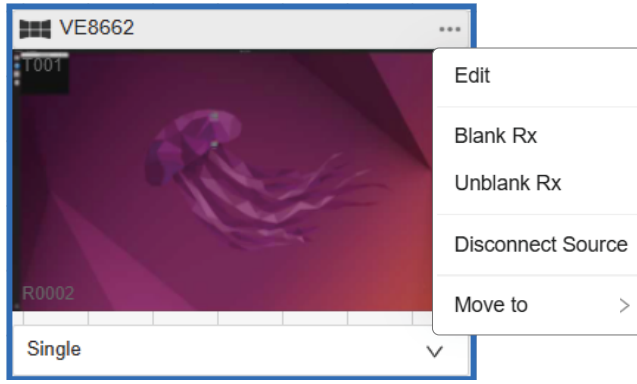
1. Identify the source to be assigned on the transmitter source panel or IP camera source panel and the target receiver / video wall / workstation.
2. Select and drag the source video to the preview area of the target receiver / video wall / workstation.



Configuration Menu

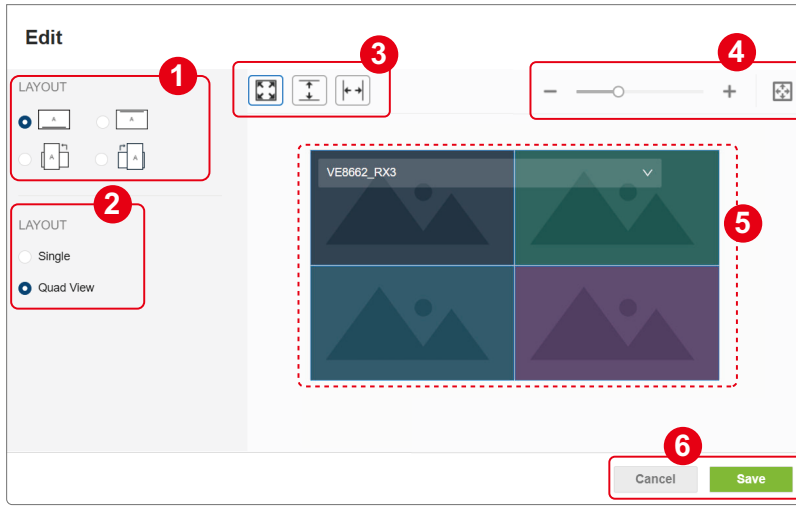
Click on the more button of the receiver / video wall / workstation card(s) to open the configuration menu for the following operations:

- Receiver



Item	Description
Edit	Open the edit popup and make changes of this receiver.
Blank Rx	Enable or disable the blanked monitor display of this receiver.
Unblank Rx	
Disconnect Source	Disconnect the source video from the transmitter.
Move to	Move this receiver to other room. The available rooms is on the next option menu.

You can make changed through the receiver **Edit** popup:



1. Select the display orientation.

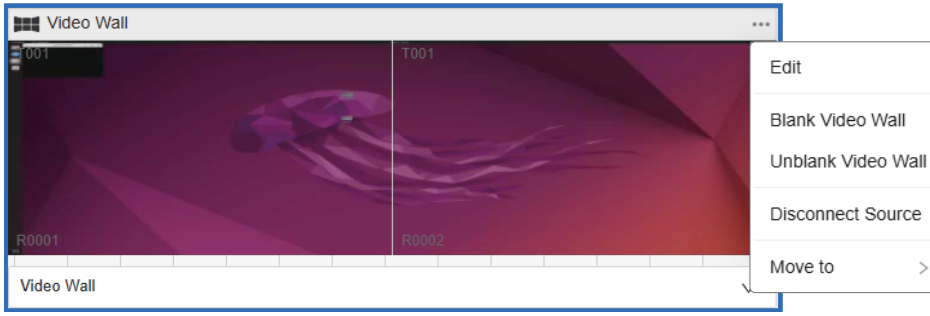
> **Note:** When the receiver is in **Single** mode and the display is rotated 90° or 270°, **Fit Height** and **Fit Width** are disabled, and the layout defaults to **Fill Screen**.

2. Set the layout you need:
   - **Single**:
     Displays a single full-screen video source.
   - **Quad View**:
     Splits the receiver display into four quadrants for viewing multiple sources at the same time.
3. Optionally use the buttons to resize the layout preview:

Item		Description
	fill screen	Makes the layout preview fit the entire preview area in this popup window.
	fit height	Fits the layout preview to the height of the preview area.
	fit width	Fits the layout preview to the width of the preview area.

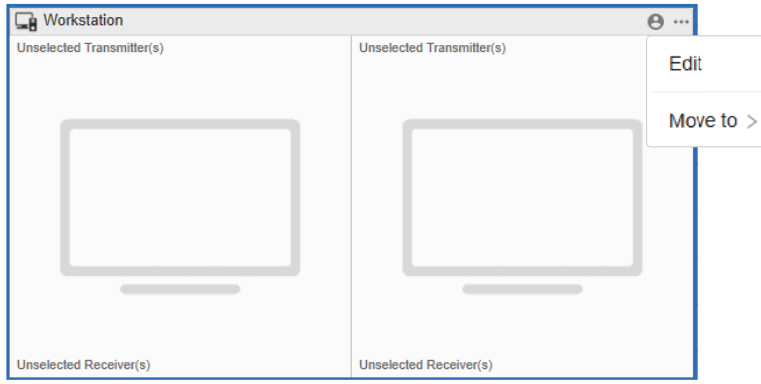
4. Optionally use the zoom slider to change the zoom level of the layout preview, and use the zoom to fit button to automatically resize the layout preview to fit the preview area in this popup window.
5. The layout preview help you visualize the configurations. From the drop-down menu, select the output receiver for the display monitor.
6. Click on **Save** button to create a video wall while **Cancel** to discard the settings.

- Video Wall



Item	Description
Edit	Open the Create Video Wall popup to make changes. See *Create Video Wall*, page 73 for details.
Blank Video Wall	Enable or disable the blanked monitor display of this video wall.
Unblank Video Wall	
Disconnect Source	Disconnect the source video from the transmitter.
Move to	Move this video wall to other room. The available rooms is on the next option menu.

- Workstation



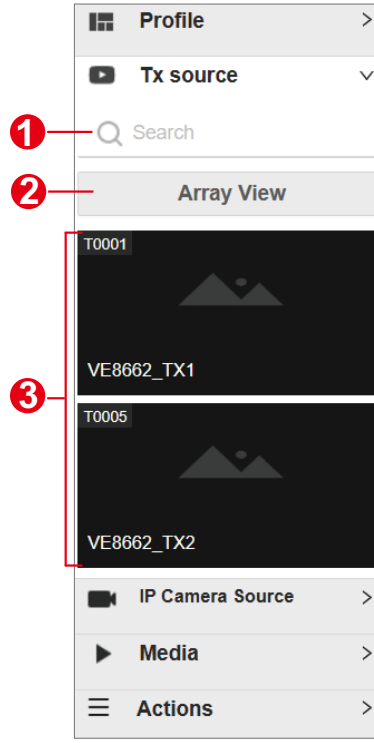
Item	Description
Edit	Open the Create Workstation popup to make changes.See *Create Workstation*, page 77 for details.
Move to	Move this workstation to other room. The available rooms is on the next option menu.

Source Panel Control

The source panel is located on the right side of a room. It contains **Profile**, **Tx Source**, **IP Camera Source**, **Media**, and **Actions**. This section explains the functions of Tx Source, IP Camera Source, Media, and Actions, while Profile management is introduced in *Profile Management*, page 100.

Tx Source Panel

The Tx source panel consists of three parts: the search bar, the transmitter list, and the array preview.

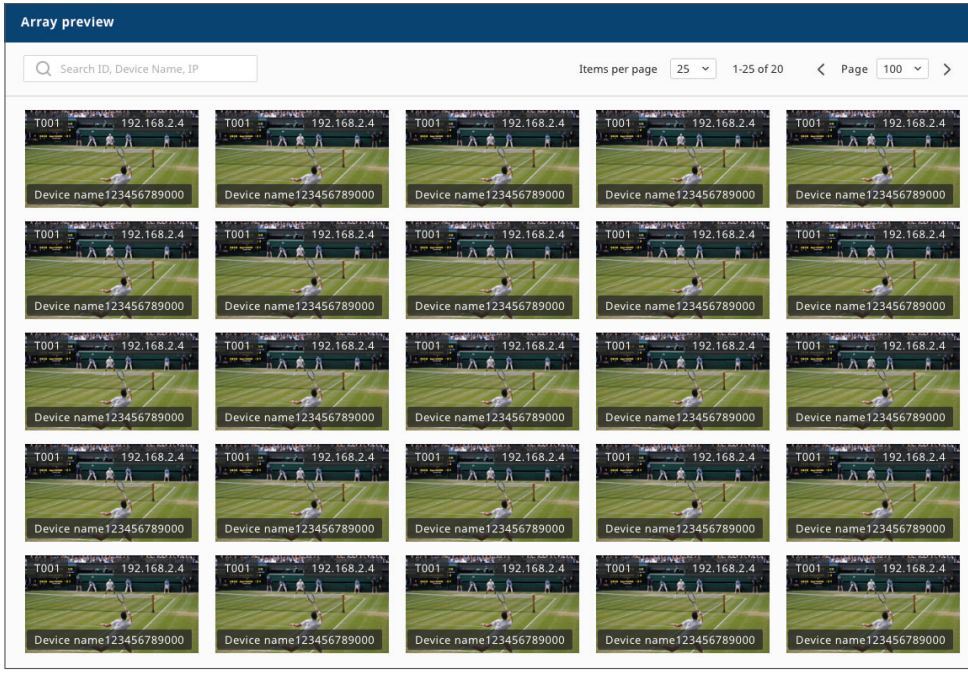


No.	Item	Description
1	Search bar	Enter the device ID or device name to search for a specific transmitter.
2	Array View	Opens a window to view all granted transmitters for this room.

No.	Item	Description
3	transmitter list	Displays the granted transmitters for this room.

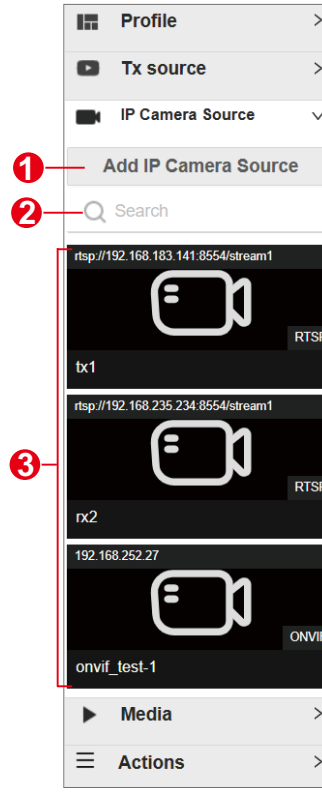
The video thumbnail preview in the transmitter list and Array View window displays a live video preview. Assign the video source by dragging the transmitter's video preview in transmitter list to the target receiver, video wall, or workstation. Release to complete the assignment.

The **Array View** window displays all videos from the granted transmitters, providing an overview of all video sources along with the transmitter's ID, device name, and IP address.



IP Camera Source Panel

The **IP Camera Source** panel displays the manually added IP video streams that are available within the same network segment as the VE8662 devices. It includes the following items:



No.	Item	Description
1	Add IP Camera Source	Opens a pop-up window to manually add a new IP video stream.
2	search bar	Enter the device ID or name to locate a specific IP stream.
3	stream list	Displays all added IP camera sources. You can drag a stream to a receiver, video wall, or workstation to display it on the corresponding monitor(s).

Adding a New IP Camera Source

Click **Add IP Camera Source** to open the configuration window and register a new IP camera stream.

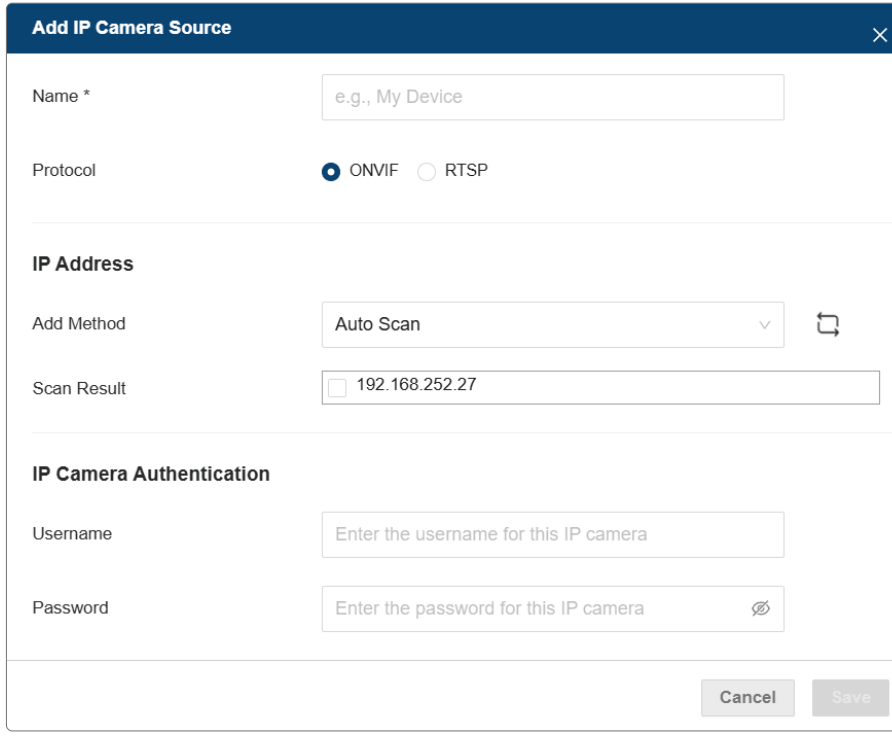
This function is available from both the **Device** > **IP Camera Source tab** and the **Room** > **source panel** > **IP Camera Source**, and both open the same configuration dialog. See *Adding a New IP Camera Source*, page 59.

This dialog allows you to add cameras using either **ONVIF** or **RTSP** protocol, depending on the supported communication method of your device.

- **ONVIF**

  In this mode, the VE Manager automatically detects cameras that comply with the ONVIF protocol and are located in the same network segment.

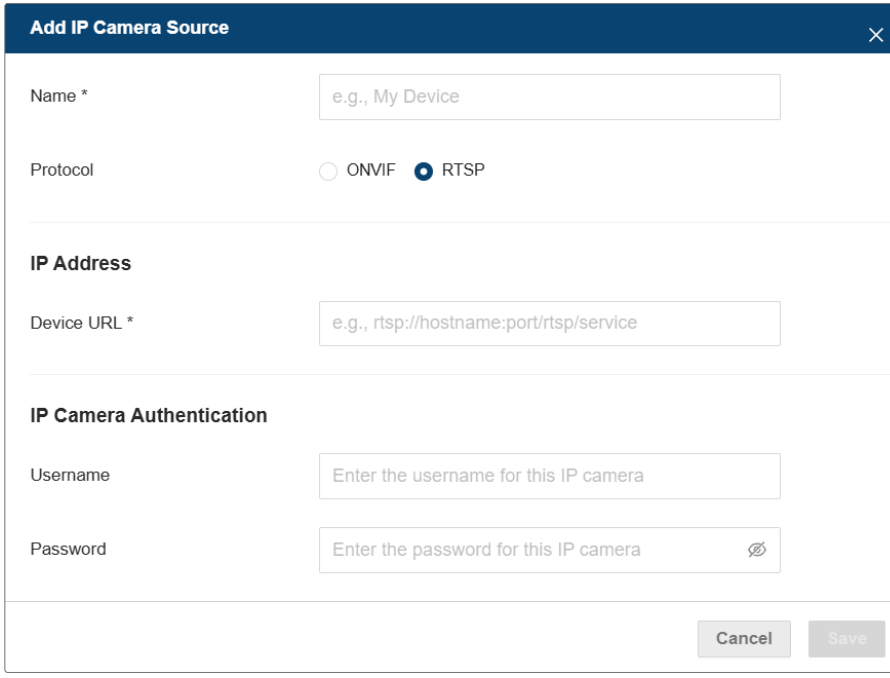
  You can assign a name to each detected camera, confirm its IP address, and enter credentials if the device requires login authentication.



- **RTSP**

  This option is designed for cameras or streaming devices that broadcast video through an RTSP address.

  Simply enter the full stream path (for example, `rtsp://hostname:port/rtsp/service`) and, if needed, provide the username and password to enable access.



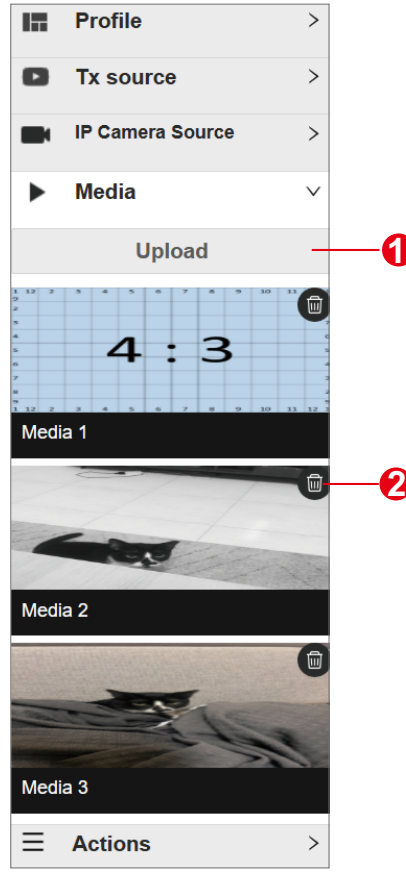
When adding an IP camera source, you can configure basic connection parameters such as the camera name, protocol type, and authentication credentials. The following table describes the available fields and their functions in the **Add IP Camera Source** dialog.

Item	Description
Device Name	Enter a custom name for the camera (up to 30 characters).
Protocol	Select the protocol used for connecting to the camera (**ONVIF** or **RTSP**).

Item	Description
Add Method	Choose how to add an IP address. When **Auto Scan** is selected, the VE Manager detects available ONVIF cameras automatically. For manual input, enter the IP address directly.
Scan Result / Device URL	Displays the detected IP address (ONVIF) or allows manual entry of the RTSP URL.
Username / Password	Enter the login credentials required by the camera for authentication.
Save / Cancel	Click Save to confirm the configuration or Cancel to close the window without saving.

Media Panel

The **Media** panel allows you to upload up to three images in .jpg or .png format, each with a maximum size of 5MB and a resolution between 1024 × 1024 and 3840 × 2160.

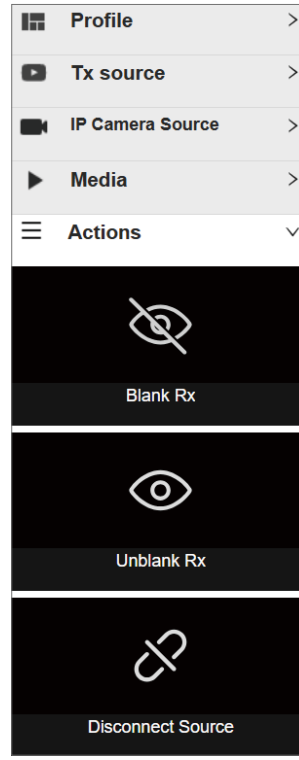


No.	Item	Description
1	Upload	Select an image from your PC and upload it. **Note:** The uploaded imaged(s) is shared across all rooms.
2	Delete	Remove the image.

Drag and drop an image onto the target receiver's preview area to assign it.

Action Panel

The **Actions** panel provides quick control options for managing receiver (Rx) or video wall output behavior. You can drag any of the following actions onto an Rx / video wall tile in the room layout to apply the desired effect:



- **Blank Rx:**
  Turns the selected receiver's output to a black screen while maintaining its connection status.
- **Unblank Rx:**
  Restores normal video output to a receiver that has been blanked.
- **Disconnect Source:**
  Removes the current source assignment from the selected receiver, returning it to an unassigned state.

These actions cannot be applied to the workstation.

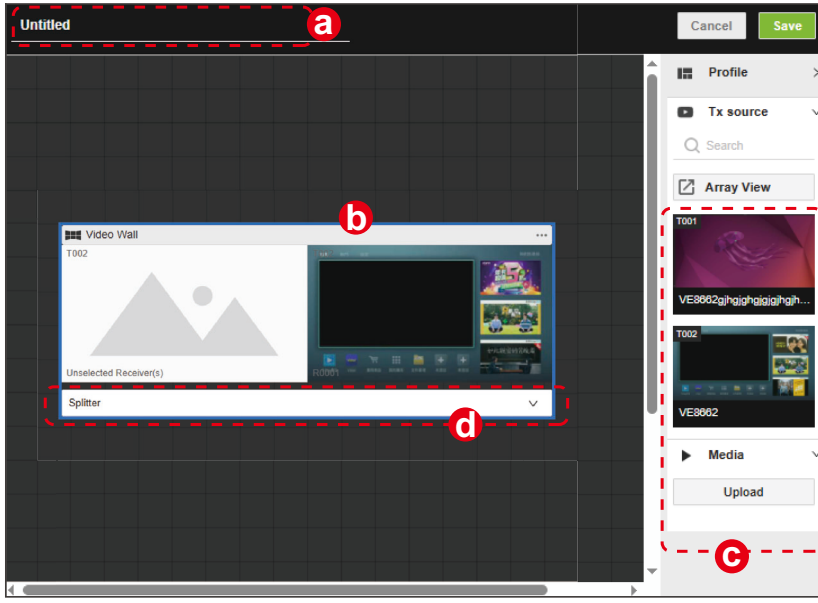
Profile Management

After configuring video receiver / video wall settings, if you find that you would like to keep the current settings, you can save it as a profile. You can create different profiles and apply them manually, or you can set up profile schedules for switching video display at different times of a day, week or month.

Creating a Profile

Follow the steps below to create a profile.

1. In the room's arrangement area, click the **Create Profile** button on toolbar. The profile configuration screen will appear.
2. On the profile configuration screen:



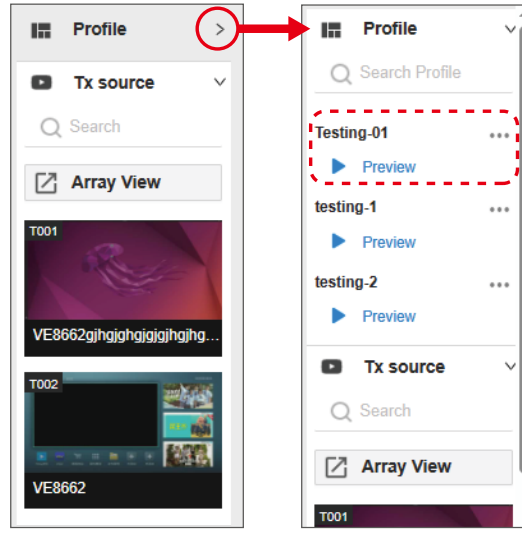
a) Enter a name for the profile.

b) Click to choose the receiver(s) / video wall(s) you wish to be in this profile.

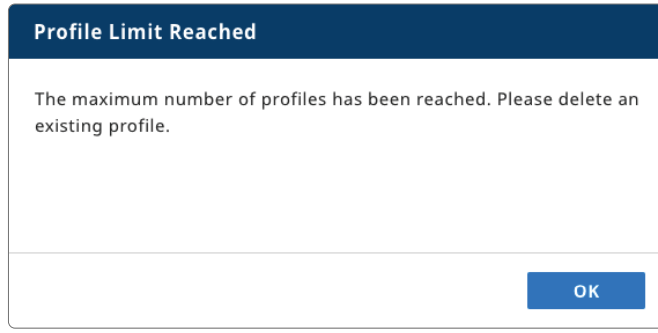
c) (optional) Drag and drop a source video / IP stream / image from the source panel to assign it to the target receiver or video wall. Perform Disconnect Source from Actions panel if necessary.

d) (optional) Change the operation mode if needed.

3. Click **Save** to complete the configuration.
4. The profile you just created will now appear in the profile list.



Each room supports up to 10 profiles. Once the limit is reached, a warning popup will appear. Delete at least one existing profile before creating a new one.

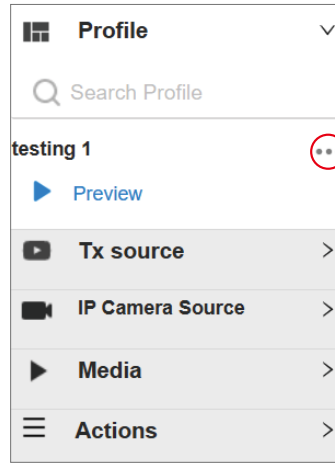


Note:
- A profile becomes invalid if its receiver(s) or video wall(s) are lost or deleted.
- A failed attempt to create a new profile may due to the receiver / video wall not having a video source from transmitters or HDMI local input.

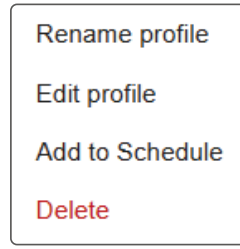
Editing or Deleting a Profile

To edit or delete an existing profile, do the following:

1. From the profile list, click the more button to open the option menu.



2. Select the function you'd like to proceed with.

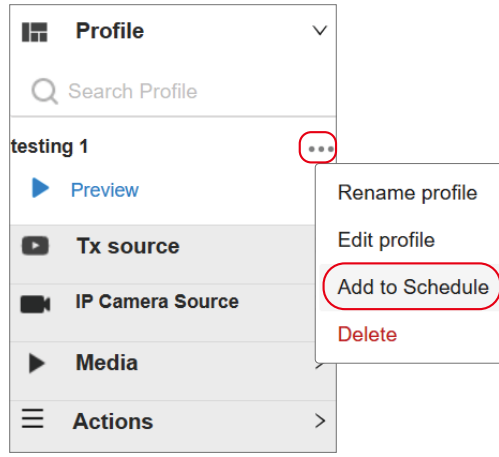


Item	Description
Rename Profile	Edit the profile name.
Edit Profile	Open the profile configuration screen to make changes.
Add to Schedule	Set the schedule for when the profile will be played.See *Setting Up Profile Schedules*, page 103.
Delete	Remove this profile. The system will ask if you would like to delete this profile. Click Delete to proceed or click Cancel to cancel.

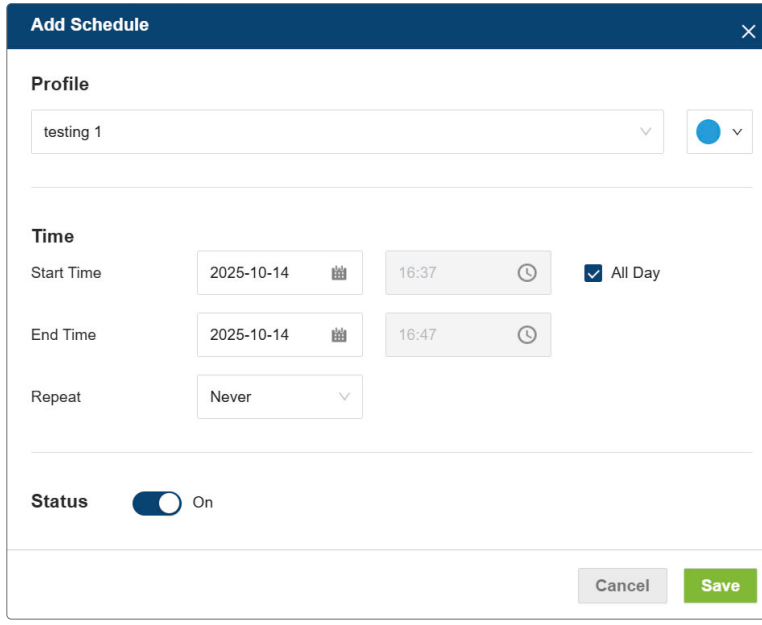
Setting Up Profile Schedules

Follow the steps below to set up profile schedules:

1. In the profile list, locate the desired profile and click its more button to open the options menu.
2. Select **Add to Schedule** to open the **Add Schedule** popup.



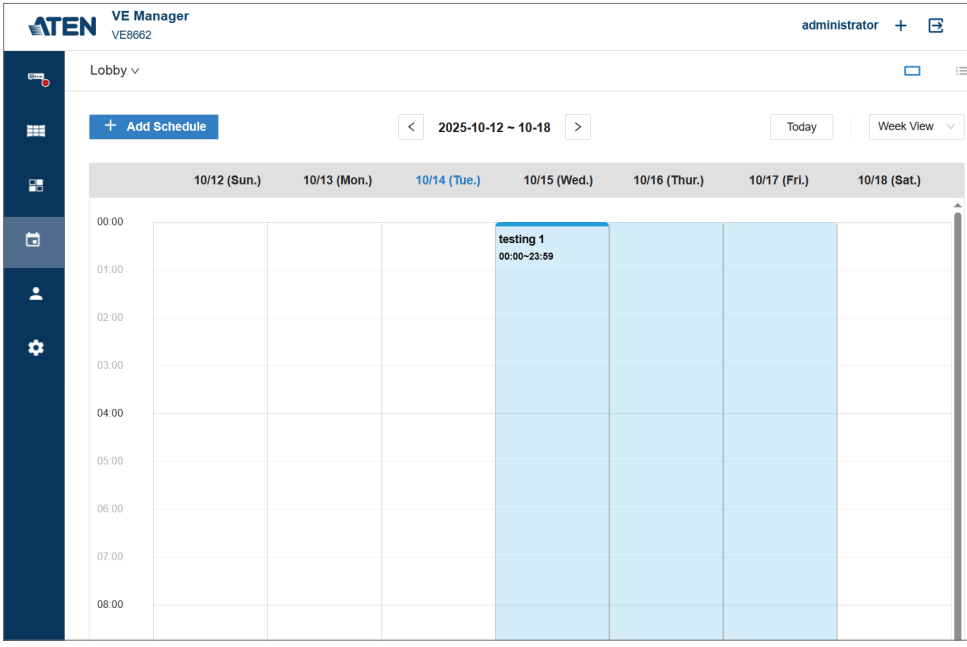
3. Configure the schedule as needed:



- **Profile**:
  Select the profile to be added to the schedule..
- **Color Code**:
  Assign a color label to this task. Use different colors to distinguish tasks.
- **Start Time / End Time**:
  Define the start and end times for the task.
- **Repeat**:
  Select a repeat cycle for the schedule.
- **Status**:
  Enable or disable the scheduled task.

Note: For detailed settings, please refer to *Schedule*, page 108.

4. Click **Save** to save the schedule and an example is shown below:

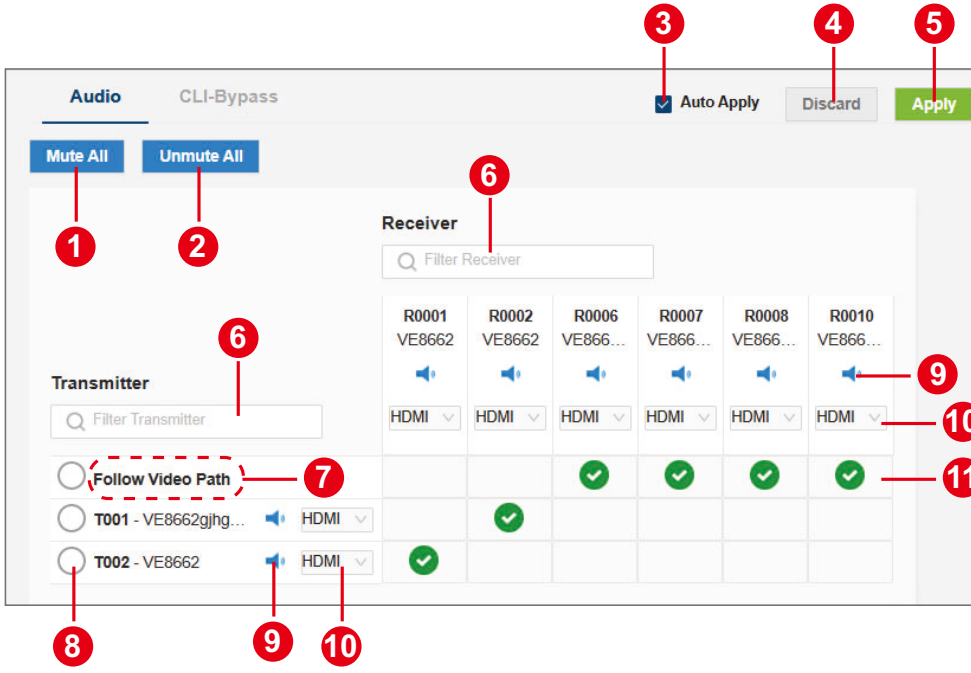


Matrix

The **Matrix** page allows administrators to efficiently control and configure matrix routing using two tab pages: **Audio** and **CLI-Bypass**. Use the routing table on each tab to configure and define which transmitter sends video or audio data to specific receiver(s) in an AV-over-IP system.

Audio

The **Audio** tab page offers the following functions:

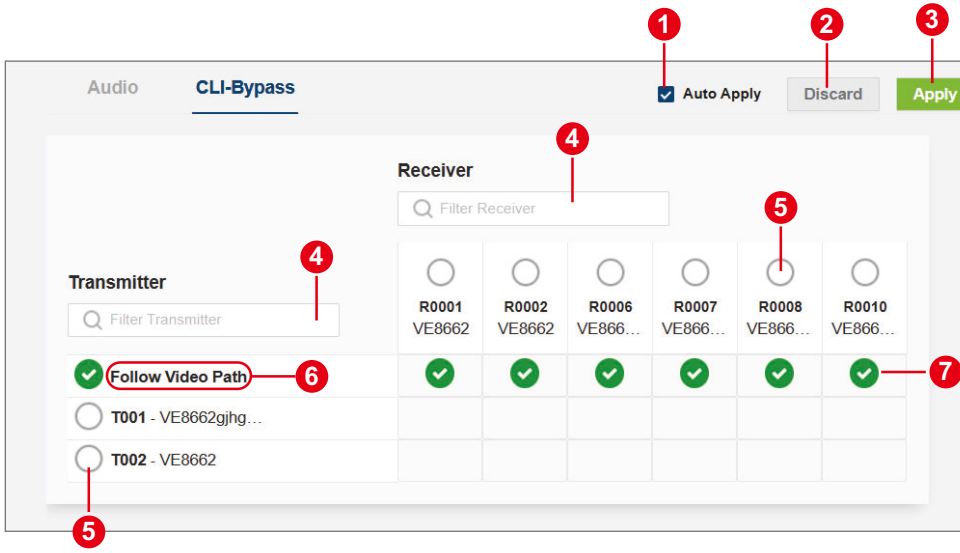


No.	Item	Description
1	Mute All	Mute all the transmitters and receivers.
2	Unmute All	Unmute all the muted VE8662 transmitters.
3	Auto Apply	Apply the changes automatically.

No.	Item	Description
4	Discard	Click **Apply** to save your changes while click **Discard** to cancel the settings.
5	Apply	
6	filter transmitter / receiver	Enter the keyword to filter the transmitters / receivers.
7	Follow Video Path	Set the audio to follow the video routing.
8	select all	Click to select all the receivers to obtain the audio signal from this transmitter.
9	mute / unmute	Click on the button to mute or unmute the unit.
10	audio source	Select the audio source between **HDMI** and **Stereo**. The default setting is HDMI.
11	crosspoint	On the graphical crossbar, simply click a crosspoint to enable the signal routing path. To disable it, click the selected crosspoint again to unmark it.

CLI-Bypass

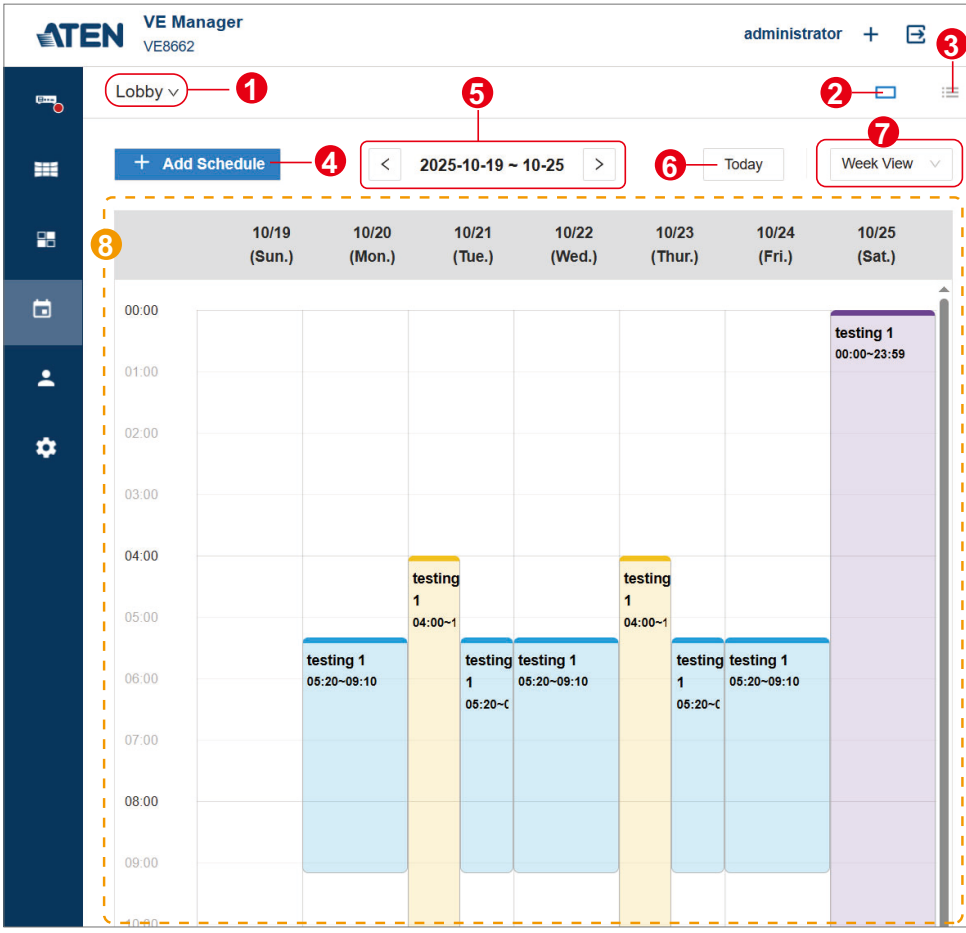
Through CLI-Bypass tab, administrators can assign a specific transmitter to one or multiple receivers for RS-232 data forwarding.



No.	Item	Description
1	Auto Apply	Apply the changes automatically.
2	Discard	Click **Apply** to save your changes while click **Discard** to cancel the settings.
3	Apply	
4	filter transmitter / receiver	Enter the keyword to filter the transmitters / receivers.
5	select all	Click to select all the transmitter / receivers to .
6	Follow Video Path	Set the data forwarding to follow the video routing.
7	crosspoint	On the graphical crossbar, simply click a crosspoint to enable the routing path. To disable it, click the selected crosspoint again to unmark it.

Schedule

Schedule helps you to set up tasks that perform automatically on specific days and times.



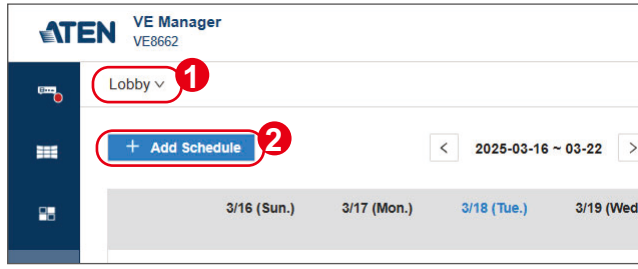
No.	Item	Description
1	room selection	Click to expand the drop-down menu that lists all the room options. Select the room you'd like to manage to switch to its schedule.
2	timeline view	Visualizes the timing and duration of the tasks.

No.	Item	Description
3	list view	Displays the scheduled tasks as a list.
4	add schedule	Click to create a new scheduled task to be performed in this room.
5	date picker	Use the next button  or the previous button  to select the date / the range of dates: ◆ in day view: Select the date to display the task(s) to be performed on the day. ◆ in week view: Select the range of dates by week to display the task(s) to be performed within the week.
6	go to today button	Click on the today button to go back to today or the current week.
7	schedule view selection	Choose between week view and day view to display the task calendar / task list.
8	task calendar / task list	Shows the scheduled task(s) to be performed in this room during the selected week.

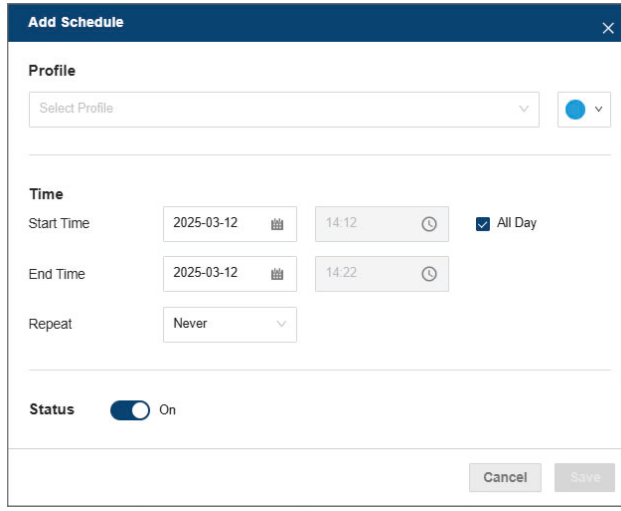
Create a Scheduled Task

To create a scheduled task, do the following:

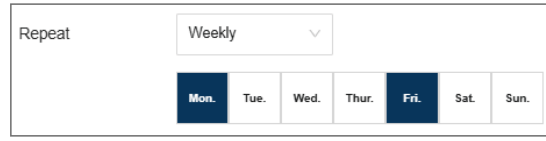
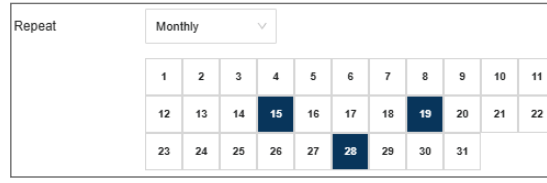
1. Open a room schedule from the room selection menu on schedule page.
2. Click on the **+ Add Schedule** button to open the add schedule window.



3. Define the following settings:



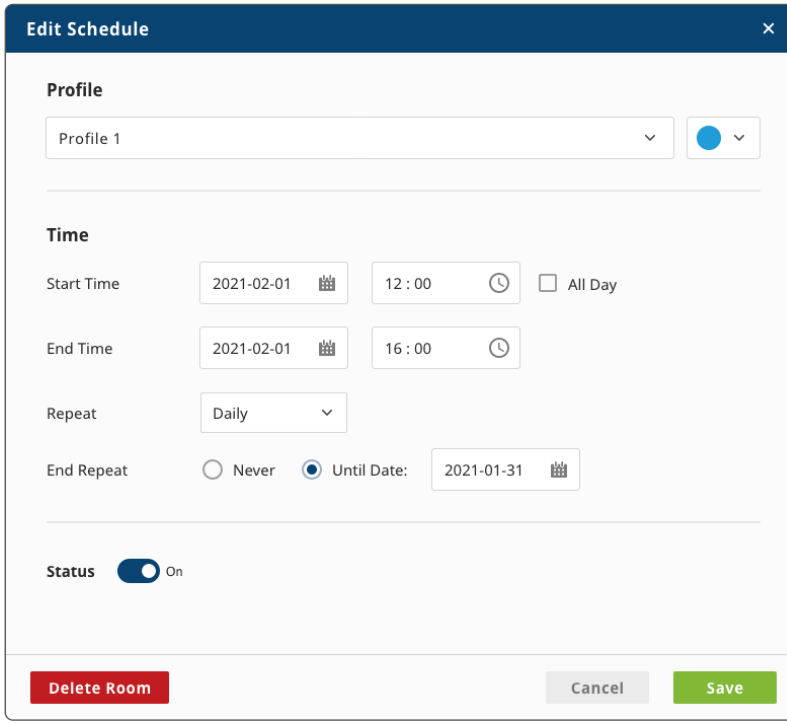
Item	Description
select Profile	Select a profile for this task to play. See Profile Management for how to manage the profiles.
color-code	Assign a color label to this task. Use different colors to tell the tasks apart.

Item	Description
start time / end time	Sets the date and time the task will begin and end.
all day	Check the All Day checkbox to play this task all day long.
repeat	Performs the task repeatedly at the scheduled times. The options to run the recurring task are: ◆ never: The task is executed only one time. ◆ daily: The recurring task is executed everyday. ◆ weekly: The recurring task is executed on a weekly basis. By selecting weekly, you need to further specify the days of the week that the task is run.  ◆ monthly: The recurring task is executed on a monthly basis. Set the particular dates this task recurs. 
end repeat	Sets the due date for this task. This setting is only available when **Repeat** is set as daily or weekly or monthly. ◆ Never: Enable this option to continue repeating indefinitely. ◆ Invalid date: Sets the date that the task will no longer run.
status	Click on the switch to turn on or off the task.

4. Click the save button to finalize creating the task. Now you can find the task you just created is on the task list.

Scheduled Tasks Management

To edit an existing task, find the task you'd like to edit form the task list, and double-click on the task to open the **Edit Schedule** popup.



Through **Edit Schedule** popup, you may:

- Make changes of this task and save it.
- Remove this task from the task list by clicking **Delete** button.
- Turn on or off the status switch to make this task active or inactive.

User

The **User** page lets the account with administrator role do the following:

- Check, add, edit, or delete users.
- Change the account password for accessing the VE Manager (web GUI).
- Assign the user role to the user account.

Note: The VE Manager is the web-based graphical user interface (web GUI) used to configure and manage the VE8662 units.

Types of User Roles

The VE Manager offers three user roles with different levels of authority. Only the user role designated as an administrator can access the **User** page to create the other two roles: **Super User** and **User**.

Refer to the tables below to distinguish between account authorization levels.

Table 1: Access Permissions

User Role	Access Permissions					
	Device	Room	Matrix	Schedule	User	Maintenance
User	no access permissions					
Super User		✓		✓		
Administrator	✓	✓	✓	✓	✓	✓

Note: Accounts with the **User** role are restricted from accessing the VE Manager (web GUI).

Table 2: Resource Access Levels

User Role	Resource Access			
	Transmitter	**IP Camera Sources**	**Room**	**Profile**
User	Limited Access	Limited Access	Limited Access	Limited Access
Super User	Full Access	Full Access	Limited Access	Full Access
Administrator	Full Access	Full Access	Full Access	Full Access

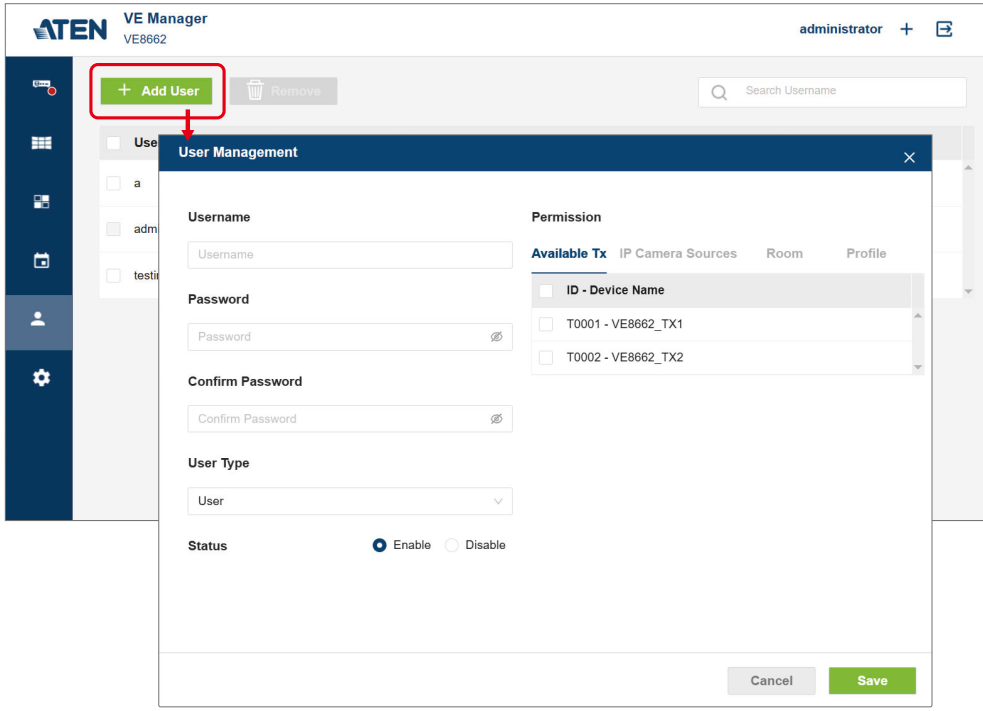
Note: Table 2 shows the resource access levels available after logging in to a workstation, not the VE Manager. Accounts with the **User** role cannot log in to the VE Manager (web GUI), and **Super User** accounts have limited access to certain pages within the VE Manager.

User Account Management

The **User** page is accessible only to administrator accounts. To create, edit, or remove user accounts, you must log in to the VE Manager with an administrator account.

Creating a New User Account

To create a new user account, follow these steps:



1. On the **User** page, click the **Add User** button to open the **User Management** popup.
2. Define the username and password, and specify the user type.
3. Choose the account status:
   - **Enable**: Activate the account.
   - **Disable**: Deactivate the account.

4. Configure the account permissions.
   - **Available TX**:
     Select the transmitter(s) that this account can access for its video source.
   - **IP Camera Sources:**
     Select the IP streams that this account can access.
   - **Room**:
     Select the room(s) that this account can access.
   - **Profile**:
     Select the profile(s) associated with the accessible room(s) that this account can apply.

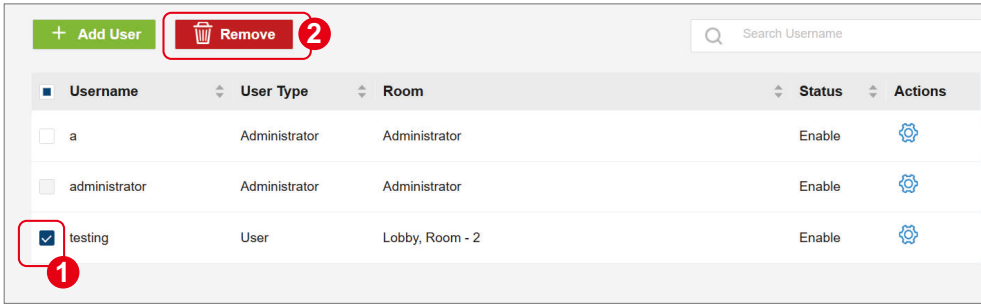
Note: **Administrators** have full access to all transmitters, IP Camera Sources, rooms, and profiles. **Super Users** have full access to transmitters and IP Camera Sources, and selectable access to rooms and profiles. **Users** have limited access to the assigned transmitters, rooms, and profiles.

5. Click **Save** to create the new account. Click **Cancel** to abort the creation and close the popup.

Editing or Deleting an Existing User Account

■ **Remove**

To remove an existing account(s):



1. From the user account list, select the account(s) you'd like to delete.
2. Click the Remove button to delete the selected account(s).

Note: The default administrator account cannot be deleted.

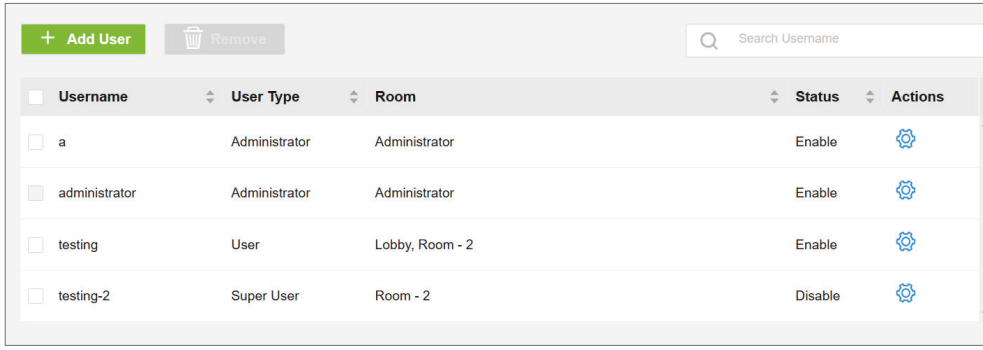
■ Edit

To edit an existing account:

1. From the user account list, double-click on an account or click the action button  to open the account's **User Management** popup.
2. Make the necessary changes and save.

User Account List

The user account list itemizes all the user accounts with the following information:



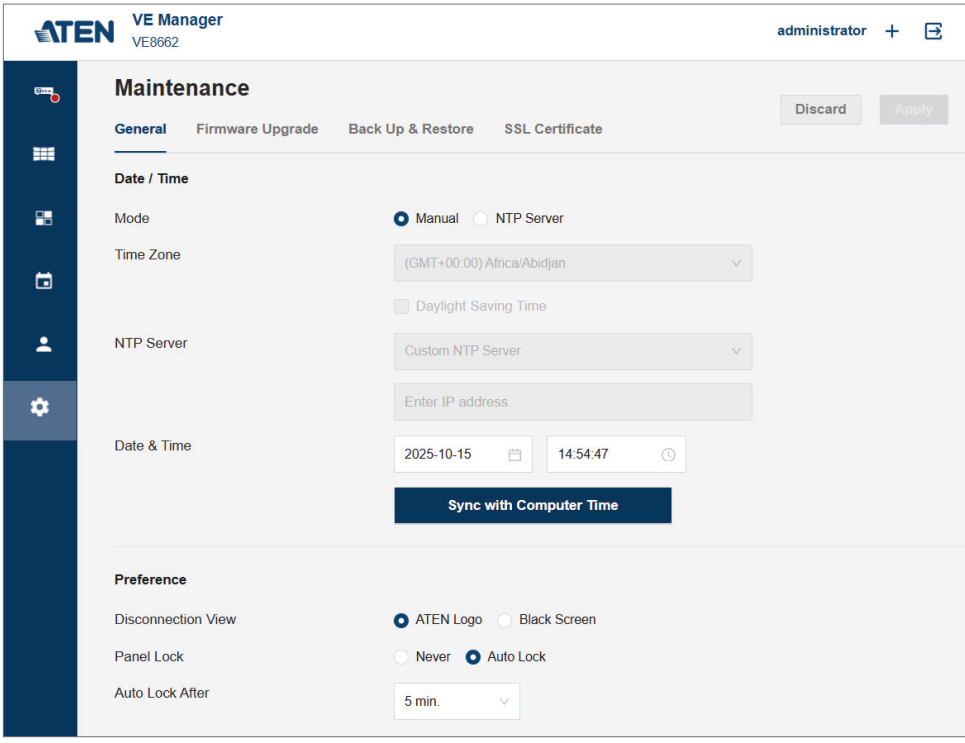
Item	Description
Username	The name of the account
User Type	The type of the user role
Room	The granted room(s) the account is allowed to access
Status	Whether the account is active or deactivated
Actions	The settings button to open the **User Management** popup

Maintenance

The Maintenance page allows you to specify device date and time, configure settings of connected VE8662 devices, upgrade device firmware, and back up the VE Manager's settings.

General Settings

The General tab contains the date, time, panel lock settings, and CLI settings.



Make sure to save your changes by clicking **Apply** button.

Date & Time

Settings	Description
Mode	Select between the two modes: ◆ Manual: Set the date and time manually. By selecting Manually, the function Date & Time below becomes available. Choose the date and time from the date picker and time picker. ◆ NTP Server: Set the Network Time Protocol (NTP) to synchronize the clock between the unit and the server.
Date & Time	Set the date and time from the date picker and time picker. **Note:** The function is only available when Manual mode is enabled.
Sync with Computer Time	If you wish to synchronize the time with the computer's time, click the button to process the settings.

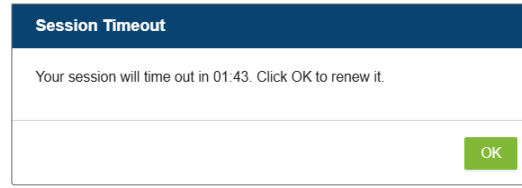
Preference

Settings	Description
Disconnection View	Set the screen to be displayed when input video source is disconnected.
Panel Lock	Select **Auto Lock** to lock the panel control of all the VE8662 units.
Auto Lock After	Specify the timeout duration for panel lock.

CLI

Settings	Description
Login	Select **On** to enable remotely logging in to VE8662 from a computer using RS-232 / Telnet interface.
Timeout	Specify the idle time that causes the CLI session closed.

Account Lockout Policy

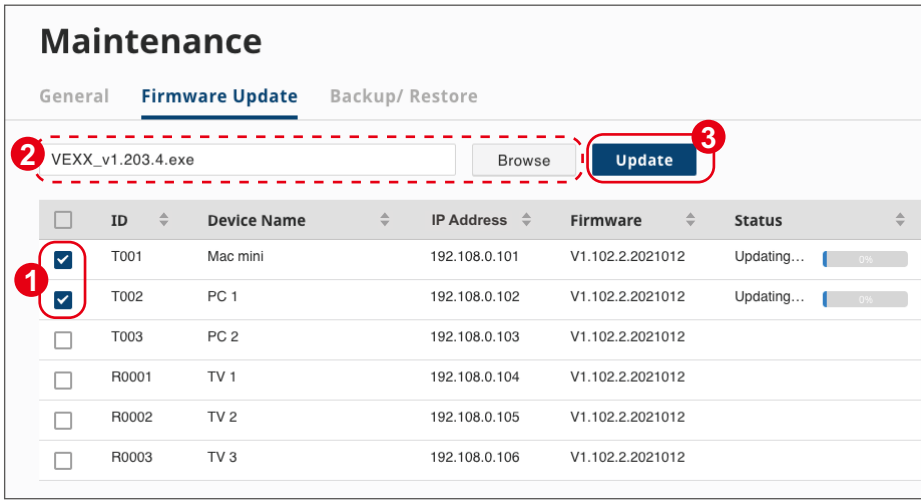
Settings	Description
Account Lockout	Enables or disables the feature that locks a user account after a specified number of failed sign-in attempts.
Maximum Invalid Login Attempts	Specifies the maximum number of failed sign-in attempts allowed before the account is locked.
Account Lockout Duration (minutes)	Defines the number of minutes a locked account remains inaccessible before it is automatically unlocked.
Auto Logout Timeout (minutes)	Specifies the duration of user inactivity before the system automatically logs out the current session. When the timeout threshold is reached, a **Session Timeout** warning dialog appears, prompting the user to click **OK** to renew the session and prevent automatic logout. 

Advanced Settings

Settings	Description
Host Header Attack Defense	Enables or disables protection against forged HTTP Host headers. When enabled, the system validates the Host field in incoming HTTP requests to prevent attacks that exploit modified or fake Host headers, which could otherwise cause unauthorized redirects or security bypasses. ◆ **Enable**: Verifies the Host value in HTTP requests to enhance security. ◆ **Disable**: Turns off validation for compatibility or testing purposes. Recommended to keep this option enabled in production environments.

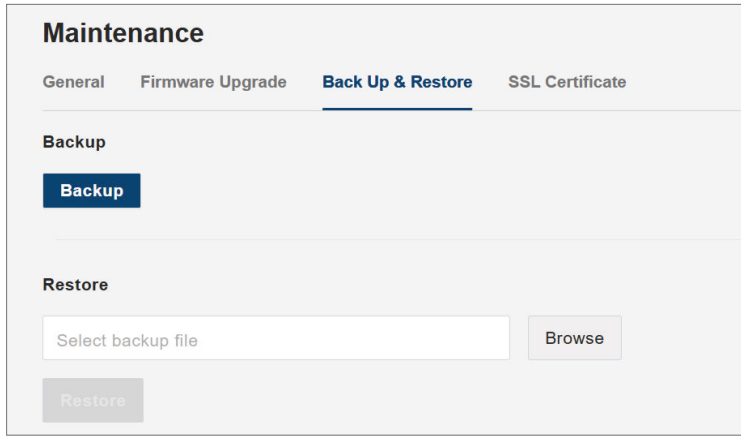
Firmware Upgrade

To upgrade the VE8662 device firmware, follow the steps below.



1. Select the device(s) you'd like to upgrade the firmware.
2. Click the **Browse** button to find the firmware file in your PC.
3. Click **Update** to start the upgrade process.

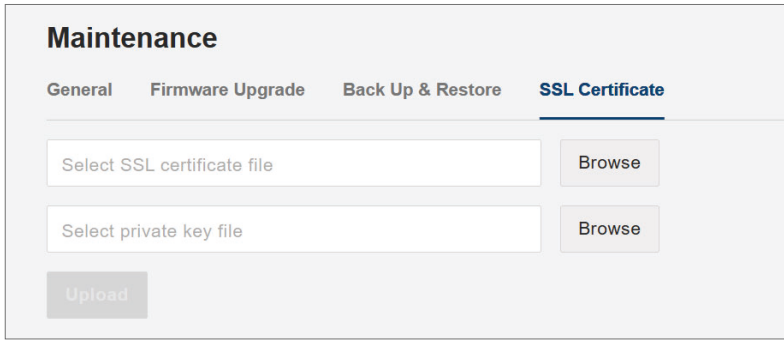
Back Up & Restore



Backup is to save to a copy of system configurations and restore is to load a previously saved backup file to recover system configurations.

- To restore settings from a backup file, the number of devices, their Tx/Rx modes, and MAC addresses must match those in the backup.
- Network settings (IP address and subnet mask) will not be restored.
- Once the restore process is complete, all units will reboot.

SSL Certificate



SSL Certificate allows administrators to enhance web interface security by uploading a valid SSL certificate and its matching private key file. The SSL certificate verifies the device's identity, while the private key enables encrypted HTTPS communication between the browser and the device.

Once both files are selected, click **Upload** to apply the new certificate.

Chapter 5
Workstation OSD Control

Overview

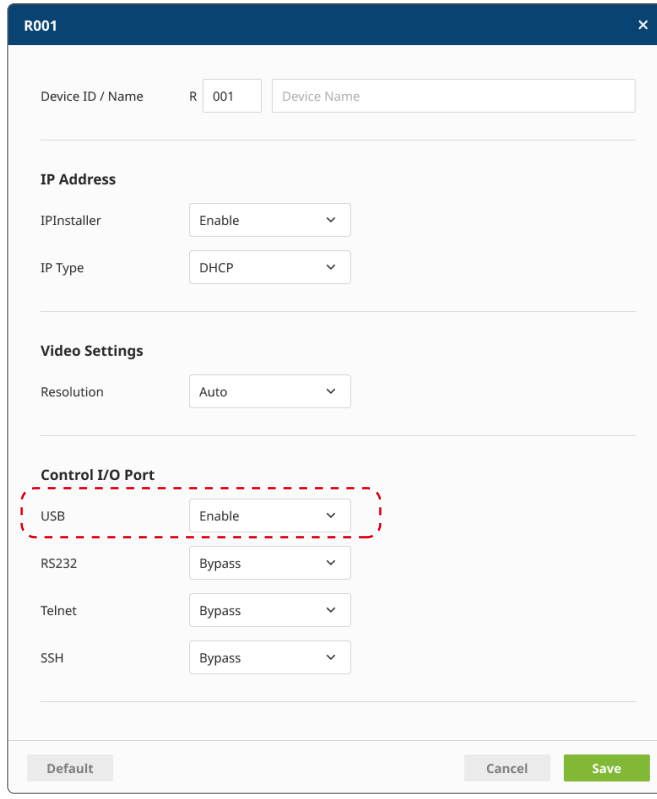
The workstation OSD Control interface allows users to manage and switch video sources within their granted rooms. Users can interact with granted transmitters, receivers of workstations, and apply granted profiles based on their account permissions.

Note: An account with the **User** role, which is restricted from accessing the VE Manager, can log in to workstation OSD control interface to manage and operate the assigned room.

Prerequisite

To enable the OSD control interface on a workstation, the following steps should be completed in advance:

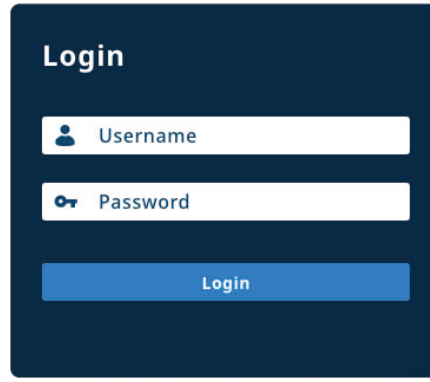
1. Connect a keyboard, mouse, and monitor to the target receiver.
   See *Connecting VE8662*, page 14.
2. Log in to the **VE Manager**, navigate to the corresponding room, and select the target receiver to set it as a workstation.
   See *Create Workstation*, page 56 and *set as workstation*, page 59 for how to create a workstation.
3. On the **Device** page of the VE Manager, open the target receiver's edit popup and enable its **USB** function.



Note: To remotely control the PC connected to the transmitter's USB Type-B port, the receiver's USB function must be set to **Enable**.

Logging In

Users must log in with their credentials to access workstation OSD control interface. To log in to a workstation, enter your username and password, and then click **Login** on the login screen.



OSD Control Operation Panel

After successfully logging in to the workstation OSD control interface, an operation panel appears, as shown in the figure below:

No.	Item	Description
1	workstation name	Displays the name of the currently logged-in workstation.
2	Logout	Logs out the account. Once you log out, the session ends which means this workstation will retrieve all pushed sources, and remains the current workstation layout.

No.	Item	Description
3	close	Hides the workstation OSD control operation panel. The function works similar to using the hotkey, Ctrl + Ctrl.
4	account	Displays the currently logged-in user account.
5	toolbar	The toolbar offer 6 buttons which deliver the following function: ◆  **Source**: Expands the source panel, where users can browse, search, and select authorized transmitter, media, or IP camera sources to switch content on the workstation receiver. ◆  **Pull**: Expand the pull control panel to acquire sources from other receivers or workstations in the same room. ◆  **Push**: Expand the push control panel to send video or media sources from the current receiver to other receivers or workstations in the same room. ◆  **Profile**: Opens the profile management panel, which contains two tabs, **Profile** and **Workstation**. Users can view, apply, or manage profiles based on their access permissions. Profiles from the Profile tab are configured via the VE Manager, while Workstation profiles are created and stored locally. *(Continues on next page.)*

No.	Item	Description
5	toolbar	*(Continued from previous page.)* ◆ **Layout**: Opens the layout control panel, allowing users to toggle between single-view and quad-view modes for each receiver. **Setting**: Opens the setting panel, where users can customize boundless switching behavior and focus display options.

After logging in, use the default hotkey **Ctrl** + **Ctrl** to hide/show the OSD control screen. The workstation displays retain the previous state before being hidden.

If a workstation already has an active source before logging in, the system automatically retains and applies the existing source after login.

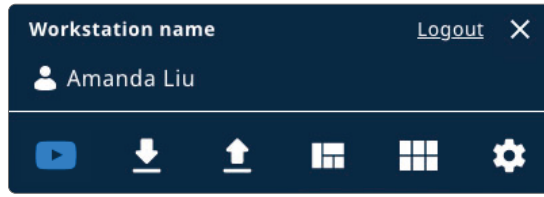
Touchscreen Monitor
When a touchscreen monitor is connected to the target receiver, pressing and holding three fingers on the screen performs the same function as the default hotkey (**Ctrl** + **Ctrl**) to hide or display the OSD control screen.
When hiding the OSD control screen, make sure the three-finger press is performed outside the OSD control screen menu area.

Workstation Receiver Bar

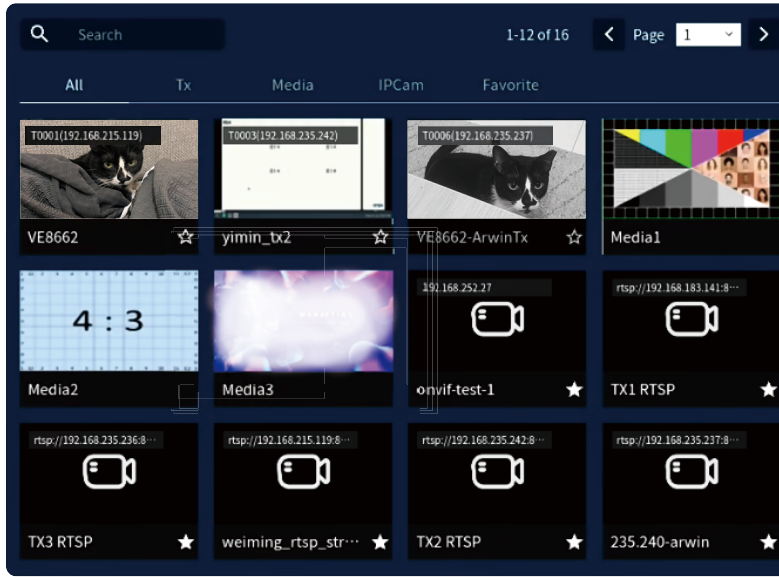
The workstation receivers bar displays all the authorized receivers (Rx) that are assigned to the workstation. Each receiver is listed in order, and the corresponding receiver tiles are shown at the bottom of the OSD control screen. Users can interact with these tiles to select the receiver for source switching and management.

Source

Click the **Source** button to expand the source panel and display the list of receiver tiles at the bottom of the OSD control screen.



Source Panel



The granted sources are listed on the source panel in order based on the transmitter ID. The source panel contains the following:

Item	Description
All	Lists all authorized sources, including transmitter video sources and images from the Media list.

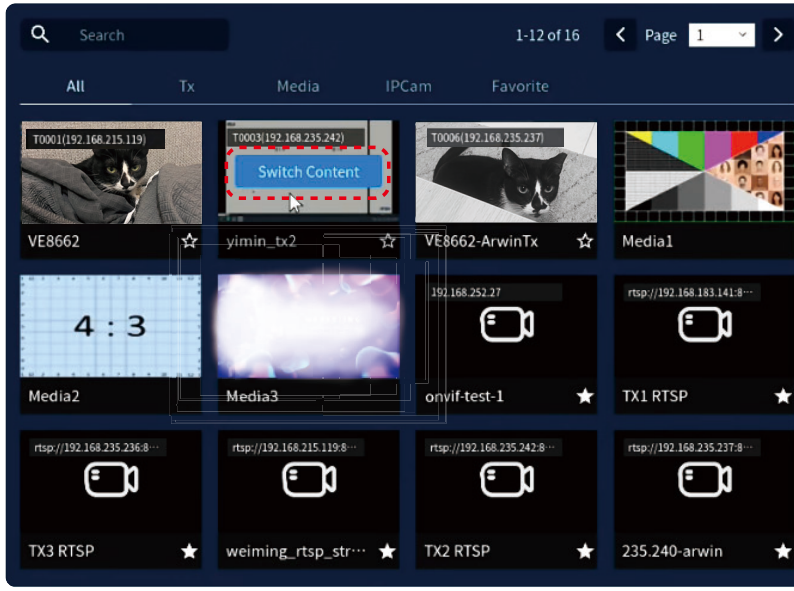
Item	Description
Tx	Lists all authorized transmitter video sources.
Media	Lists all media sources. **Note:** Media sources are accessible by all users.
IPCam	Lists all authorized **IP Camera Sources**.
Favorite	Click the star icon to add a source to **Favorites**. The **Favorite** tab only shows sources that have been added.
Search bar	Filters results based on the input transmitter device name or device ID.

Source Switching

To switch the source that displays on the workstation receiver:

1. Select the Receiver (Rx):
   Click on the desired receiver display from the workstation receiver bar.

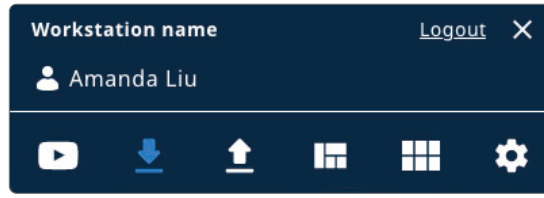
2. Select the Source:
   Click to select the source you need from the source panel.
3. Click the **Switch Content** Button:
   After selecting the receiver, click the button to change the source.



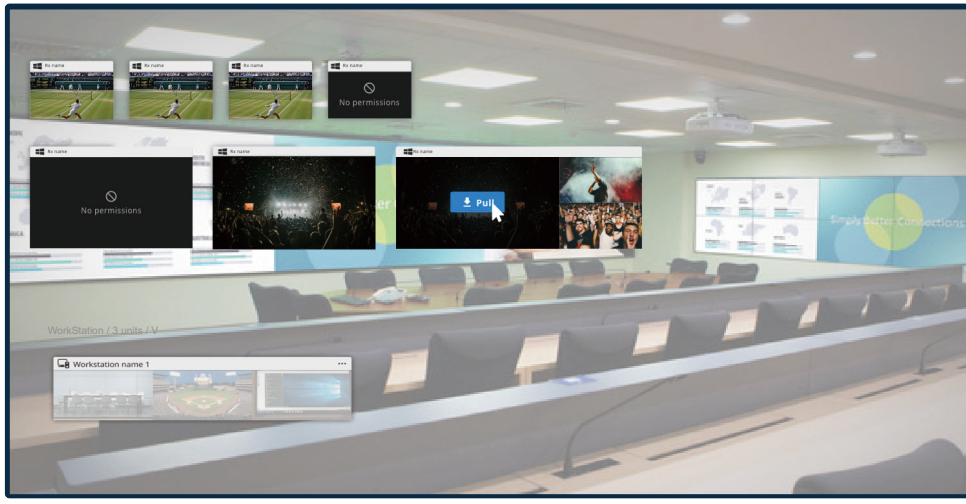
The source will be switched, and the receiver will display the new source.

Pull (Acquiring a Source)

Pull is used to acquire the available source from other receivers or workstations belonging to this room.



Click the **Pull** button to expand the pull control panel which displays the receivers and workstations in this room. If there's the desired source, you can pull it to the selected receiver listed in the receiver bar at the bottom of the OSD control screen.



Note:
- Unavailable sources are covered with a white translucent overlay.
- The video source to be acquired must be from the available transmitters. Unauthorized sources appear as **No Permission**.

Follow the steps for pulling a source.

1. Select the Rx Display:

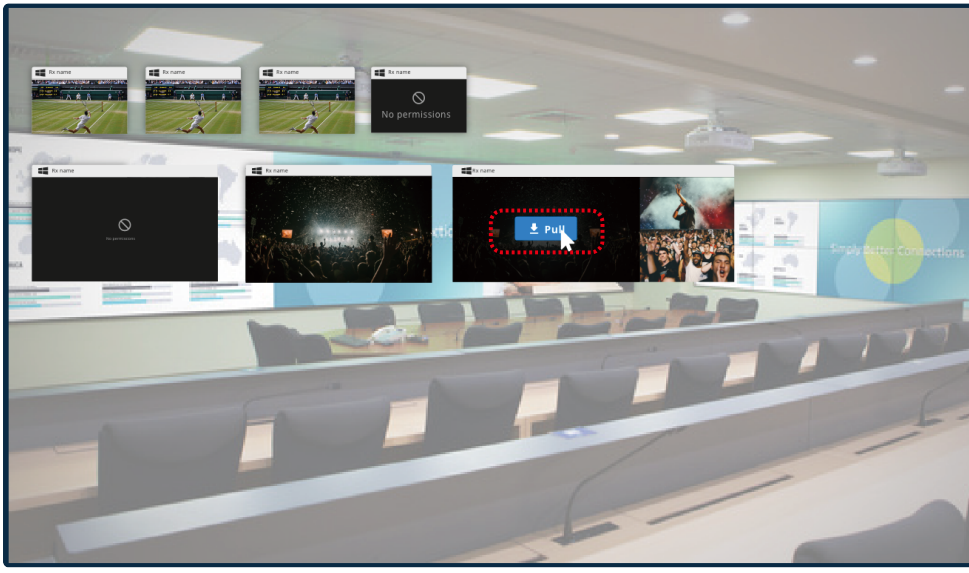
   Click on the desired Rx display at the bottom of the OSD control screen.

2. Choose the Desired Source:

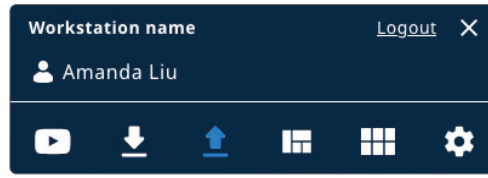
   Select the source you want to acquire from the available options.

3. Click the **Pull** Button:

   Click the **Pull** button to transfer the selected source to the OSD control screen.



Push (Sending a Source)



Push is the process of sending a source, such as video or media, obtained from the receivers in the workstation receiver bar, to another receiver display on the **Push** control panel. It allows content to be shared with designated receivers, and users can accept or reject incoming sources via notifications.

Steps to Push a Source

1. Select the Rx Display:

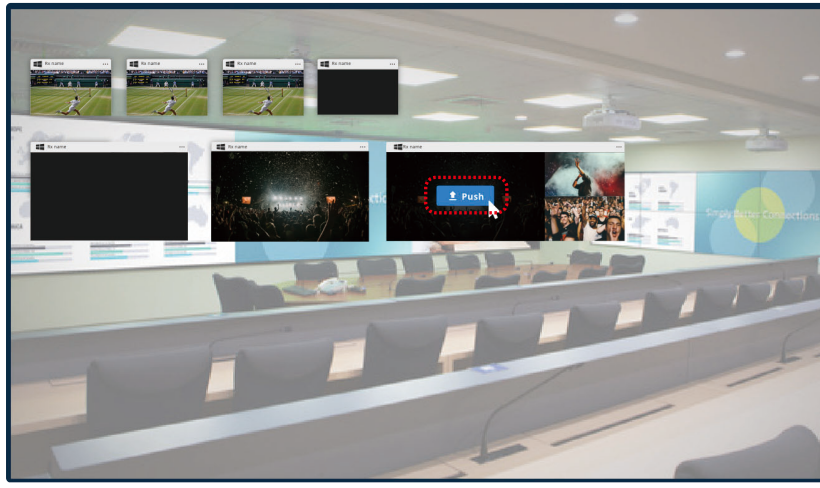
   From the bottom Rx bar, click on the desired Rx display that contains the source you want to send (the default is the current Rx).

2. Choose the Receiver to Push the Source To:

   Select the receiver display in the Push panel where you want to send the source.

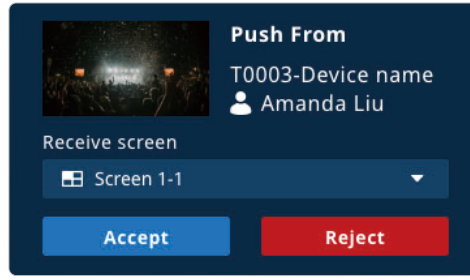
3. Click the Push Button:

   Click the **Push** button to send the selected source to the specified Rx.



Push Notification

When a pushed source is sent to a receiver that is logged in, the corresponding receiver OSD will display a notification prompting the user to accept or reject.

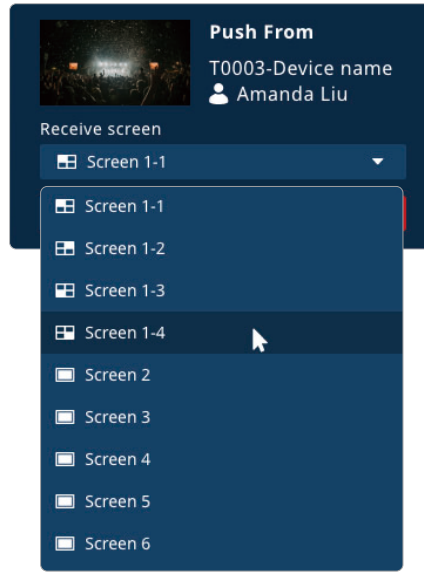


If the receiver is not logged in, the source will be switched automatically.

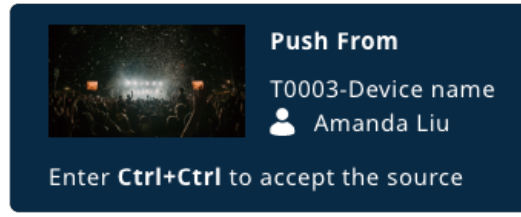
Note: You cannot push a source that has been pushed to you by another user.

Click **Accept** to apply the source while click **Reject** to close the notification. If no action is taken within 3 minutes of receiving the notification, it will automatically be rejected and closed.

If you want to designate the receiving screen, select it from the drop-down menu before accepting the pushed source.

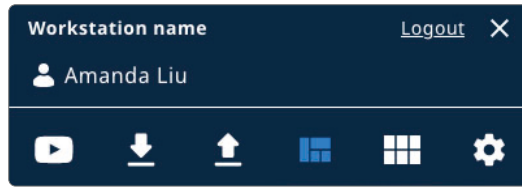


If you receive a push notification while the OSD control screen is hidden, use the hotkey **`Ctrl + Ctrl`** to open the OSD control screen, then decide whether to accept the pushed source.

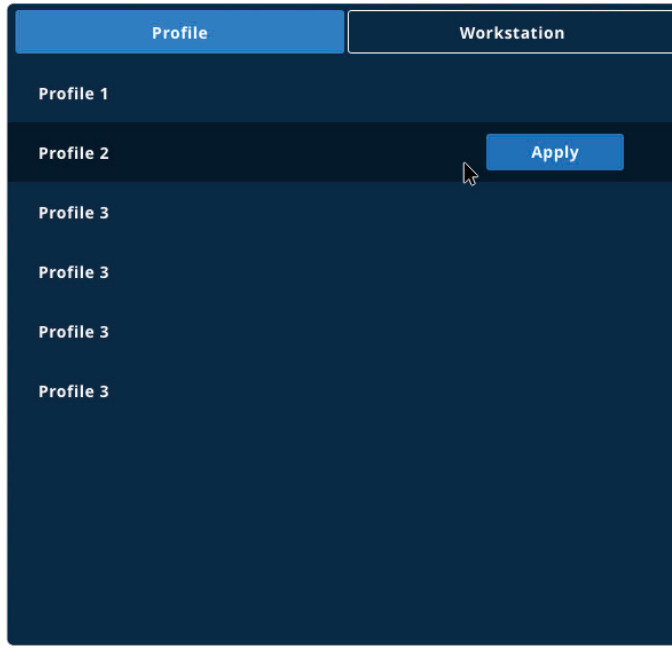


When multiple push sources are received, they will be listed in the notification panel, with a maximum of 15 entries. Once this limit is exceeded, the oldest notifications will be removed to make room for new ones.

Profile

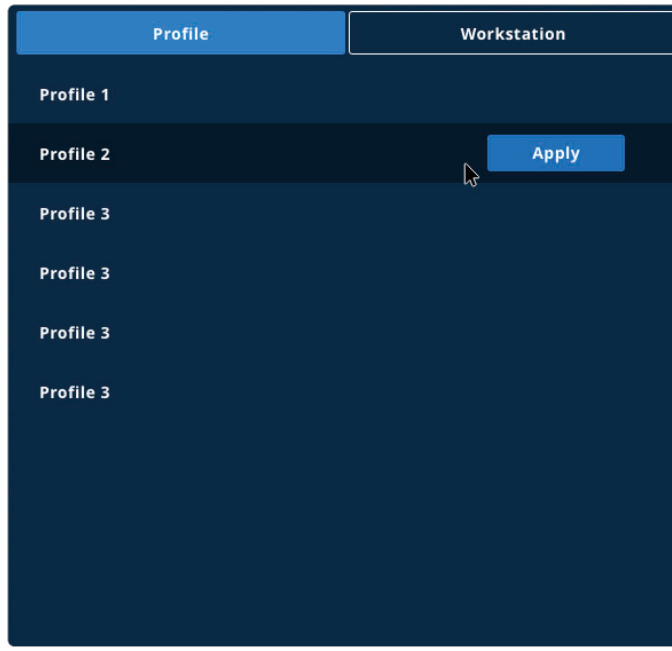


Users can view and apply granted profiles associated with the current room. Click the **Profile** button to expand the profile control panel, which includes two tabs: **Profile** and **Workstation**.



Profile Tab

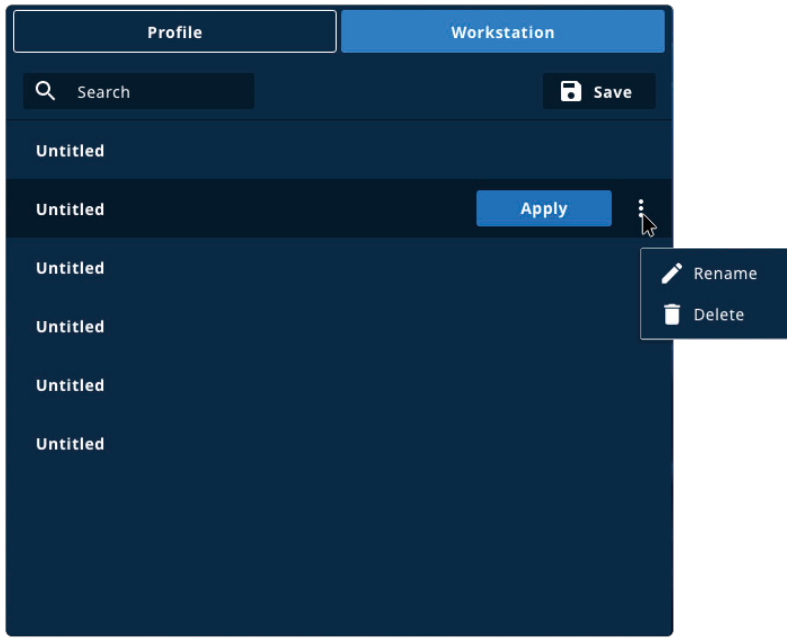
The **Profile** tab displays only the profiles that match the user's access permissions. Click **Apply** to activate the selected profile.



- The profiles listed in this tab are configured via the VE Manager (web browser interface). These profiles are assigned to specific users during the user creation or editing process.
- Profiles on the Profile tab can only be modified or deleted through the VE Manager. On the workstation, users can only apply them.

Workstation Tab

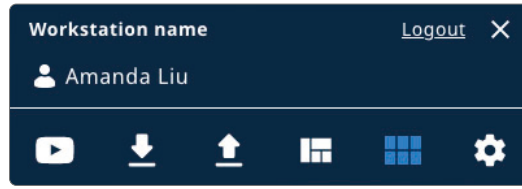
The **Workstation** tab lets users create and manage profiles locally on the workstation, with each profile linked to both the workstation and the user.



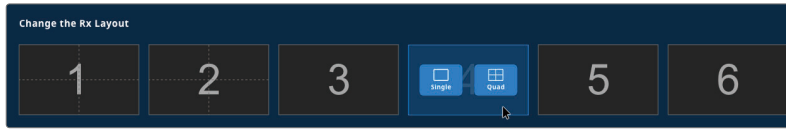
- Profiles listed on Workstation tab are created directly on the workstation. Click the **Save** button in the top-right corner to create a new profile.
- The profiles on the **Workstation** tab cannot be modified or deleted via the VE Manager. They can only be applied, renamed, or deleted on the workstation.
- The profile records the transmitter-receiver pairing of the logged-in workstation at the time of creation. After creation, only the profile name can be changed. The source pairing remains fixed.
- Workstation profiles are bound to both the specific workstation and the user who created the profiles. To apply the workstation profile successfully, use the same user account to log in to the same workstation.
- If a workstation is ungrouped in the VE Manager, all data of that workstation in the workstation OSD control interface will be deleted.

Layout

Users can change the display layout of the current workstation.

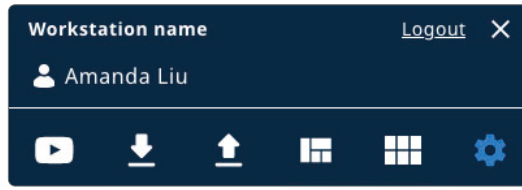


Click the **Layout** button to open the layout control panel. The panel lists all receiver screens under the current workstation and allows users to switch the viewing mode for each receiver.

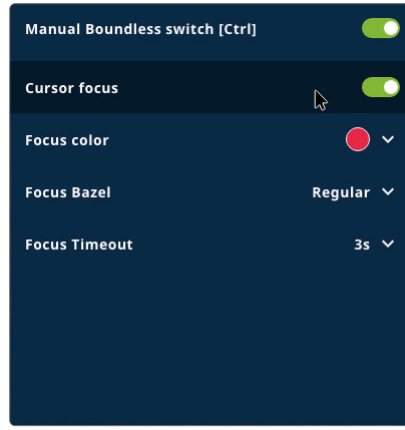


Click a receiver layout to toggle between single-view and quad-view modes. Each layout retains the original transmitter sources before and after switching.

Setting



The Setting panel allows users to customize how the boundless switching feature behaves and how the focus indicator is displayed when switching between transmitters.



The following options are available:

- **Manual Boundless switch [Ctrl]**:
  Enables manual control for boundless switching. When this option is turned on, users must press **Ctrl** key twice (**Ctrl** + **Ctrl**) to perform a boundless switch. When enabled, users can move the cursor across displays to control another transmitter (Tx). When disabled, the boundless switching function is turned off.
  The default setting is **On**.
- **Cursor focus**:
  Activates a visual indicator on the target display when the cursor switches to another transmitter. The focus frame helps users quickly identify which display is currently active.
  Users can further customize the focus display using the following options:

- **Focus color**:
  Selects the color of the focus frame (six color options available). The default color is **Red**.
- **Focus Bazel**:
  Adjusts the thickness of the focus frame to **Thin**, **Regular**, **Bold**. The default setting is **Regular**.
- **Focus Timeout**:
  Defines how long the focus frame remains visible after switching. Options are **Off**, **3s**, **15s**, **30s**, **Always**. The default setting is **3s**.

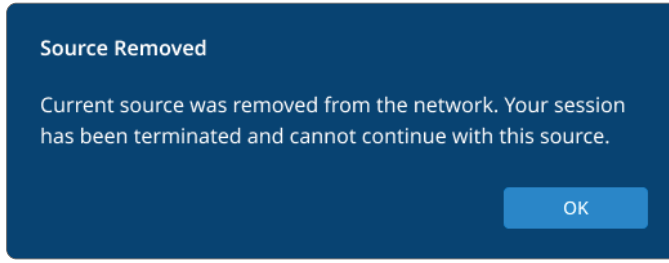
Workstation Status Notifications

When a source or a device within the workstation is removed or becomes unavailable, the system displays a pop-up message to notify the user of the change.

These notifications help users understand when a source session or device configuration has been terminated or modified.

Source Removed

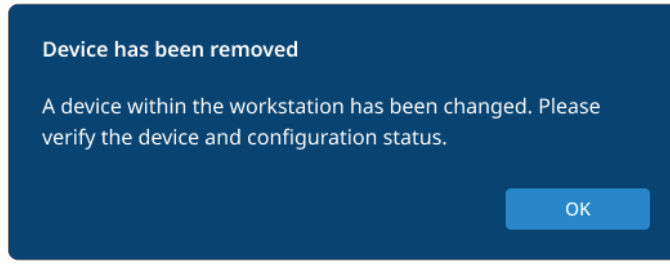
When a transmitter, media source, or IP camera that is currently linked to the workstation is removed from the VE network, the system displays a **Source Removed** message.



- Indicates that the source is no longer available for playback or transmission.
- Instructs the user to select another available source from the workstation to continue operation.

Device in Workstation is Removed

When a device within the workstation (for example, an assigned receiver) is removed from the VE network, the system displays a **Device has been removed** message.



- **For receivers that remain in the workstation**:

  Displays the dialog on the active receiver screens. The **OK** button is available and must be clicked manually to close the dialog.

- **For removed receivers**:

  Displays the dialog on the removed receiver screens. The dialog automatically closes after 30 seconds and does not include an OK button.

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Chapter 6
Receiver Display and On-screen Indicators

Overview

This chapter introduces the on-screen information and notification messages that appear on the display connected to a receiver (Rx). It also explains how the OSD (On-Screen Display) setting in the VE Manager affects the visibility of receiver information.

Receiver OSD Information Display

When the **OSD** option is enabled in a room's configuration page of the VE Manager, the receiver automatically overlays its information card on the connected display. See *OSD setting*, page 70.

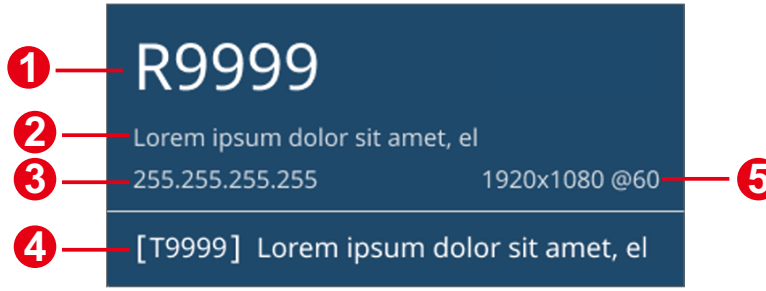
The OSD information card appears at the upper-left corner of the screen and provides details such as the Rx ID, receiver name, IP address, connected transmitter name, output resolution, digital audio mute status, and blank screen status.

This function helps users quickly identify receiver connections and diagnose display-related issues without accessing the web interface.

Note: The OSD information card is only visible when the receiver output is active and properly linked to a display device.

OSD Information Card (Single View)

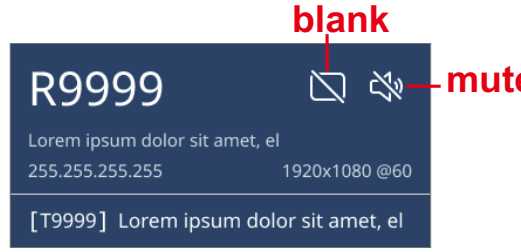
The OSD information card displays the following receiver information on the screen:



No.	Item	Description
1	Rx ID	The receiver ID of the VE8662 receiver connected to this display monitor.
2	Rx name	The receiver name of the VE8662 receiver connected to this display monitor.
3	Rx IP address	The IP address of the VE8662 receiver connected to this display monitor.
4	Tx source information	The VE8662 transmitter that provides the video source shown on this display monitor.
5	output resolution	The output resolution of the video displayed on the screen.

Mute / Blank

The Mute and Blank icons on the OSD information card indicate the receiver's current audio and video output status.



Item	Condition	Description
Blank	When the receiver's video output is blanked	The blank icon appears when the display is blanked (screen turns black). The OSD information card remains visible at the upper-left corner unless the OSD feature is disabled in the VE Manager.
Mute	When the receiver's digital audio output is muted	The mute icon appears when the receiver's audio is muted. No icon is displayed when the audio output is active.

Quad View OSD Information Card

When the receiver operates in Quad View mode, the OSD information card displays the receiver and source information for each quadrant. The layout includes up to four source tiles, each showing the corresponding transmitter (Tx) name or No Signal if no source is assigned.

- The Mute icon appears at the upper-right corner of the OSD information card when the receiver's audio output is muted.
- The Blank icon appears when a specific quadrant is blanked (e.g., the top-left quadrant in the example figure above). The OSD information card remains visible unless the OSD feature is disabled in the VE Manager.

On-screen Warning Messages

During playback or transmission, certain warning messages may appear on the receiver's display to indicate connection or decoding issues.

These messages are automatically triggered when the receiver detects abnormal playback conditions such as unsupported video formats, HDCP restrictions, or blocked network streams. Each message provides a brief description of the issue and guides the user to verify the connected devices or system configuration.

HDCP Restriction – Display doesn't support HDCP

Appears when the connected display does not support HDCP (High-bandwidth Digital Content Protection) encryption required by the source device.

This message indicates that the video content cannot be displayed due to HDCP incompatibility. To resolve the issue, use an HDCP-compliant display or disable HDCP on the source device (if supported).

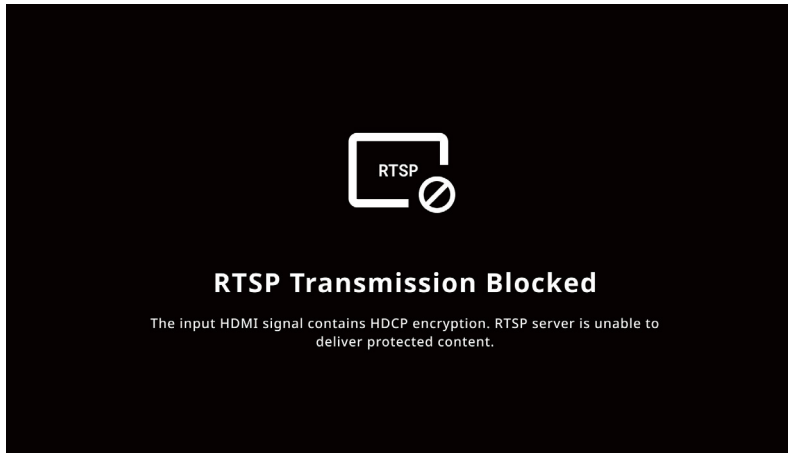
Unsupported Video Resolution

Appears when the receiver cannot display the video due to an unsupported resolution setting. This condition may occur in the following cases:

- When operating in Quad View mode, if the source (Tx) resolution exceeds Full HD (1080p), the receiver is unable to decode the video stream.
- When the output resolution specified in the VE Manager exceeds the maximum resolution supported by the connected display device.

To resolve this issue, lower the source output resolution or adjust the display settings in the VE Manager to match the display's supported specification.

RTSP Transmission Blocked



Appears when the receiver cannot display the video because the source content is HDCP-protected and therefore cannot be transmitted through RTSP streaming.

In this condition, the RTSP server replaces the video signal with a warning image indicating that the protected content cannot be streamed.

To continue playback, use a non-HDCP source or disable HDCP protection on the transmitting device (if supported).

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Chapter 7
CLI Commands

Overview

The Command Line Interface (CLI) allows administrators to configure, monitor, and control VE8662 devices by issuing direct text-based commands. You can access the CLI using RS-232, Telnet, or SSH connections from either the Transmitter (Tx) or Receiver (Rx) unit.
This interface provides a flexible way to automate configuration and troubleshoot system behaviors without relying on the Web GUI.

Note: Only users with administrator privileges can execute CLI commands.

Access and Authentication

- Make sure you have installed a PC or an ATEN Control Box to the Ethernet switch in your setup.
- The VE8662 Tx or Rx device must be connected to the same network as your control PC.
- Log in to the VE Manager and go to **Maintenance** > **CLI**. Select **On** to enable login requirement for Telnet / SSH command-line interface.
- RS-232, Telnet, or SSH access must be enabled in the VE Manager for each unit.

Access Methods

- RS-232:
  Connect the control PC's serial port to the VE8662's RS-232 port using a serial cable.
- Telnet:
  Open a Telnet client and enter the IP address of the target device.
- SSH:
  Use an SSH client for encrypted communication.

Login Credentials

To access the CLI, users must have an administrator account.

The VE8662 Command Line Interface (CLI) can be accessed only by accounts with the administrator role. Use the account and password to log in.

Session Termination

To exit the CLI, type `exit` or `logout` and press Enter.

Note: Use the `help` command to view available commands or check command syntax.

Command Guidelines

- The general form of a command is:

  command parameter<argument> {one|two|three}

Notation	Description
command	The name of the command is shown in bold.
parameter	Indicates the name of the parameter.
<argument>	Indicates the name of the value or the information that the user must provide. Only type the information in the angle brackets, not the brackets themselves.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
{ }	Indicates a set of choices from which the user must choose one.
|	Indicates two or more mutually exclusive choices in a command line. Only type one of the choices in the command line, not the symbol.

- If you have two or more parameters, the order of these parameters among themselves does not affect the result of the operation. For example, both of the following commands execute the same task:

  command name + parameter 1 + parameter 2

  command name + parameter 2 + parameter 1

Operation Commands

This section describes the CLI commands supported by the VE8662 system. Each command includes its syntax, purpose, and examples for practical use.

sw – Switch

Sets or disconnects the video source for a specific receiver output port, or controls the display mode of a video wall region.

- **Syntax:**

  The following command formats are supported:

```
sw o<rx_id> i<tx_id>
sw o<rx_id> cam<cam_id>
sw o<rx_id> media<media_id>
sw o<rx_id> none
sw o<rx_id> {on|off}
sw o<rx_id> {single|quad}
sw o<rx_id> <src1,src2,src3,src4>
```

- **Parameter Description:**

Parameter	Description
i	Input port: Transmitter ID (e.g., i1) **Note:** Use list src to retrieve available source IDs.
o	Output port: Receiver ID or video source ID(e.g., o1) **Note:** Use list dev to retrieve available source IDs.
cam	IP camera source ID
media	Media source ID
none	Disconnect current video source

Parameter	Description
on	Turn display on or off (also applies to entire video wall region)
off	
single	Set receiver view mode
quad	
src1 src2 src3 src4	List of sources for quad view

Note:

- The sw command applies to standalone receivers, workstation receivers, and video wall regions.
- When off is used, the receiver output is blanked.
- Use list src to obtain source IDs.
- Workstation receivers don't support parameter on/off/none.

■ **Examples:**

1. Connect Rx 1 to Tx 1:
   ```
   sw o1 i1
   ```
2. Switch Rx 1 to IP camera source 1:
   ```
   sw o1 cam1
   ```
3. Switch Rx 1 to media 1:
   ```
   sw o1 media1
   ```
4. Turn on Rx 1 display:
   ```
   sw o1 on
   ```
5. Turn off Rx 1 display:
   ```
   sw o1 off
   ```
6. Disconnect current source:
   ```
   sw o1 none
   ```

7. Display single view:

   ```
   sw o1 single
   ```

8. Display quad view:

   ```
   sw o1 quad
   ```

9. Configure quad view with mixed inputs:

   ```
   sw o1 1,none,,4
   ```

`mute` – Mute Audio

Sets or displays the audio mute state of a transmitter (Tx) or receiver (Rx) device.

- **Syntax:**

```
mute
mute o<rx_id> {on|off}
mute i<tx_id> {on|off}
mute o* {on|off}
mute i* {on|off}
```

- **Parameter Description:**

Parameter	Description
(empty)	Show mute state of all devices
`o`	Output port: Receiver ID (e.g., `i1`)
`i`	Input port: Transmitter ID (e.g., `o1`)
`a`	Device address (optional, for specifying one or more devices)
`*`	Representing all receivers or transmitters.
`on`	Mute on (no audio)
`off`	Mute off (audio output enabled)

Note:

- The mute command can be used on both transmitters (Tx) and receivers (Rx).
- When no parameter is specified, it displays the current mute state of all connected devices.
- The `on` option disables the audio output, while `off` restores it.
- Use `*` to apply the command to all devices of the selected type (Tx or Rx).
- This command applies to audio signal paths only; video transmission is not affected.

■ **Examples:**

1. Show all device mute states:

   ```
   mute
   ```

2. Mute audio output of receiver 1:

   ```
   mute o1 on
   ```

3. Unmute audio output of receiver 1:

   ```
   mute o1 on
   ```

4. Mute all receivers:

   ```
   mute o* on
   ```

5. Unmute all transmitters:

   ```
   mute i* off
   ```

`profile` – Load or Display Profile

Displays the available room profiles or loads a specific profile to a room.

■ **Syntax:**

```
profile
profile r<room_id> f<profile_id>
```

■ **Parameter Description:**

Parameter	Description
(empty)	Display all profiles from all rooms
`r`	Room ID
`f`	Profile number (e.g., `f1`) Profile list (e.g., `f1`,`f2`,`f3`)

Note:

- The `profile` command without parameters lists all available profiles stored in the system.
- The `profile r<room_id> f<profile_id>` command loads the specified profile to the selected room.

■ **Examples:**

1. Show all stored profiles:
   ```
   profile
   ```
2. Load profile 1 to room 1:
   ```
   profile r1 f1
   ```

`read` – Read Device Information

Retrieves the current status or configuration information of a specific device, input port, or output port.

■ **Syntax:**

```
read
read {o<rx_id> | i<tx_id>}
```

■ **Parameter Description:**

Parameter	Description
(empty)	Retrieves basic information of the currently connected device (the one logged in via CLI).
`o`	Output port: Receiver ID (e.g., `o1`)
`i`	Input port: Transmitter ID (e.g., `i1`)
`*`	Representing all receivers or transmitters.

Note:

- Use `read` alone to display basic information of the currently connected device.
- Use read `o<rx_id>` to query the receiver status, or read `i<tx_id>` to query the transmitter status.

■ **Examples:**

1. Get basic information of the currently connected device:

   ```
   read
   ```

2. Read status of receiver 1:

   ```
   read o1
   ```

3. Read all receivers:

   ```
   read o*
   ```

4. Read status of transmitter 2:

   ```
   read i2
   ```

5. Read all transmitters:

   ```
   read i*
   ```

`selfdiagnostic` – Get Device Diagnostic Information

Retrieves diagnostic information from the selected device.
You can run self-diagnostics for all devices, or target a specific transmitter or receiver to verify connection and hardware status.

■ **Syntax:**

```
selfdiagnostic
selfdiagnostic {o<rx_id> | i<tx_id>}
```

■ **Parameter Description:**

Parameter	Description
(empty)	Run self-diagnostic on the currently connected device (the one logged in via CLI).
`o`	Output port: Receiver ID (e.g., `o1`)
`i`	Input port: Transmitter ID (e.g., `i1`)
`*`	Representing all receivers or transmitters.

Note:

- Use `selfdiagnostic` alone to run diagnostics on the currently connected device.
- Use selfdiagnostic `o<rx_id>` to check the receiver status, or selfdiagnostic `i<tx_id>` to check the transmitter status.

■ **Examples:**

1. Run diagnostics on the currently connected device:
   ```
   selfdiagnostic
   ```
2. Check receiver 1:
   ```
   selfdiagnostic o1
   ```

3. Check all receivers:
   ```
   selfdiagnostic o*
   ```
4. Check transmitter 2:
   ```
   selfdiagnostic i2
   ```
5. Check all transmitters:
   ```
   selfdiagnostic i*
   ```

`audiomap` – Configure RX Audio Source

Displays or sets the receiver (RX) audio source.
You can view the current audio mapping, assign an audio source manually, or follow the video source automatically.

■ **Syntax:**

```
audiomap
audiomap o<rx_id> i<tx_id>
audiomap o<rx_id> auto
audiomap o<rx_id> {analog | hdmi}
audiomap i<tx_id> {analog | hdmi}
```

■ **Parameter Description:**

Parameter	Description
(empty)	Display the current audio mapping for all connected devices.
`o`	Output port: Receiver ID (e.g., `o1`)
`i`	Input port: Transmitter ID (e.g., `i1`)
`type`	Audio port type: `analog` or `hdmi`
`auto`	Follow the video source automatically.
`*`	Representing all receivers or transmitters.

Note:

- Use `audiomap` alone to show the current RX audio source mapping for all devices.
- Use `audiomap o<rx_id> i<tx_id>` to assign an audio source manually.

- Use `audiomap o<rx_id> auto` to follow the assigned video input automatically.
- Use `audiomap o<rx_id> {analog | hdmi}` or `audiomap i<tx_id> {analog | hdmi}` to define the audio output type.
- `analog` routes audio through the analog output port, while `hdmi` routes it through the HDMI port.

■ **Examples:**

1. Display all audio mappings:
   ```
   audiomap
   ```
2. Assign transmitter 2 as the audio source for receiver 1:
   ```
   audiomap o1 i2
   ```
3. Follow video automatically for all receivers::
   ```
   audiomap o* auto
   ```
4. Set receiver 2 audio output to HDMI:
   ```
   audiomap o2 hdmi
   ```
5. Set all transmitters to analog output:
   ```
   audiomap i* analog
   ```
6. Reboot all receivers:
   ```
   reboot o*
   ```
7. Reboot transmitter 2:
   ```
   reboot i2
   ```
8. Reboot all transmitters:
   ```
   reboot i*
   ```

`reboot` – Reboot Device

Reboots the selected device to restart its system operation. You can reboot all connected devices at once, or target a specific transmitter or receiver.

■ **Syntax:**

```
reboot
reboot {o<rx_id> | i<tx_id>}
```

■ **Parameter Description:**

Parameter	Description
(empty)	Reboot the currently connected device (the one logged in via CLI).
`o`	Output port: Receiver ID (e.g., `o1`)
`i`	Input port: Transmitter ID (e.g., `i1`)
`*`	Representing all receivers or transmitters.

Note:

- Use `reboot` alone to restart the currently connected device.
- Use reboot `o<rx_id>` to reboot a specific receiver, or reboot `i<tx_id>` to reboot a specific transmitter.
- Device operation resumes automatically after reboot completes.

■ **Examples:**

1. Reboot the currently connected device:
   ```
   reboot
   ```
2. Reboot receiver 1:
   ```
   reboot o1
   ```
3. Reboot all receivers:
   ```
   reboot o*
   ```

4. Reboot transmitter 2:

   ```
   reboot i2
   ```

5. Reboot all transmitters:

   ```
   reboot i*
   ```

`help` – Show Command Usage

Displays usage information for all available commands, or detailed syntax for a specific command.

- **Syntax:**

```
help
help <cmd>
```

- **Parameter Description:**

Parameter	Description
(empty)	Display a list of all available commands along with brief descriptions.
`cmd`	Specify a command name to display its detailed syntax and usage information.

Note:

- Use `help` alone to list all supported CLI commands and their brief descriptions.
- Use `help <cmd>` to view detailed syntax, parameters, and examples for a specific command.

- **Examples:**

1. Display all available commands and their descriptions:

```
help
```

2. Display usage for the read command:

```
help read
```

`serial` – Configure RS-232 Port Settings

Displays or sets the RS-232 port configuration for transmitters or receivers.

- **Syntax:**

```
serial
serial {o<rx_id>] | i<tx_id>}
serial {o<rx_id> | i<tx_id>} baud <value> dbit
<value> parity <value> sbit <value>
```

- **Parameter Description:**

Parameter	Description
(empty)	Display current RS-232 settings of the currently connected device (the one logged in via CLI).
`baud`	Baud rate setting. Supported values: `9600` or `115200`.
`dbit`	Data bit setting: `7` or `8`.
`parity`	Parity bit setting: none, even, or odd.
`sbit`	Stop bit setting: `1` or `2`.
`*`	Represents all ports or devices.

Note:

- Use `serial` alone to show the RS-232 configuration of the currently connected device.
- Use `serial {o<rx_id> | i<tx_id>}` to display or modify a specific unit's RS-232 port.
- Use `baud`, `dbit`, `parity`, and `sbit` together to define serial communication parameters.
- The default configuration is 115200 baud, 8 data bits, no parity, and 1 stop bit.

■ **Examples:**

1. Display RS-232 settings of the currently connected device:
   ```
   serial
   ```
2. Check receiver 1's RS-232 settings:
   ```
   serial o1
   ```
3. Display all transmitter serial settings:
   ```
   serial i*
   ```
4. Configure all receivers to 9600 baud, 8 data bits:
   ```
   serial o* baud 9600 dbit 8
   ```
5. Configure all transmitters to 9600 baud, 8 data bits:
   ```
   serial i* baud 9600 dbit 8
   ```

vw – Configure Video Wall

Switches video wall sources, layouts, and display modes for receivers in a specified room.

■ **Syntax:**

```
vw r<room_id> v<vw_id> i<tx_id>
vw r<room_id> v<vw_id> camcam<cam_id>
vw r<room_id> v<vw_id> media<media_id>
vw r<room_id> v<vw_id> none
vw r<room_id> v<vw_id>  <layout_id>
vw r<room_id> v<vw_id> lc<custom_layout_id>
vw r<room_id> v<vw_id> {on|off}
vw r<room_id> v<vw_id> array <rx_id1,rx_id2,...>
vw shift o<rx_id> {u|d|l|r}<num>
```

■ **Parameter Description:**

Parameter	Description
r	Room ID where the video wall is located
v	Video wall ID
i	Input source: Transmitter ID (e.g., i1)
cam	IP camera source ID.
media	Media source ID.
none	Disconnect current video source.
layout_id	Layout mode: ◆ 0 = Video Wall ◆ 1 = Splitter ◆ 2 = Custom
lc	Specify a custom layout ID.

Parameter	Description
on	Turn the video wall display on or off.
off	
array	Define the receiver array for the video wall arrangement.
u	Shift the video wall receiver position: ◆ u = Up ◆ d = Down ◆ l = Left ◆ r = Right
d	
l	
r	
num	Specify the number of positions to shift.

Note:

- Use `vw r<room_id> v<vw_id> i<tx_id>` to switch the video wall source.
- Use `vw r<room_id> v<vw_id> lc<custom_layout_id>` to apply a custom layout.
- Use `vw r<room_id> v<vw_id> {on|off}` to turn the display on or off.
- Use `vw r<room_id> v<vw_id> array <...>` to assign receivers to a video wall.
- Use `vw shift o<rx_id> {u|d|l|r}<num>` to fine-tune receiver position in the layout.
- Use `list vw` to retrieve available video wall IDs.
- Use `list vw custom` to retrieve available custom layout IDs.

■ Example

1. Switch room 1's video wall 1 to transmitter 1:

   ```
   vw r1 v1 i1
   ```

2. Display IP camera 1 on room 1's video wall:

   ```
   vw r1 v1 cam1
   ```

3. Switch to media source 1:

   ```
   vw r1 v1 media1
   ```

4. Apply custom layout 1:

   ```
   vw r1 v1 lc1
   ```

5. Turn off video wall display:

   ```
   vw r1 v1 off
   ```

6. Assign receivers 1–4 to a video wall array:

   ```
   vw r1 v1 array 1,2,3,4
   ```

7. Shift receiver 1 display right by one position:

   ```
   vw shift o1 r1
   ```

`list` – List Information

Displays lists of rooms, devices, video sources, or customized video wall layouts. You can use this command to check available devices, sources, and layouts in the current system.

■ **Syntax:**

```
list
list {dev | src | vw | vw custom}
```

■ **Parameter Description:**

Parameter	Description
(empty)	Displays all rooms and their receivers (RX distribution).
`dev`	Lists all connected devices, including transmitters (TX) and receivers (RX).
`src`	List all available video sources.
`vw`	Lists all video walls.
`vw custom`	Lists all customized video wall layouts.

Note:

- Use `list` alone to display the RX distribution in all rooms.
- Use `list dev` to list all Tx/Rx device IDs.
- Use `list src` to show all the video sources.
- Use `list vw` to display all the video walls.
- Use `list vw custom` to display all user-defined video wall layouts.

■ **Examples:**

1. Display all rooms and their receivers:

```
list
```

2. Display all Tx/Rx devices:

   ```
   list dev
   ```

3. Display all video sources:

   ```
   list src
   ```

4. Display all video walls:

   ```
   list vw
   ```

5. Display all custom video wall layouts:

   ```
   list vw custom
   ```

`reset` – Reset Device Settings

Resets device settings or software modules.

■ **Syntax:**

```
reset
reset {o<rx_id> | i<tx_id>}
```

■ **Parameter Description:**

Parameter	Description
(empty)	Reset the current device.
`o`	Output port: Receiver ID (e.g., `o1`)
`i`	Input port: Transmitter ID (e.g., `i1`)
`*`	Representing all receivers or transmitters.

Note:

- Use `reset` alone resets the current device settings.
- Use `reset o<rx_id>` or `reset i<tx_id>` to reset specific receiver (RX) or transmitter (TX) devices.

■ **Examples:**

1. Reset the current device:
   ```
   reset
   ```
2. Reset receiver 1:
   ```
   reset o1
   ```
3. Reset all receivers:
   ```
   reset o*
   ```

4. Reset transmitter 2:

   ```
   reset i2
   ```

5. Reset all transmitters:

   ```
   reset i*
   ```

`logout` – Log Out CLI

Logs out the current CLI session. This command is used to terminate a user session in command mode when connected via SSH/Telnet.

- **Syntax:**

```
logout
```

- **Parameter Description:**

Parameter	Description
(empty)	Logs out the current CLI session.

Note: If login authentication is not enabled, the Telnet session will not require logout.

- **Examples:**

1. Log out of the current session:

```
logout
```

`exit` – Disconnect CLI

Exits the current command line interface and terminates the connection. This command is functionally similar to logout, but is also used to close the CLI environment entirely.

- **Syntax:**

```
exit
```

- **Parameter Description:**

Parameter	Description
(empty)	Disconnects from the CLI session.

- **Examples:**

1. Exit the CLI session:

```
exit
```

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Appendix

Safety Instructions

General

- This product is for indoor use only.
- Read all of these instructions. Save them for future reference.
- Follow all warnings and instructions marked on the device.
- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- Do not use the device near water.
- Do not place the device near, or over, radiators or heat registers.
- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any kind on the device.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- To prevent damage to your installation it is important that all devices are properly grounded.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.
- Position system cables and power cables carefully; Be sure that nothing rests on any cables.
- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.

- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

Rack Mounting

- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- Always load the rack from the bottom up, and load the heaviest item in the rack first.
- Make sure that the rack is level and stable before extending a device from the rack.
- Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.
- After a device is inserted into the rack, carefully extend the rail into a locking position, and then slide the device into the rack.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.
- Ensure that proper airflow is provided to devices in the rack.
- Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer.
- Do not step on or stand on any device when servicing other devices in a rack.

Error Message on LCM Display

When an error occurs, the OSD displays the error code and message on the screen for troubleshooting purposes.

Error Code	Error Message	Description
301	Upgrade Fail	Unable to upgrade the firmware
401	Can’t Set Device ID	Unable to set or change the device ID of this VE8662 unit.
501	Set IPCam Failed	Unable to set or change the IP camera source.
601	Set Tx Source Failed	Unable to set or change the input video source.
701	Set Quadview Failed	Unable to change the display mode from single view to quadview.
801	Set Single Failed	Unable to change the display mode from quadview to single view.
901	Unknown Error	Unable to identify the specific problem that caused the error.

Technical Support

International

- For online technical support – including troubleshooting, documentation, and software updates: http://support.aten.com
- For telephone support, see *Telephone Support*, page iv:

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase
- Your computer configuration, including operating system, revision level, expansion cards, and software
- Any error messages displayed at the time the error occurred
- The sequence of operations that led up to the error
- Any other information you feel may be of help

Specifications

Function	VE8662
Video Input	
Max. Distance	5m
Impedance	100 Ω
Interfaces	1 × HDMI Type A Female (Black)
Video Output	
Interfaces	1 × HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	5m
Video	
Max. Data Rate	Average: 20–25Mbps
Compliance	HDMI (4K) HDCP2.3 & HDCP2.2 Compatible
Max. Resolutions / Distance	Up to 4K@100m (Cat 5e/6, point to point) **Note:** True 4K supported: 3840 × 2160 @ 60Hz (4:4:4) only
Video Compression	H.265 Codec Latency: 3–5 frames
Audio	
Input	1 × HDMI Type A Female (Black) 1 × Mini Stereo Jack Female (Green)
Output	1 × HDMI Type A Female (Black) 1 × Mini Stereo Jack Female (Green)
Connectors	
Unit To Unit	1 × RJ-45 Female (with PoE)

Function	VE8662	
Power	1 × DC Jack (Black) with locking or 1 × RJ-45 PoE PD (Power Over Ethernet, PoE)	
Control		
RS-232	Connector	1 × Terminal Block, 3 pole
	Baud Rate	115200 (max.)
	Data Bits	8
	Stop Bits	1, no parity and flow control
USB Channel	1 × USB Type B Female (Host) 2 × USB Type A Female (Device)	
Pushbuttons		
Operating Mode Selection	3 × Push buttons for LCM operation	
Switches		
Selection Mode	1 × Slide Switch—T (Be a Transmitter) / R (Be a Receiver) selection	
LEDs		
Power	1 × DC in LED (Green) 1 × PoE LED (Green)	
Power Consumption	DC12V; 4.79W; 22BTU/h (Tx) DC12V; 4.98W; 45BTU/h (Rx) **Note:** ◆ The measurement in Watts indicates the typical power consumption of the device with no external loading. ◆ The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.	

Function	VE8662
Power over Ethernet (PoE)	IEEE 802.af PoE compliant 5.99W; 28BTU/h (Tx) 6.23W; 51BTU/h (Rx) **Note:** ◆ The measurement in Watts indicates the typical power consumption of the device with no external loading. ◆ The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.
Environmental	
Operating Temperature	0–40°C
Storage Temperature	-20–60°C
Humidity	0–80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	0.51 kg (1.12 lb)
Dimensions (L x W x H) with bracket	14.02 × 12.30 × 3.00 cm (5.52 × 4.84 × 1.18 in.)
Dimensions (L x W x H) without bracket	13.60 × 10.10 × 2.90 cm (5.35 × 3.98 × 1.14 in.)

Function	VE8662	
Input Resolutions	3840 × 2160p 24 / 25 / 30 / 60 Hz	1080p 24 / 25 / 30 / 50 / 60 Hz
	2560 × 1440 @ 30 / 60 Hz	1080i 50 / 60 Hz
	1920 × 1200 @ 60 Hz	1024 × 768 @ 60 / 70 / 75 Hz
	1920 × 1080 @ 24 / 25 / 30 / 50 / 60 Hz	800 × 600 @ 56 / 60 / 72 / 75 Hz
	1680 × 1050 @ 60 Hz	720 × 480 @ 60 Hz
	1600 × 1200 @ 60 Hz	720 × 400 @ 70 Hz
	1440 × 900 @ 60 Hz	720p 50 / 60 Hz
	1400 × 1050 @ 60 Hz	640 × 480 @ 60 / 67 / 72 / 75 Hz
	1280 × 1024 @ 60 / 75 Hz	640 × 480 @ 60 Hz (4:3)
	1280 × 800 @ 60 Hz	576p 50 Hz (4:3 / 16:9)
	1280 × 720 @ 25 / 30 / 50 / 60 Hz	480p 60 Hz (4:3 / 16:9)

Note: The listed resolutions are verified mainly with Windows PC sources. For Linux or macOS systems, supported resolutions may differ depending on the actual use scenarios or applications.

ATEN Warranty Policy

The warranty policy may vary by product category and region of purchase. For details, please visit ATEN's official website, select your purchase counties/ regions and then go to the Support Center, or contact your local ATEN sales representative for further assistance.

Released: 2026-02-04