

Owner's Manual

HDMI over IP 4K Extender Transmitter with PoE: B162-001-POE

HDMI over IP 4K Extender Receiver with PoE: B162-100-POE

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1. FCC Information

FCC Notice, Class A

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: *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 user must use shielded cables and connectors with this equipment. Any changes or modifications to this equipment not expressly approved by Tripp Lite could void the user's authority to operate this equipment.*

2. 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.

3. Package Contents

B162-001-POE

- 4K HDMI over IP Extender Transmitter with PoE
- RS-232 Terminal Block
- 5V DC Power Adapter
- (4x) Foot Pads
- Quick Start Guide

B162-100-POE

- 4K HDMI over IP Extender Receiver with PoE
- RS-232 Terminal Block
- 5V DC Power Adapter
- (4x) Foot Pads
- Quick Start Guide

Check to ensure all components are present and in good order. If anything is missing or was damaged in shipping, contact your dealer.

Read this manual thoroughly, and follow the installation and operation procedures carefully to prevent any damage to the product or to any other devices on the installation.

4. Introduction

The Tripp Lite B162 HDMI over IP Extenders deliver visually lossless 4K signals with low latency over long distance via a standard Gigabit Ethernet switch.

Tripp Lite's solution is designed to address the challenges that system integrators encounter when implementing AV over IP solutions. It is an effective, easy-to-use and economical digital signage solution with the following features and advantages:

- Limitless scalability and flexibility
- No complicated IP setup
- No additional server PCs or software required
- Go further for less with daisy-chaining
- Convenient integration and installation

Engineered to meet today's demands of large-scale, multi-display 4K signal transmission and designed for easy setup and operation, the B162 HDMI over IP Extenders are ideal for a wide range of environments, such as trade shows, airports, university campuses, conference centers and shopping centers.

5. Product Features

Lightweight Compression with Ultra-Low Latency

- Delivers visually lossless high-quality video up to 4K @ 30 Hz (4:4:4).
- Ensures stunning quality video using advanced video lossless compression technology.
- Optimum EDID settings for smooth power-up, high-quality display and the best video resolution across different screens.
- Offers different levels of video compression rate, including Smooth, Balance and High Quality, for users to choose depending on practical usage.

Power over Ethernet Support

- Place the unit anywhere, including ceilings, without having to install additional power cabling and outlets.

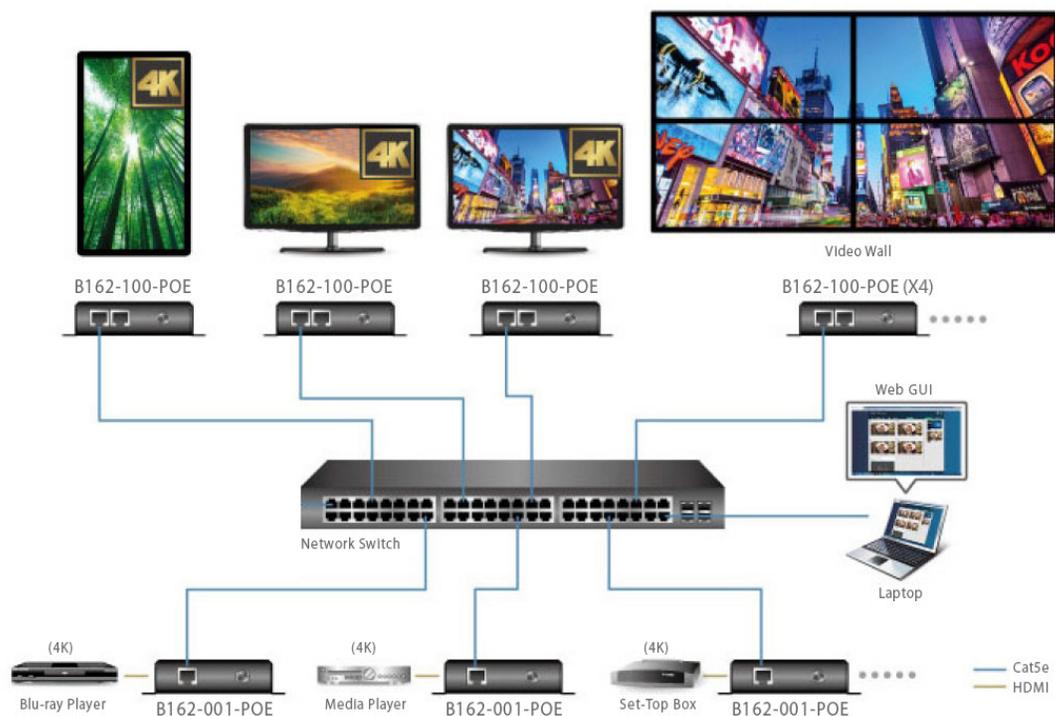
Limitless Scalability and Flexibility

- Extends AV connections from a simple point-to-point to a multipoint-to-multipoint setup via LAN without distance limitations.
- Offers multi-functionality in extender, splitter, matrix switch, video wall and daisy-chain applications.
- Mix and match the latest 4K displays. Built-in scaler automatically scales up incoming video signal to match the maximum resolution of the connected display devices.

Collaboration with Control System

- Integrated solution - compatible with Control System, allowing users to operate B162 extender directly via CLI Telnet or RS-232 protocol.
- Effortless operation - one click to operate display, projector, source device and related equipment effectively via touch panel and keypad.

5. Product Features



Note:

- B162 PoE extenders can be installed in combination with PoE Ethernet switches to reduce power cabling and additional power outlets.

Spontaneous Scheduling Management

- Offers a user-friendly scheduling management function for users to pre-plan the display schedule.
- Provides robust and intuitive scheduling management options to help users manage all events in the calendar and set events to one-minute intervals.
- Integrates all B162 units to arrange the profile by grouping individual receivers or video walls.
- Multiple profiles can be arranged to play in any order over a selected period.

No Complicated IP Setup

- Simple configuration that requires no extensive IT experience or extra learning.
- Effortlessly switches among input sources via top-panel push buttons.

5. Product Features

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

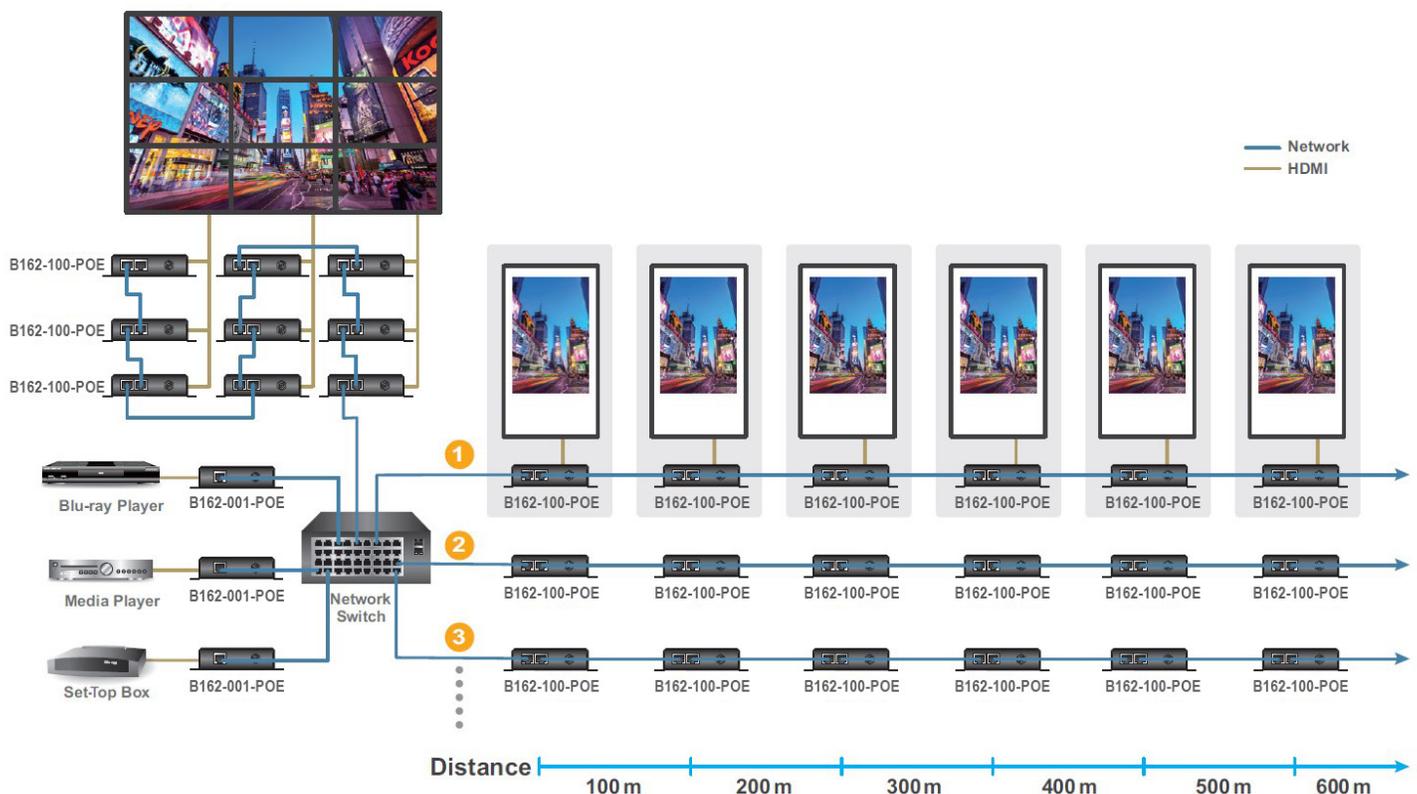
- Simple access – users can use the browser or IP address to link directly to the DVOE Manager.

Go Further For Less with Daisy-Chaining

- Connects multiple displays through a single port to utilize every port of the Ethernet switch and maximize its value.
- Easily expandable – cabling and system deployment is easy with no huge Ethernet switches and fewer cables needed.
- Recommended for large-scale deployment covering hundreds of meters, such as hotel facilities, airports, university campuses, stations, shopping malls and exhibition centers.

Note:

- Depending on your network architecture, we recommend daisy-chaining up to 30 units.
- For daisy-chain installation setup, only the first level supports PoE. All B162 units connected on the second level or above will need a power adapter.



5. Product Features

Video Wall Support

- Supports up to 8 x 8 video wall (64 displays).
- Supports horizontal or vertical (90° and 270° rotation) display orientation.
- Easily switches layout profiles, preview and drag-and-drop video sources via the intuitive web GUI.

Note: *If you experience issues related to your network architecture, please contact Tripp Lite for support.*

Embedded / De-Embedded Audio Support

- Separate audio signal can be embedded into the HDMI stream (B162-001-POE only).
- Audio stream can be extracted from the HDMI stream and delivered as a separate audio signal (B162-100-POE only).

Multiple Control Channels

- Multiple control methods – the system can be managed via Ethernet or top-panel push buttons.
- USB Connectivity - USB port (USB 2.0) allows connection of devices, such as keyboard, mouse, flash drive, printer and other USB peripherals.
Note: *Each B162 transmitter can be controlled by 4 USB touchscreens connected to B162 receivers.*
- Bi-Directional IR Channel – IR transmission is processed one way at a time.
- RS-232 Channel – bi-directional RS-232 serial port allows for connection of peripherals, such as touchscreens and barcode scanners.

6. Getting Started

Follow the steps below to install, connect, configure and get started with your B162 devices:

1. Decide your network architecture and configuration.
2. Mount your B162 devices on walls or racks. For more information, see *Mounting the Device*.
3. Connect the B162 devices to sources, displays, network and other hardware devices as required. For more information, see the installation diagrams in *Connecting the Device*.
4. Use one of the following methods to assign input sources:
 - **Note:** *Skip this step if you have a point-to-point setup. In a point-to-point setup, source input is automatically assigned.*
 - *Assign input sources using the device panel. For more information, see Assigning Sources Using the Device Panel.*
 - *Assign input sources using DVOE Manager. For more information, see Logging In and Configuring DVOE Manager.*

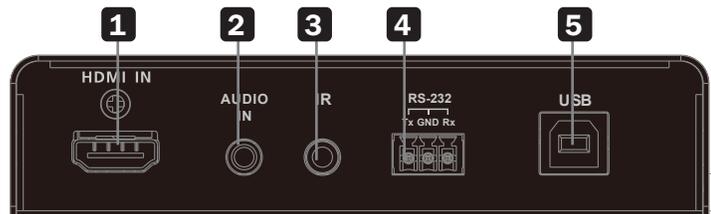
7. Hardware Setup

7.1 Components

Before proceeding to hardware setup:

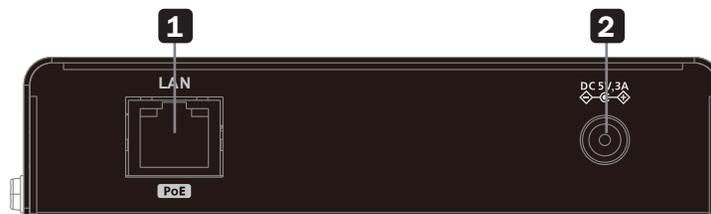
- Review the safety information regarding the placement of this device in *Important Safety Instructions*.
- Do not power on the device until all necessary hardware is connected.

B162-001-POE Front View



- 1** HDMI Input – Connects an HDMI cable to the source device.
- 2** Audio Input – Connects an audio cable to the source device's analog output.
Note: Does not support microphones.
- 3** Bi-Directional IR Port – Connects an IR receiver/transmitter to allow configuration using a remote control.
- 4** RS-232 Serial Port – Connects to a computer for serial control.
- 5** USB-B Port – Connects to the source device.

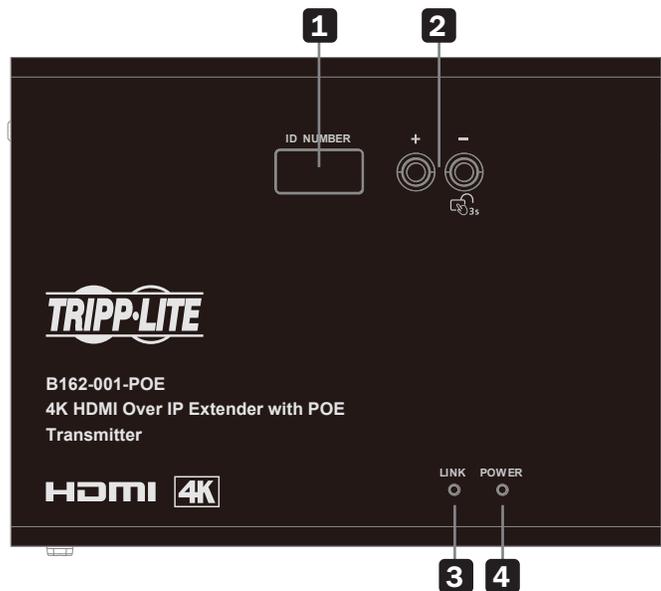
B162-001-POE Rear View



- 1** LAN Port with PoE – Connects a Gigabit Ethernet cable to the LAN.
- 2** DC Power Jack – Connects the DC Power Adapter to provide power to the transmitter.

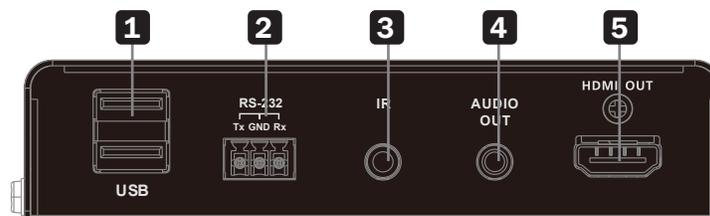
7. Hardware Setup

B162-001-POE Top View



- 1** ID Display Panel – Identifies the unit's ID number.
- 2** Prev (+)/Next (-) Buttons – Assigns ID numbers on B162 devices, and assigns the source video (transmitter) for the receiver.
- 3** Link LED – Lights orange to indicate the LAN Port 1 is connected to an Ethernet switch.
- 4** Power LED – Lights green to indicate the unit is receiving power.

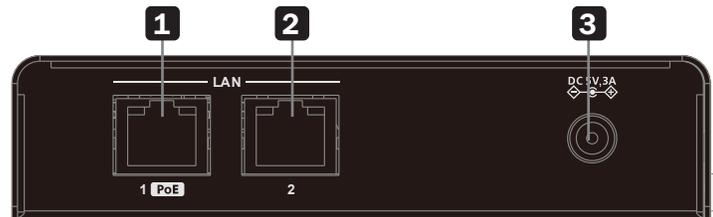
B162-100-POE Front View



- 1** USB-A Ports – Connect virtual media or USB peripherals.
- 2** RS-232 Serial Port – Connects to a serial device.
- 3** Bi-Directional IR Port – Connects an IR receiver/transmitter to allow configuration using a remote control.
- 4** Audio Output – Connects speakers.
- 5** HDMI Output – Connects an HDMI cable to the display.

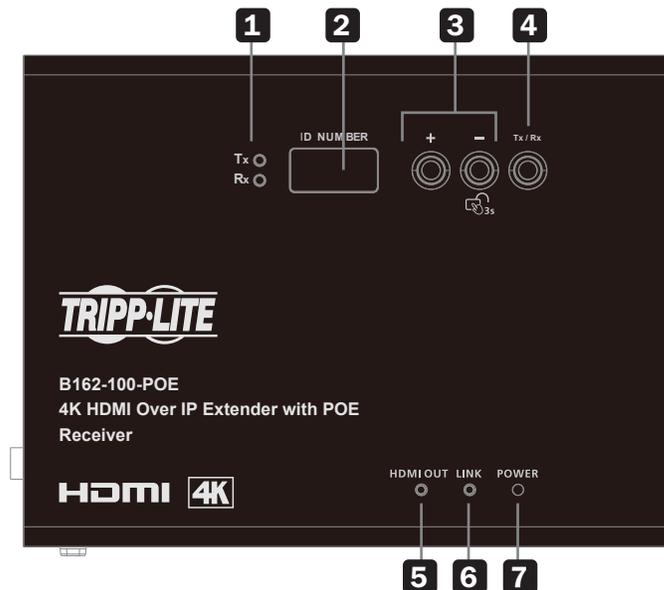
7. Hardware Setup

B162-100-POE Rear View



- 1** LAN 1 Port with PoE – Connects a Gigabit Ethernet cable to the LAN.
- 2** LAN 2 Port (no PoE) – Connects to another B162-100-POE with an Ethernet cable in a daisy-chain setup.
- 3** DC Power Jack – Connects the DC Power Adapter to provide power to the receiver.

B162-100-POE Top View



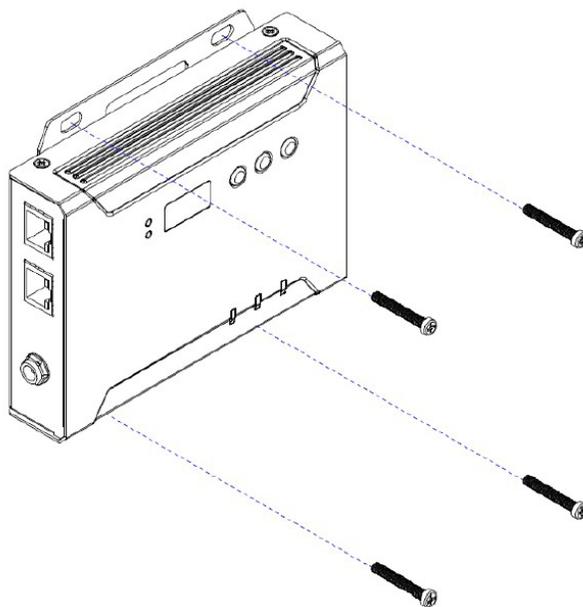
- 1** Tx/Rx LEDs – Light to indicate whether the displayed ID number is for the transmitter or receiver.
- 2** ID Display Panel – Identifies the transmitter's or the receiver's ID number.
- 3** Prev (+)/Next (-) Buttons – Assigns ID numbers on B162 devices, and assigns the source video (transmitter) for the receiver.
- 4** Tx/Rx Switch Button – Press to switch control between the receiver and its corresponding transmitter.
- 5** HDMI Out LED – Lights orange to indicate a stable video output.
- 6** Link LED – Lights orange to indicate the LAN Port 1 is connected to an Ethernet switch.
- 7** Power LED – Lights green to indicate the unit is receiving power.

7. Hardware Setup

7.2 Mounting the Device

Wall Mount

Secure or hang the B162 unit on a wall using the built-in mounting brackets.



7. Hardware Setup

7.3 Connecting the Device

Follow the steps below to connect your B162 units with the hardware as required.

Note: For details on LED indicators to help you identify connection status or signal transmission, see Status LEDs.

1. Connect the transmitter's HDMI Input to the video source device with a user-provided HDMI cable.
2. Connect the receiver's HDMI Output to the video display device with a user-provided HDMI cable.
3. The diagrams to the right illustrate a point-to-point setup. Set up the B162 units as follows:

Point-to-Point Setup

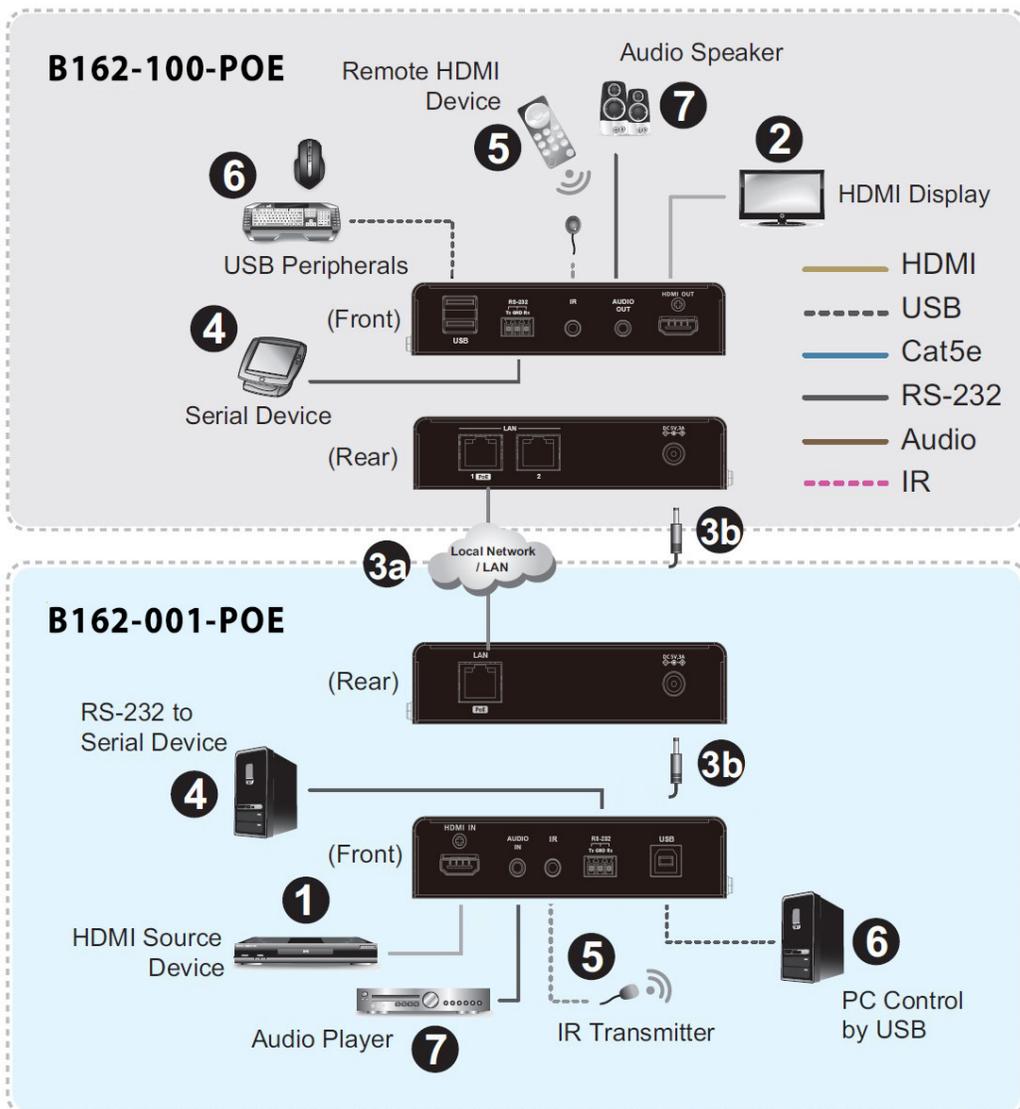
- A. Connect one end of an Ethernet cable to the LAN Port on the transmitter and the other end to the LAN Port on the receiver.
- B. Plug the power adapters into the DC Power Jacks on both units.

Multipoint-to-Multipoint Setup

- A. Install the transmitter and the receiver to the same LAN by connecting their LAN Ports to an Ethernet switch using Ethernet cables.
- B. The units can be powered on through an Ethernet cable if they are connected to a PoE-supported Ethernet switch. Alternatively, plug the power adapters into the DC Power Jacks on both units.

Note: When power is available from both the power adapter and the Ethernet cable (PoE), the supply from the power adapter will receive priority.

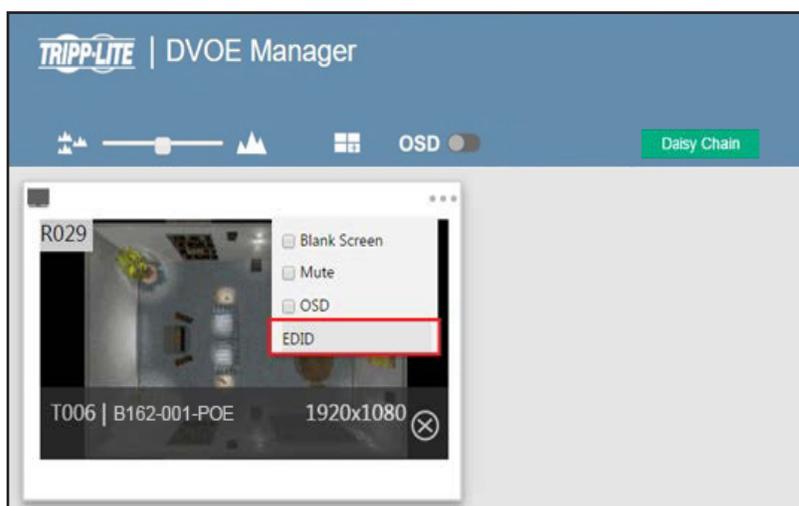
4. (Optional) To bypass RS-232 signals, connect your computer to the RS-232 Serial Ports on the units.
5. (Optional) To bypass IR signals, plug the IR Receiver into the Bi-Directional IR Port on the transmitter or receiver, depending on where you wish to operate the remote control and the IR Transmitter.
6. (Optional) To use a keyboard/mouse, connect those USB peripherals to the receiver's USB-A ports and your computer to the transmitter's USB-B port.
7. (Optional) Connect audio devices to the transmitter's Audio Input and the receiver's Audio Output.



7. Hardware Setup

Notes:

- The IR, RS-232 and USB signal transmissions are disabled by default. To enable them, go to **System Settings>Receiver>IR/RS232** or **USB** in DVOE Manager and select the signal source.
- Each transmitter can be controlled by 4 USB touchscreens connected to receivers.
- To receive HDMI audio on the transmitter, make sure to configure the following in DVOE Manager:
 - o Go to **System Settings>Transmitter>Audio In**, and change the setting to HDMI.
 - o To receive 5.1 or 7.1 surround sound on the receiver:
 - Go to **System Settings>Transmitter**, access the transmitter's configuration window, and set EDID to Manual.
 - From DVOE Manager's preview area, click the "three dots" (...) icon, and select EDID to allow transmission of the receiver's EDID to the transmitter.



8. Panel Operation

8.1 Overview

This chapter provides information on panel LEDs and instructions to operate the B162 units using the panel buttons.

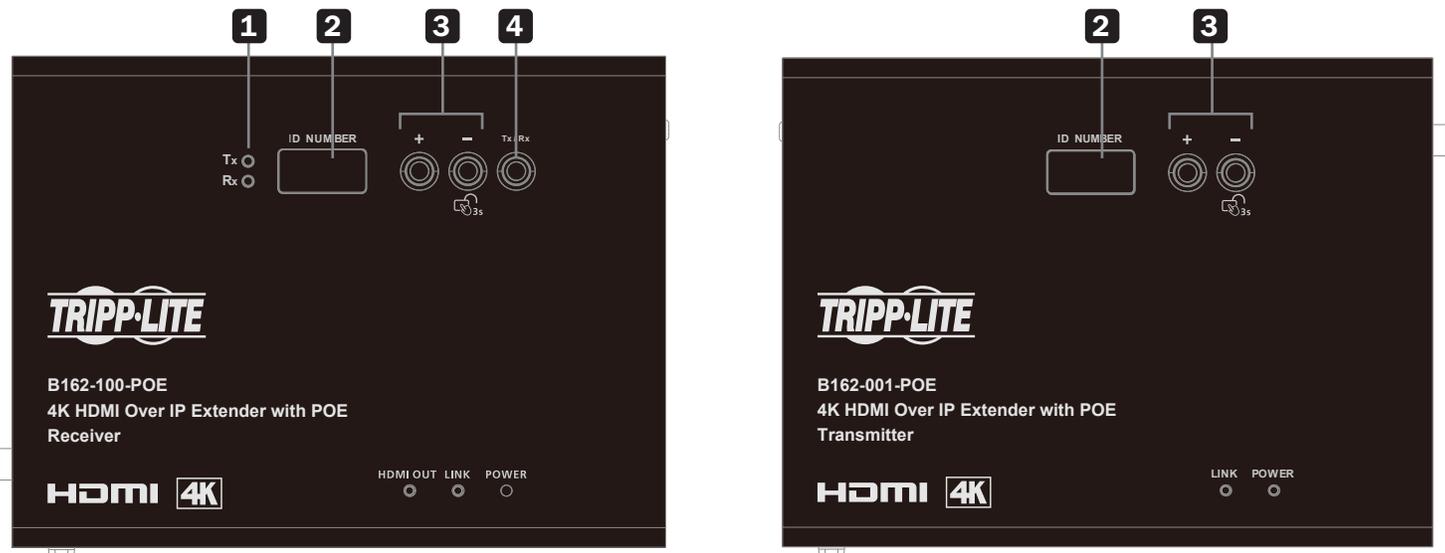
8.2 Status LEDs

Both the transmitter and receiver have front-panel LEDs that indicate their operating and power status.

| LED | Indicator | Description |
|----------------------------|---------------|---|
| Power | Lights green | Device is powered on |
| | Off | Power is off |
| LINK | Lights orange | LAN is connected |
| | Off | LAN is not connected |
| HDMI Out | Lights orange | Video output is stable |
| | Blinks orange | Video output is unstable |
| | Off | Video output is not being transmitted |
| RJ45 Connector (Left LED) | Lights orange | Data is being transmitted at 100 Mbps |
| | Lights green | Data is being transmitted at 1000 Mbps (1 Gbps) |
| RJ45 Connector (Right LED) | Lights green | LAN is connected; no data is being transmitted |
| | Blinks green | LAN is connected; data is being transmitted |

8. Panel Operation

8.3 Panel Controls



1. Tx/Rx LEDs – Indicate whether the displayed ID number is for the transmitter or receiver.
2. ID Number:
 - o Transmitter: Identifies its ID number.
 - o Receiver:
 - Identifies its ID number or the transmitter’s ID number when the panel control is switched to Tx.
 - If the ID number exceeds 3 digits, letter A, b, c, d, E and F are used to replace the first 2 digits:
 - A= 10, A00 ~ A99 to display ID number 1000 ~ 1099
 - B= 11, b00 ~ b99 to display ID number 1100 ~ 1199
 - C= 12, c00 ~ c99 to display ID number 1200 ~ 1299
 - D= 13, d00 ~ d99 to display ID number 1300 ~ 1399
 - E= 14, E00 ~ E99 to display ID number 1400 ~ 1499
 - F= 15, F00 ~ F99 to display ID number 1500 ~ 1599
 - o ID Number blinks to indicate it is being used by another B162 device.
3. Up (+)/Down (-) Buttons:
 - a. Assign ID numbers on the devices.
 - b. Assign the source video (transmitter) for the receiver.
4. Tx/Rx Switch Button – Press to switch control between a receiver and its corresponding transmitter.

Notes:

- The B162 unit automatically locks its panel when it idles for 1 minute. To unlock, press and hold the Down button for 3 seconds.
- Tx/Rx LEDs and Tx/Rx Switch button are available only on B162-100-POE receivers.

8. Panel Operation

8.4 Assigning Sources Using the Device Panel

1. Assign an ID number to each of your B162-100-POE devices:
 - a. On the B162-100-POE, make sure the control is switched to Rx, in which case the Rx LED lights up. If not, press the Tx/Rx Switch button.
 - b. Use Prev (+) and Next (-) to assign an ID number to this receiver.
 - c. Repeat Steps 1a and 1b on each B162-100-POE.
2. For a matrix setup, assign an ID number to each B162-001-POE device:
 - a. On the B162-001-POE, use Prev (+) and Next (-) to assign an ID number to this transmitter.
 - b. Repeat Step 2a on each B162-001-POE.
3. Assign source inputs to your B162-100-POE.
 - a. Press the Tx/Rx Switch button to switch control to Tx, in which case the Tx LED lights up.
 - b. Use Prev (+) and Next (-) to assign a source input to this receiver.
 - c. Repeat Steps 3a and 3b on each B162-100-POE.

9. Management

9.1 Overview

B162 HDMI over IP Video Extenders can be remotely and centrally managed using a built-in utility program, the DVOE Manager. Accessed through a web browser, this utility provides a central platform that allows you to do the following:

- Configure transmitter and receiver settings
 - o See *Transmitter Settings and Receiver Settings*
- Monitor transmitter and receiver statuses
 - o See *Checking B162 Statuses*
- Create display templates
 - o See *Creating a Video Wall Layout*

9.2 Looking Up the Login IP Address

Follow the steps below to download the IP Installer utility and use it to look up your transmitter's IP address:

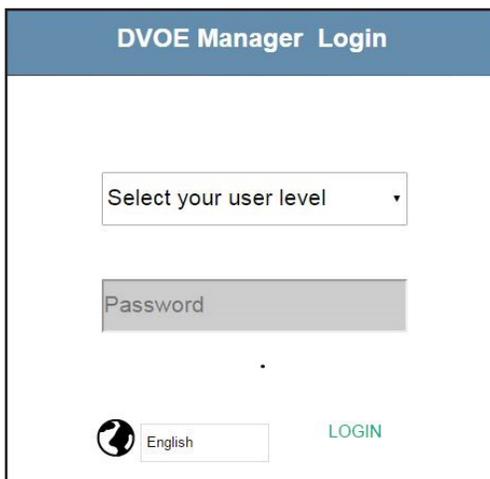
1. Go to the following <https://assets.tripplite.com/firmware/b064-ip-installer.zip>
2. Unzip and execute the downloaded IP Installer. The Network Device IP Installer screen appears.
3. Click **Enumerate** to search for devices in the network. The detected devices are shown in Device List.
4. Use the IP address of any B162 transmitter to log into DVOE Manager.
5. Alternatively, you can obtain the IP address from the HDMI monitor connected to the B162 receiver. For more information, see the installation diagrams in *Connecting the Device*.

9.3 Logging In and Configuring DVOE Manager

On a computer with web access, follow the steps below to log into DVOE Manager:

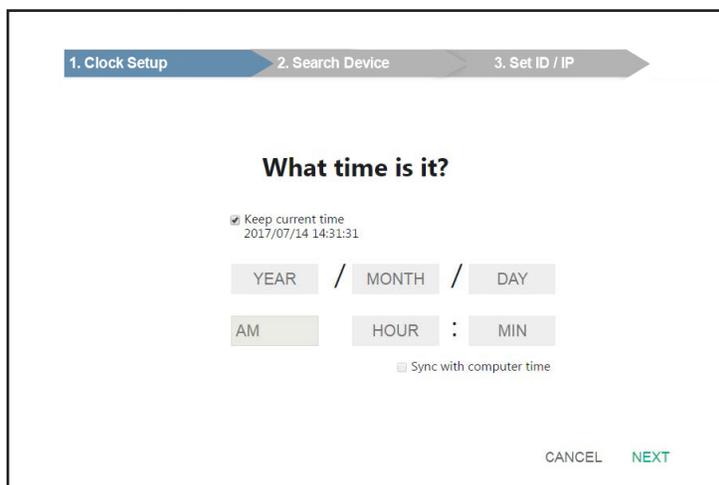
9. Management

1. Open a web browser and type the IP address you obtained using IP Installer Utility. The following screen appears:



The screenshot shows the 'DVOE Manager Login' interface. At the top, there is a blue header with the text 'DVOE Manager Login'. Below the header, there is a dropdown menu labeled 'Select your user level'. Underneath the dropdown is a password input field labeled 'Password'. At the bottom left, there is a language selection button with a globe icon and the text 'English'. At the bottom right, there is a green 'LOGIN' button.

2. Select *Administrator* for User Level and type *password* for the Password field. The following screen appears upon initial login.
Note: If you are the administrator logging in for the first time, use the default password: *password*. For security purposes, the system will prompt you to change the password. The new password must be different from your login password.



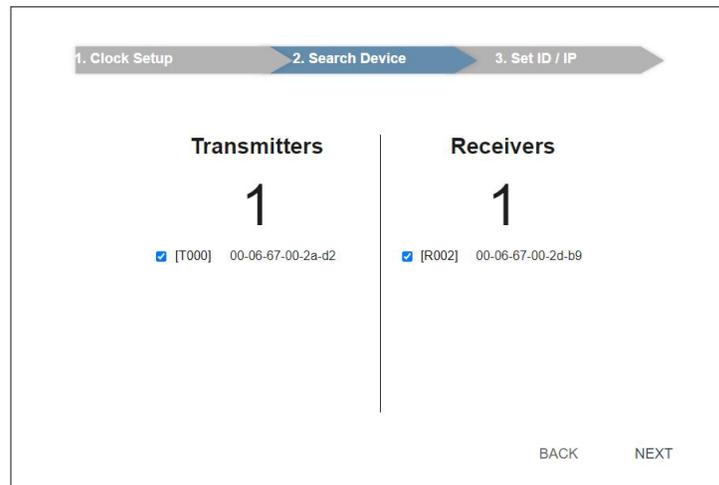
The screenshot shows the 'What time is it?' configuration screen. At the top, there is a progress bar with three steps: '1. Clock Setup' (highlighted in blue), '2. Search Device', and '3. Set ID / IP'. The main heading is 'What time is it?'. Below the heading, there is a checked checkbox labeled 'Keep current time' with the current time '2017/07/14 14:31:31' displayed below it. There are input fields for 'YEAR / MONTH / DAY' and 'AM / HOUR : MIN'. At the bottom, there is an unchecked checkbox labeled 'Sync with computer time'. At the bottom right, there are 'CANCEL' and 'NEXT' buttons.

3. Select a date and time for the DVOE Manager using one of the following methods:

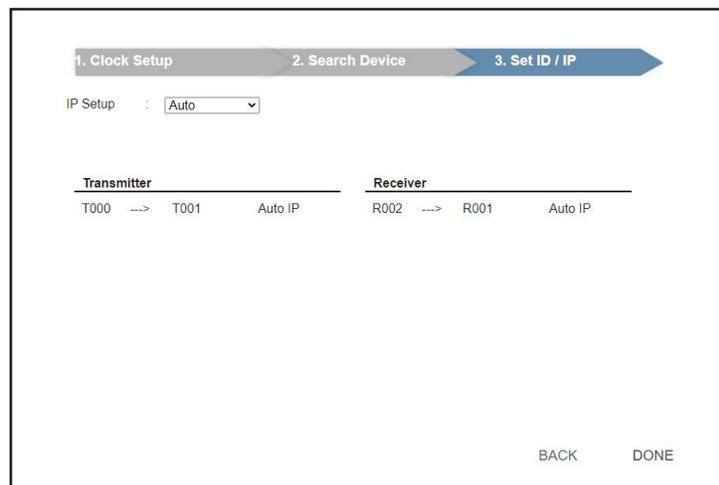
- To keep the current date and time settings, select *Keep current time*.
- To adopt the date and time settings of the endpoint used to access DVOE Manager, select *Sync with computer time*.
- To specify a different date and time, type the desired date and time in YYYY/MM/DD format.

9. Management

4. Click *Next*. The following screen appears. The setup wizard lists the B162 transmitters and receivers found in the network.



5. To configure device IP addresses, select the devices from the list and click *Next*. The following screen appears:



6. Click the *IP Setup* dropdown box to select a method for assigning IP addresses to the managed B162 devices.

- Auto – Select this option to have IP addresses automatically assigned by DVOE Manager.
- DHCP – Select this option to have IP addresses dynamically assigned by a DHCP server.
- Manual – Select this option to designate IP addresses for the managed video extenders. For details, see Step 7.

9. Management

7. To manually assign IP addresses, follow the steps below:

a. From the Set ID/IP page, select *Manual* for IP Setup. This screen appears:

The screenshot shows the 'Set ID / IP' screen with three progress indicators at the top: '1. Clock Setup', '2. Search Device', and '3. Set ID / IP'. The 'IP Setup' dropdown is set to 'Manual' with a subtext 'Input IP Range ex. 192.168.0.100 - 200'. There are input fields for 'Transmitter' and 'Receiver', each with a refresh icon. Below these are two sections: 'Transmitter' and 'Receiver'. The 'Transmitter' section shows 'T000' and 'T001' with a double-headed arrow between them. The 'Receiver' section shows 'R002' and 'R001' with a double-headed arrow between them. At the bottom right are 'BACK' and 'DONE' buttons.

b. In the Transmitter and Receiver fields, type valid IP address ranges.

c. Click *Refresh* to start assigning IP addresses.

d. When the assignment is complete, DVOE Manager displays the assigned IP addresses.

8. To reassign device IDs, click and type a new ID for the target B162 device.

The screenshot shows the 'Set ID / IP' screen with three progress indicators at the top: '1. Clock Setup', '2. Search Device', and '3. Set ID / IP'. The 'IP Setup' dropdown is set to 'Auto'. Below are two sections: 'Transmitter' and 'Receiver'. The 'Transmitter' section shows 'T000' and 'T001' with a double-headed arrow between them, and 'Auto IP' to the right. The 'Receiver' section shows 'R002' and 'R001' with a double-headed arrow between them, and 'Auto IP' to the right. At the bottom right are 'BACK' and 'DONE' buttons.

9. Click *Done*. The DVOE Manager's main screen appears.

Notes:

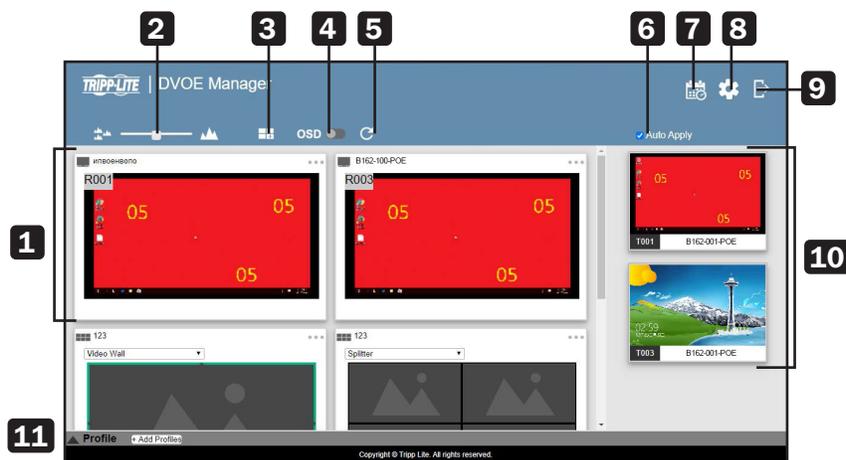
- For security reasons, *Tripp Lite* recommends changing the password at first login. For details on account settings, see Account Settings.

- To access these settings again, click  from the DVOE Manager's main screen, then click .

9. Management

9.4 The Main Screen

You can access the following controls from the DVOE Manager's main screen:



- 1** Previews for Video Walls and Receivers – Shows a preview of created video walls, individual video receivers and daisy-chain setups. For details about creating video wall templates, see *Creating a Video Wall Layout*. For details about controls in a preview, see *Editing a Preview*.
- 2** Preview Size – Drag the slider bar to adjust the size of preview windows.
- 3** Create/Edit Video Wall – Click to create or edit video wall templates. For details, see *Assigning Sources Using DVOE Manager*.
- 4** OSD – Globally enables or disables panel control of the B162 devices used in managed video walls. To enable or disable panel control for a single video wall, use the OSD setting for a preview window. For details, see **Configuration Menu** in *Editing a Preview*.
- 5** Refresh – Refresh or update the daisy-chain status.
- 6** Auto Apply – Enables settings to be automatically applied to the devices.
- 7** Profile Schedule – Click to enter profile scheduling page. For more information, see *Setting Up Profile Schedules*.
- 8** System Settings – Access general settings, transmitter and receiver settings, firmware updates, backup and restore settings, account settings and other system settings. For more details, see *System Settings*.
- 9** Log Out – Click to log out of DVOE Manager
- 10** Source List – Lists display sources and identifies each with its corresponding transmitter.
- 11** Profile Bar – Video wall profile for video wall display. For more information, see *Profile*.

9. Management

9.4.1 Apply/Auto Apply

If you wish to apply settings as you configure them, check **Auto Apply**.



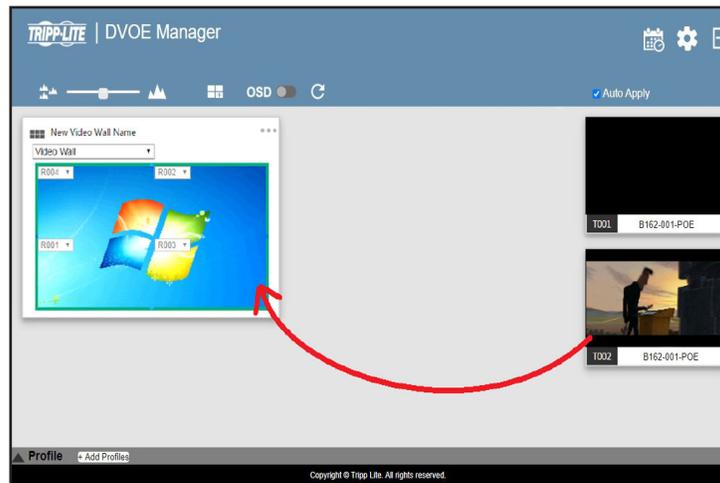
Alternatively, if you wish to manually apply the settings, uncheck **Auto Apply** and use the **Apply** button. The button will light up to show a change was made.



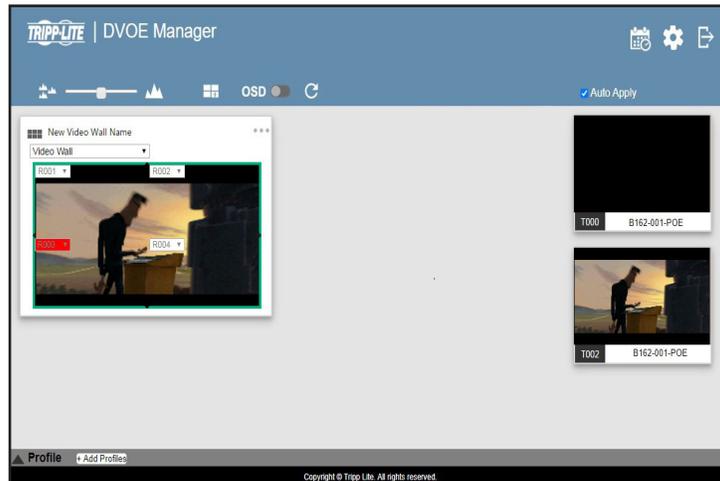
9.5 Assigning Sources Using DVOE Manager

Follow the steps below to assign input sources using DVOE Manager:

1. On the main screen, identify the source you wish to be assigned in the Source List and the preview video walls/receivers.
2. Select and drag the source to the preview video walls/receivers.

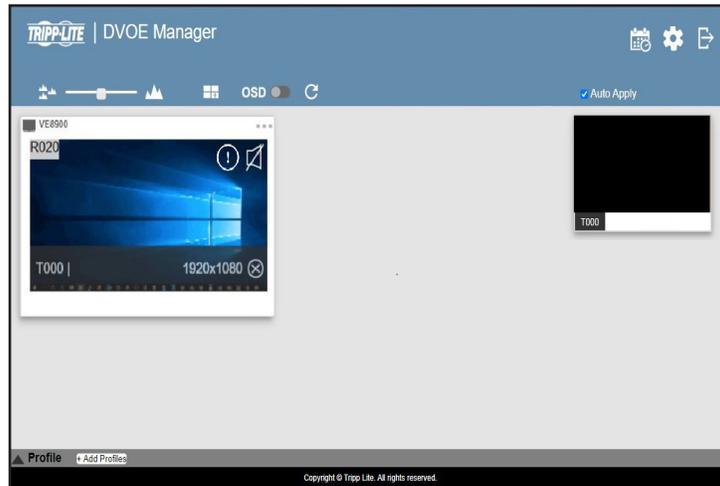


3. When there is a display issue from the connected receiver, the specific receiver will be indicated in red from the preview.



9. Management

4. When there is a display issue from a single connected receiver, the preview is shown below.



Alternatively, you can go into system settings to assign sources there. Follow the steps below:

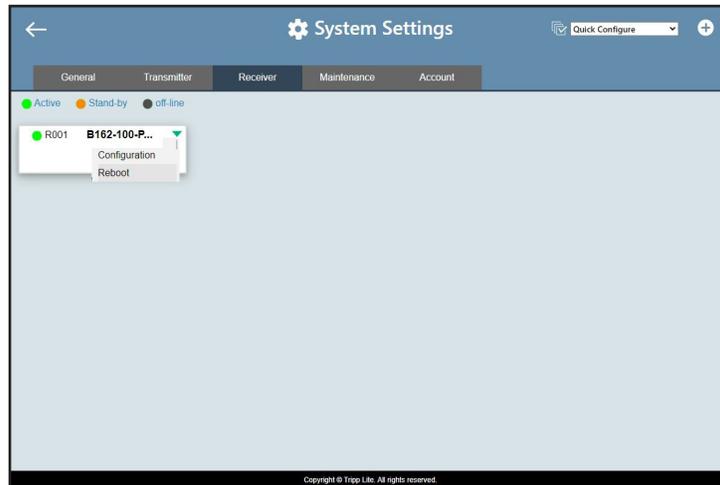
1. From the main screen, click , and then click the **Receiver** tab. The managed B162-100-POE receivers appear.



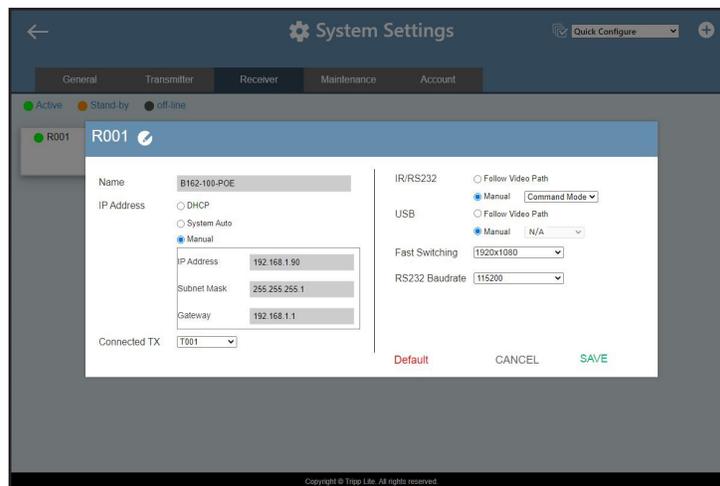
9. Management

2. Assign a source for each of the B162-100-POE receivers.

- a) Move the cursor to a receiver. A green arrow appears at the top right corner of the receiver preview window.
- b) Click the green arrow. A dropdown menu appears.



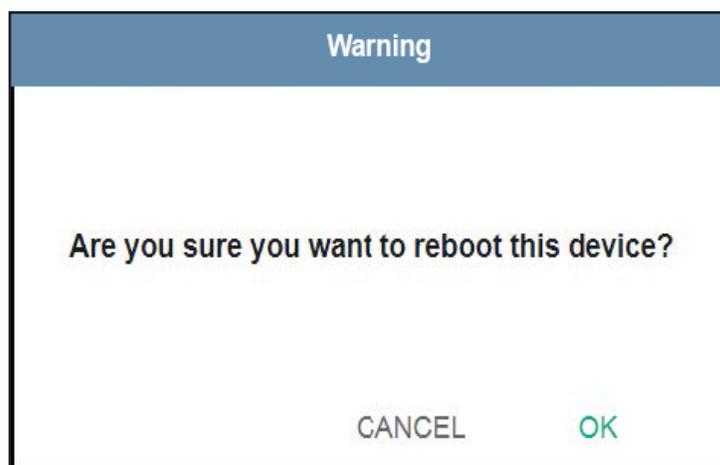
c) From the dropdown menu, click **Configuration**. This window appears:



d) Click the **Connected Tx** dropdown arrow and select a Tx source.

e) Repeat steps 2a through 2d to assign sources for each of the receivers.

f) To reboot the B162 units, click the green arrow mentioned in step 2b, and click **Reboot**. This warning window appears:

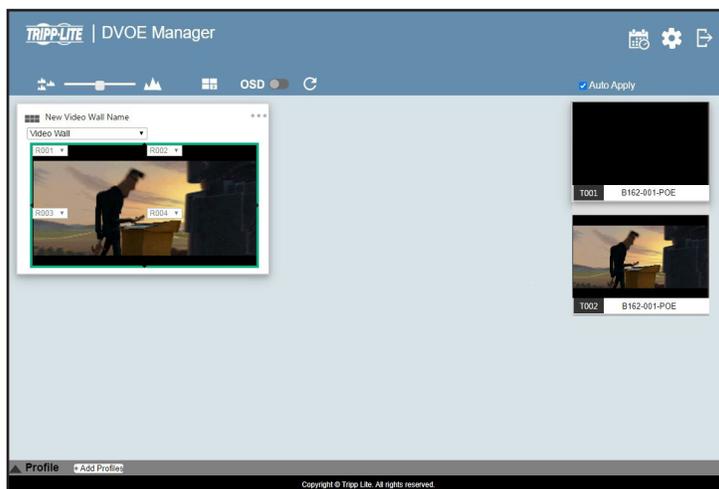


9. Management

9.6 Configuring and Setting Up a Video Wall

To configure a video wall, follow the steps below.

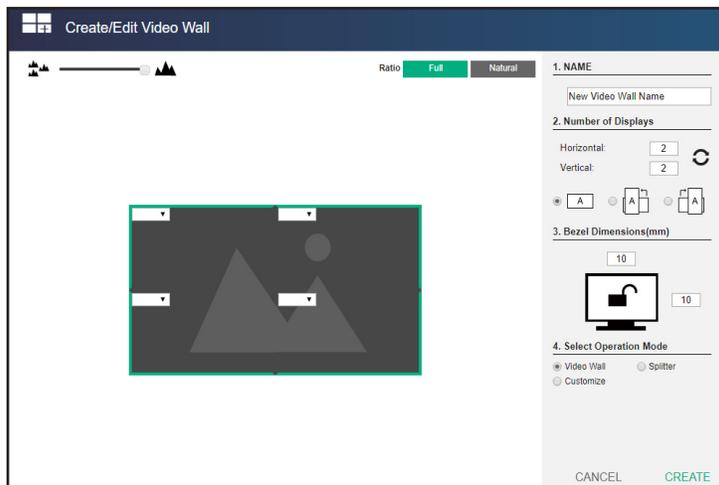
1. Make sure you have created a video wall template for your specific needs. For detailed steps, see *Creating a Video Wall Layout*.
2. From the DVOE Manager's main screen, drag and drop input sources from the Source List onto the created video wall layout. In the following example, the display source **T002** is assigned to this video wall layout, which has 4 monitors, **R001** to **R004**, merged to form an enlarged display of one source video.



Note: For details on editing video wall settings, see *Editing a Preview*.

9.6.1 Creating a Video Wall Layout

1. To create a new layout, click **Create/Edit Video Wall** from the main screen. The following window appears. A preview of the layout is shown in the middle.



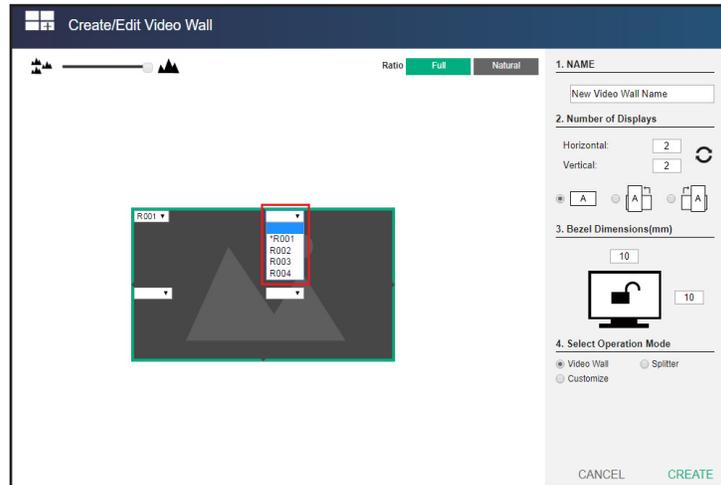
9. Management

2. Configure your video wall layout as required. Use the preview to help you visualize the layout.

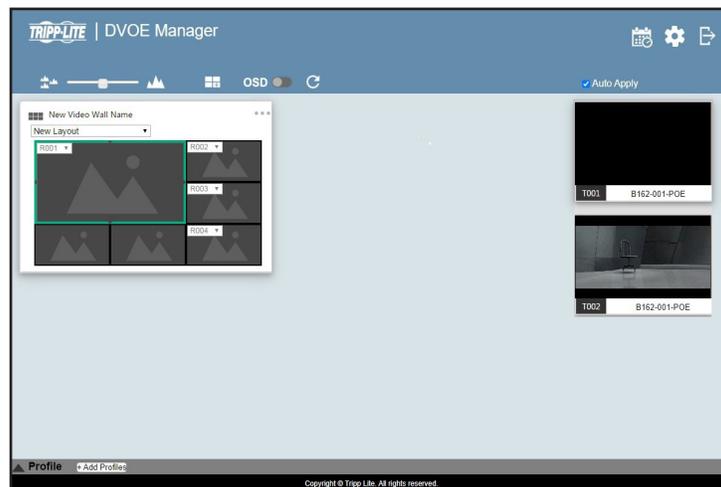
| Control | Description |
|---|--|
| Name of Video Wall | Type the name of your video wall. |
| Number of Displays | <p>Define the following parameters.</p> <p>Horizontal and Vertical: Click the dropdown boxes to select the number of displays for your video wall. Click Refresh to show a preview of your configuration.</p> <p>Display Orientation: Select horizontal or vertical display. A vertical display is either a 90° clockwise or a 90° counter-clockwise rotation of the horizontal display.</p> |
| Bezel Dimensions | Type to specify the top/bottom and right/left widths of the monitor frame. The value on the top is the total of the top and bottom bezel. The value on the right is the total of the left and right bezel. |
| Operation Mode | <p>Select an operation mode for your video wall:</p> <p>Video Wall: Select this option to set up a video wall.</p> <p>Splitter: Select this option to set up a display of identical content on multiple monitors.</p> <p>Customized: Select this option to create a customized display. Click New layout in the list to rename this template.</p> |
|  | Click and hold the slider bar to enlarge or reduce the size of preview windows. |
|  | Use this button to merge displays. Click to select the desired monitors from the layout preview and click the button to merge the monitors. |
|  | Use this button to separate already merged monitors. Select a merged monitor from the layout preview, and then click the button. |
| Ratio Full Natural | <p>Full: Click to display source videos in full extension.</p> <p>Natural: Click to display source videos in their original aspect ratio.</p> |

9. Management

- From the preview area, click the dropdown boxes to define the output receiver for each monitor. An already selected, unavailable receiver is marked with an asterisk (*).

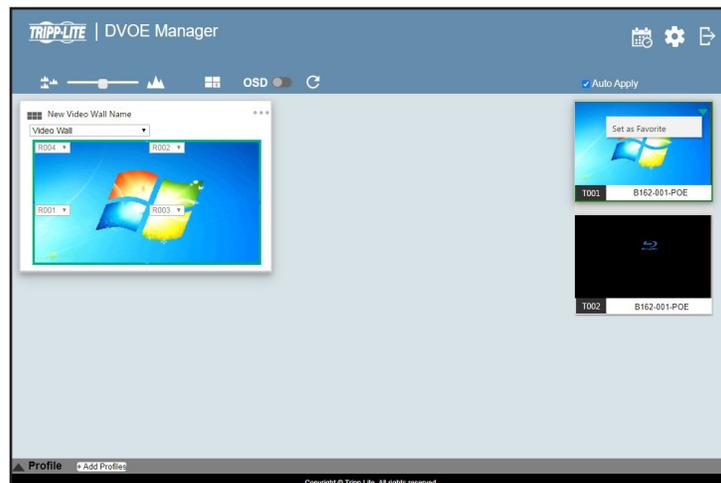


- Click **Create**. The new video wall template is created.



9.6.2 Editing a Video Wall Layout

To edit a video wall layout from the DVOE Manager's main screen, click the top right corner of the layout you wish to edit, and then select **Edit**. For more details on video wall settings, see *Creating a Video Wall Layout*.



9. Management

9.6.3 Editing a Preview

You can edit the following settings for a video wall layout:



- 1** Operation Mode – Click the dropdown list to select an operation mode.
- 2** Assigned Receiver – Displays the assigned receiver for the display. For an unmerged display, double-click the display to open the settings page for the assigned receiver.
- 3** Configuration Menu – Click the top right corner to access the following controls:
 - o Blank – Disables the display on this video wall.
 - o Mute – Disables audio transmission to this video wall.
 - o OSD – Enables or disables the panel control of all B162 devices for this video wall.
 - o Edit – Click to access the video wall layout settings. For more details, see *Creating a Video Wall Layout*.
 - o Delete – Click to remove this layout from DVOE Manager. For a receiver, this option is only available when it is offline.

9.7 Profile

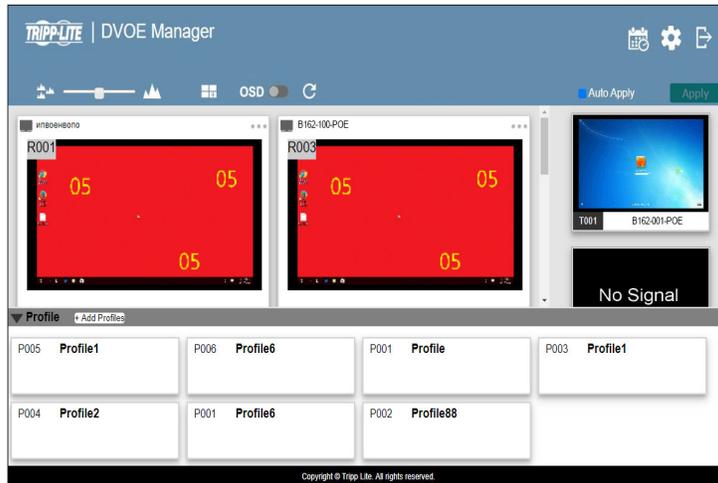
After configuring video receiver/video wall settings, if you find that you would like to keep the current settings, you can save it as a profile. You can create different profiles and apply them manually, or you can set up profile schedules for switching video displays at different times of a day, week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

9. Management

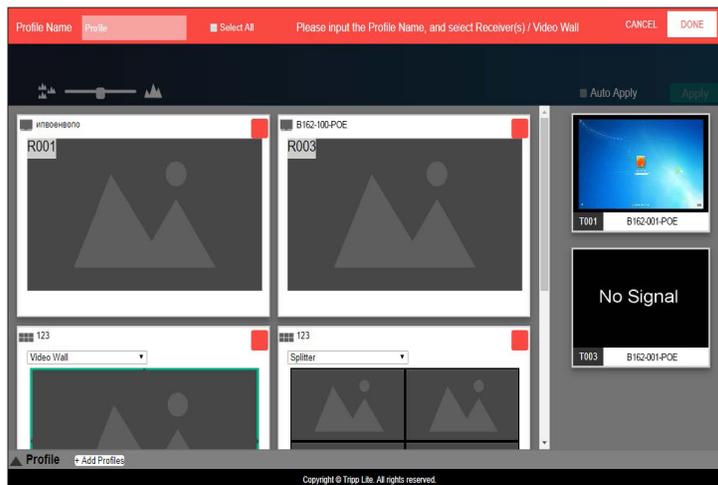
9.7.1 Creating a Profile

Follow the steps below to create a profile.

1. On the main screen, click the profile arrow on the profile bar for the profile list shown below:



2. Click **+Add Profiles** for the page below:



- Profile Name: Enter a profile name.
- Receivers/Video Walls: Select the receivers/video walls you wish to be in this profile by checking the orange box. Alternatively, you can select all receivers/video walls by checking the **Select All** option.

3. Click **Done** to complete the configuration.

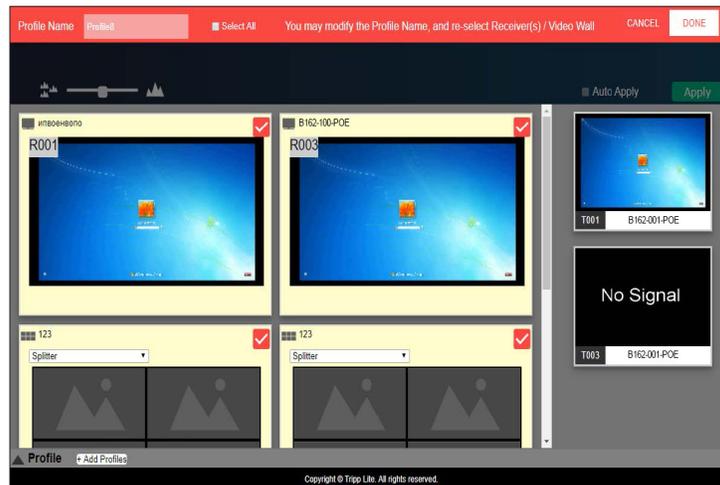
9. Management

9.7.2 Editing, Deleting and Disconnecting a Profile

On the profile list, you can edit, delete and disconnect profiles. Click to select the profile you wish to configure and a green arrow will appear. Click the green arrow for a dropdown menu of edit, delete and disconnect options.

Edit

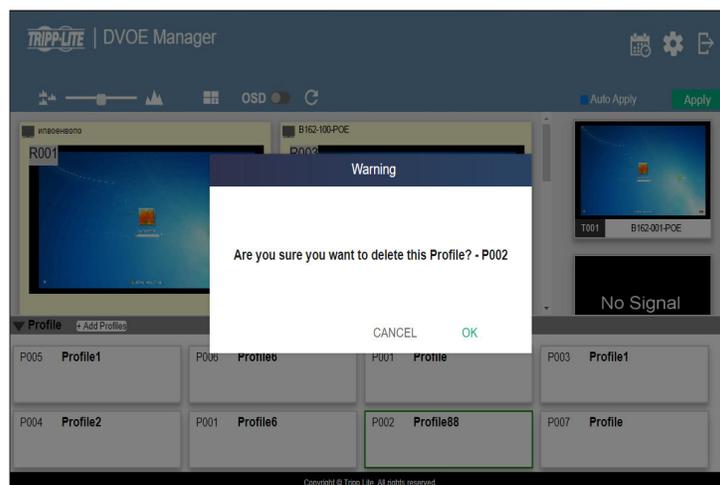
To edit the profile, click the **Edit** option:



- Profile Name: Enter a profile name.
 - Receivers/Video Walls: Select/deselect the receivers/video walls you wish to be in this profile by checking/unchecking the orange box. Alternatively, you can select/deselect all receivers/video walls by checking/unchecking the **Select All** option.
- Click **Done** to complete editing.

Delete

To delete the profile, click the **Delete** option:



The system will ask if you would like to delete this profile. Click **OK** to proceed or click **Cancel** to cancel.

Disconnect

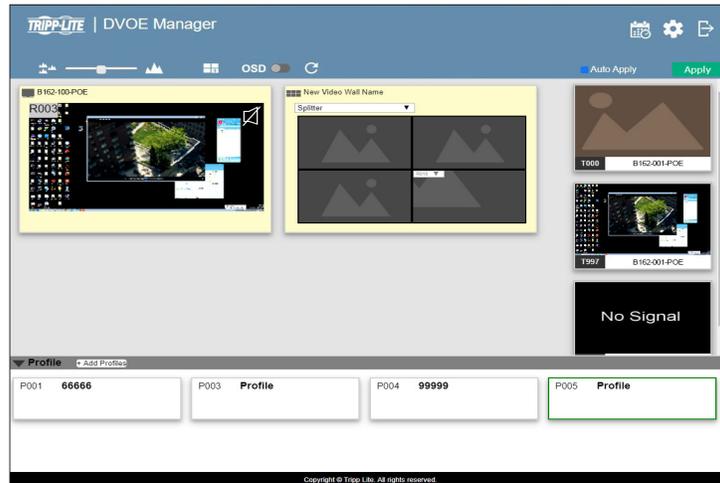
To disconnect the current profile from the video wall, click **Disconnect**. The video wall should go blank.

9. Management

9.7.3 Select/Apply a Profile

After creating the profile, you can apply the settings of the profile to the video displays. Follow the steps below to apply the settings:

1. Bring up the profile list.
2. Click to select a profile and a preview will be shown:



The video receiver/video wall selected in the profile will be displayed. If the current video receivers/video walls have a yellow background, it indicates the video settings have not been applied. If the background is gray, it indicates the video receivers/walls are not available. If the background is white, it indicates the settings are currently applied to the system.

3. Click **Apply** to apply the settings of the profile.
4. When applied, the video settings will be shown on the main screen.

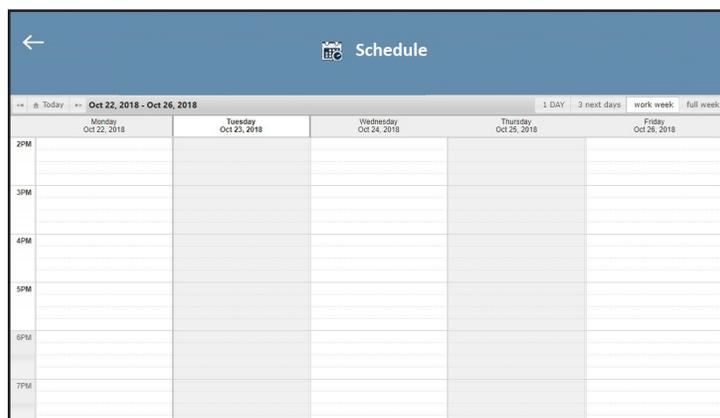
9.7.4 Setting Up Profile Schedules

Follow the steps below to set up profile schedules:

1. On the main screen, click the profile schedule icon on the top right corner.



An example of the profile schedule screen (with nothing planned) is shown below:



On this page, you can select to show current schedule of either

- “1 day”
- “next 3 days”
- “work week”
- “full week”

9. Management

2. Click to select the day and time period to set up the schedule. An example is shown below:

Edit/Add Schedule

Status: Enable Disable

Repeat:

Profile:

Start Date:

End Date:

Start Time: :

End Time: :

3. Edit/add the schedule as required:

- Status: Enable or disable the schedule.
- Profile: Select a profile.
- Start Date: Select or enter a start date.
- End Date: Select or enter an end date.
- Start Time: Select or enter a start time.
- End Time: Select or enter an end time.
- Repeat: Select a repeat cycle for the schedule.
 - o Once: Select this option to run this schedule only once.
 - o Daily: Select this option to run this schedule every day.
 - o Weekly: Select this option to run this schedule every week.

You can also select which days you wish the schedule to run in a week. The option is shown below:

Repeat:

Monday Tuesday Wednesday Thursday Friday

Saturday Sunday

- o Monthly: Select this option to run this schedule every month. You can also enter the days you wish the schedule to run in a month, or enter a range(s) for the schedule to run. Follow the on-screen instructions on how to enter the schedule here.

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

Schedule

← Today → Oct 22, 2018 - Oct 28, 2018 1 DAY 3 next days work week full week

| | Monday Oct 22, 2018 | Tuesday Oct 23, 2018 | Wednesday Oct 24, 2018 | Thursday Oct 25, 2018 | Friday Oct 26, 2018 | Saturday Oct 27, 2018 | Sunday Oct 28, 2018 |
|-----|------------------------|--|---------------------------|--------------------------|------------------------|--------------------------|------------------------|
| 2PM | | 02:30 pm to 03:00 pm S004 - Profile08 | | | | | |
| 3PM | | | | | | | |
| 4PM | | | | | | | |
| 5PM | | | | | | | |
| 6PM | | | | | | | |
| 7PM | | | | | | | |

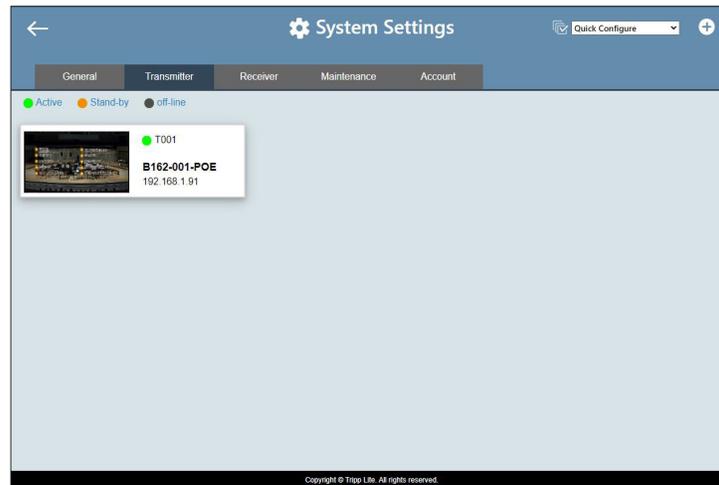
Copyright © Tripp Lite. All rights reserved.

9. Management

9.8 Managing B162 Devices

9.8.1 Checking B162 Status

You can check the statuses of your B162 devices by clicking , from the main screen, and then the **Transmitter** or **Receiver** tab.



The status for a B162 device is indicated with a colored circle. See the table below for status indicators and the corresponding descriptions.

| Indicator | Description |
|-----------|--------------------------------|
| Green | Device is connected and active |
| Orange | Device is on standby |
| Gray | Device is offline |

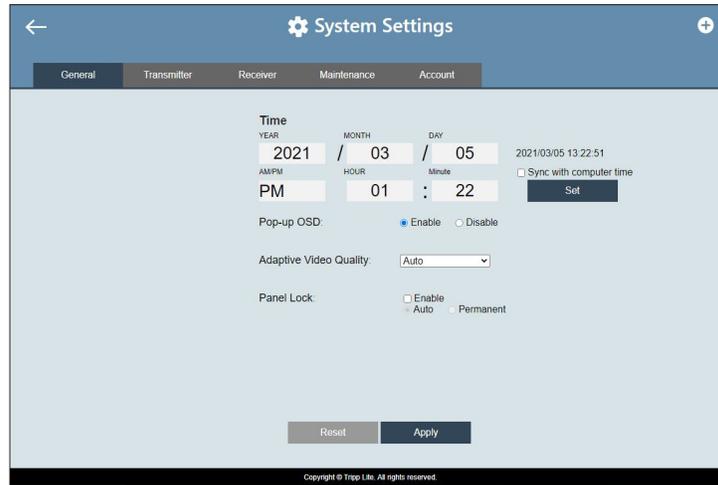
10. System Settings

10.1 Overview

The System Settings page allows you to specify device date and time, configure settings of connected B162 devices, upgrade device firmware and back up the DVOE Manager's settings.

10.2 General Settings

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



To access the General tab, click the , from the main screen, and then click the **General** tab.

- Date and time: Click and type the desired information and click **Set** to save the settings.
- Sync with computer time: If you wish to synchronize the time with the computer's time, check the checkbox and click **Set**.
- Pop-Up OSD: When enabled, the OSD will be displayed when switching video sources. The OSD will not be displayed when disabled.
- Video Quality: Click to select a video quality for display.
- Panel Lock:
 - o Select **Permanent** to lock the panel control of all connected B162 devices. To unlock the panel of a single B162 device, uncheck the **Enable** checkbox.
 - o Select **Auto** to automatically lock the panel control of all connected B162 devices when it idles for 1 minute. To unlock the panel of a single B162 device, press and hold the **Down** (-) button on the top panel for 3 seconds.
- Installation Wizard: Click the plus-sign icon on the top right corner to open the installation wizard. For details, see *Logging In and Configuring DVOE Manager*.

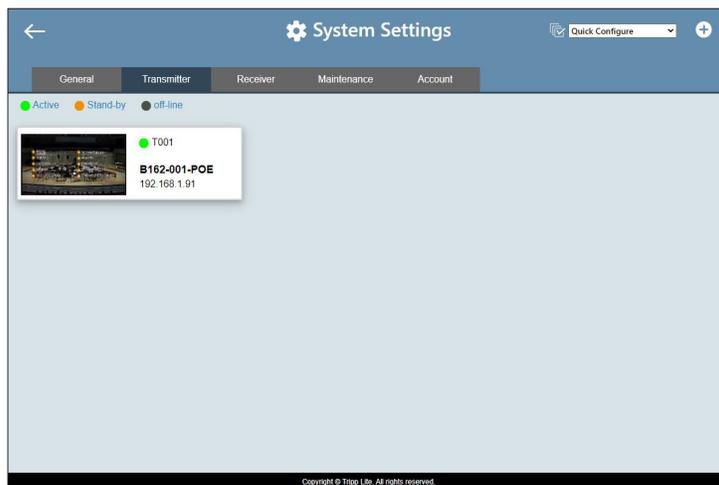
Click **Apply** for the settings to take effect on the connected B162 devices.

10. System Settings

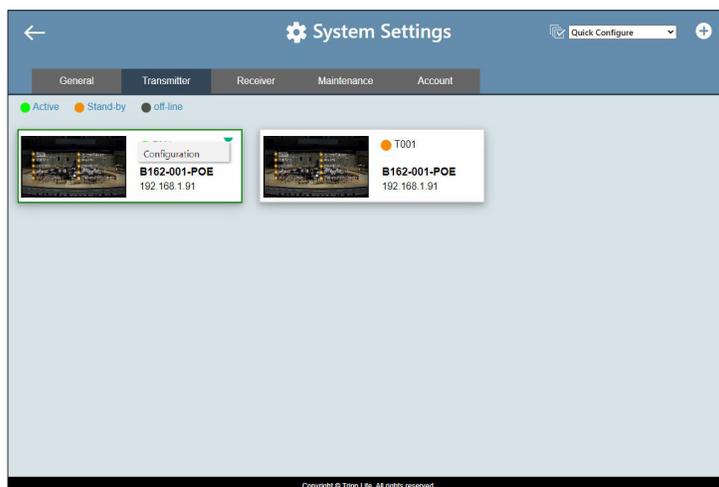
10.3 Transmitter Settings

The Transmitter tab displays the managed B162-001-POE transmitter devices and provides access to the settings. To access transmitter settings, follow the steps below:

1. From the main screen, click the gear icon and then click the **Transmitter** tab. The managed B162-001-POE transmitters appear.

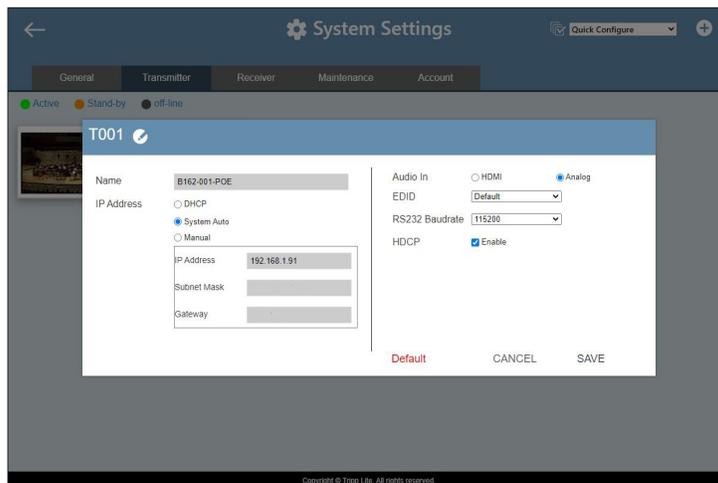


2. Move the cursor to a transmitter you wish to configure. A green arrow appears at the top right corner of the transmitter preview window.
3. Click the green arrow. A dropdown menu appears.



10. System Settings

4. Click **Configuration**. This window appears.



5. Configure the settings as required.

- Name: Click to rename the transmitter.
- IP Address: Specifies how the transmitter obtains its IP address. By default, this field is set to **System Auto**.
 - o DHCP: Select this option to have the IP address automatically assigned by a DHCP server.
 - o System Auto: Select this option to have the IP address automatically assigned by the DVOE Manager.
 - o Manual: Select this option to designate an IP address for the transmitter. Manually type the IP Address, Subnet Mask and Gateway for the device.
- Audio In: Select your audio signal type.
- EDID: After receiving EDID information from the connected display, the B162-001-POE analyzes this information and sets up the input source. Select an EDID mode that suits your needs.
 - o Default: Sets up the input to an optimum configuration based on a predefined list of EDID.
 - o Auto: Sets up the input to the best resolution of the connected displays.
 - o Manual: Sets up the input to user's configuration.
 - o Remix: Sets up the input to an optimum resolution of the connected displays.
- RS-232 Baud Rate: Select a suitable baud rate.
- HDCP: By default, HDCP is enabled for the B162 units.
- Default: Click to restore the transmitter's settings to default.

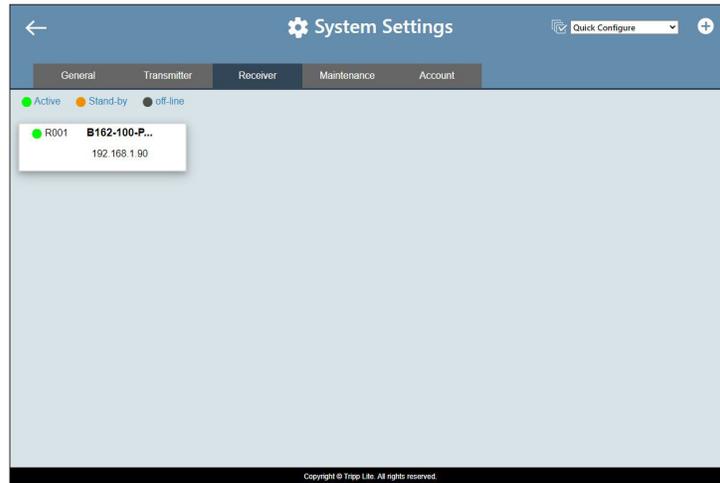
6. Click **Save** to keep the changes.

10. System Settings

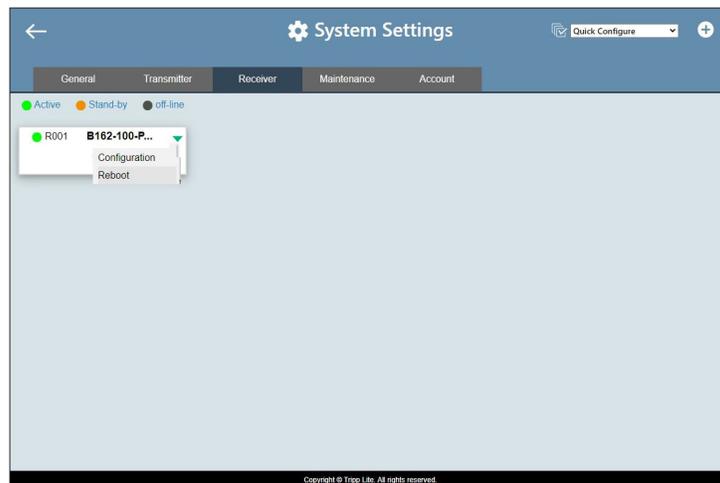
10.4 Receiver Settings

The Receiver tab displays the managed B162-100-POE receiver devices and provides access to the settings. To access receiver settings, follow the steps below:

1. From the main screen, click the gear icon, and then click the **Receiver** tab. The managed B162-100-POE receivers appear.

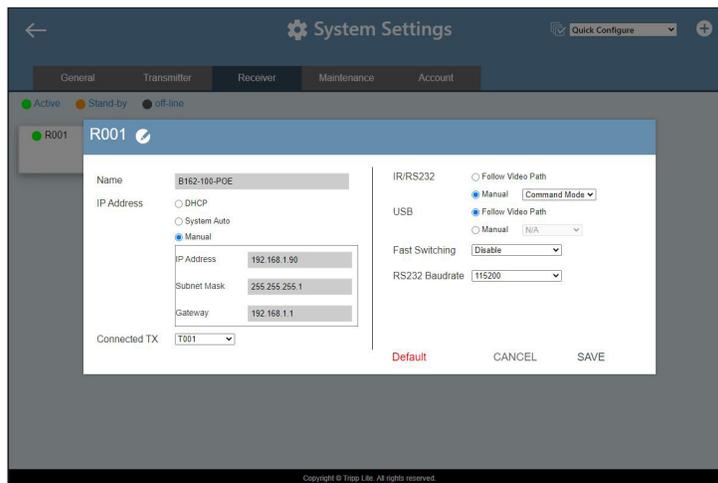


2. Move the cursor to a receiver you wish to configure. A green arrow appears at the top right corner of the receiver preview window.
3. Click the green arrow. A dropdown menu appears.



10. System Settings

4. Click **Configuration**. This window appears.



5. Configure the settings as required.

- Name: Type to name the receiver.
- IP Address: Specifies how the receiver obtains its IP address. By default, this field is set to **System Auto**.
 - o DHCP: Select this option to have the IP address automatically assigned by a DHCP server.
 - o System Auto: Select this option to have the IP address automatically assigned by the DVOE Manager.
 - o Manual: Select this option to designate an IP address for the receiver. Manually type the IP Address, Subnet Mask and Gateway for the device.
- Connected Tx: Defines the video source for this receiver.
- IR/RS-232: Sets the source for IR/RS-232 signals. By default, the IR and RS-232 are disabled (**Manual > N/A**).
 - o Follow Video Path: Select this option to receive IR/RS-232 signals from the transmitter (**Connected Tx**) where the receiver obtains its video source.
 - o Manual: Use this setting to select a different source for obtaining IR/RS-232 signals.
- USB: Sets the source for the connected USB devices.
 - o Follow Video Path: Select this option to receive USB signals from the transmitter (**Connected Tx**) where the receiver obtains its video source.
 - o Manual: Use this setting to select a different source for obtaining USB signals.
- Fast Switching: Click to define the resolution for fast switching. **Note:** For best results, Tripp Lite recommends setting this field to the same resolution as your video source and make sure this setting is identical on all B162-100-POE receivers.
- RS-232 Baud Rate: Click to define the baud rate for the receiver.
- Default: Click to restore the receiver's settings in this window to default.

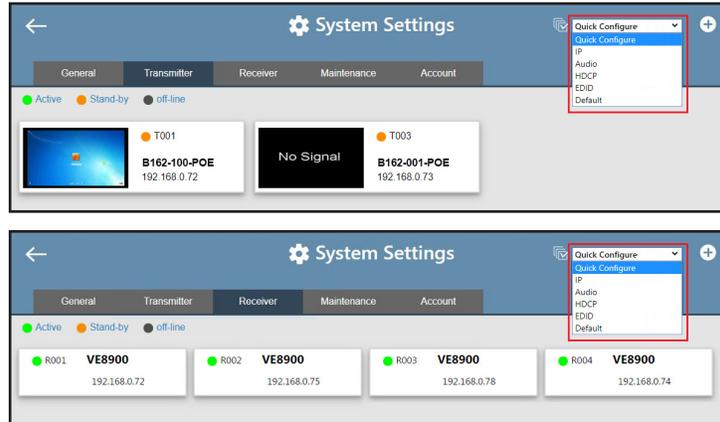
6. Click **Save** to keep the changes.

10. System Settings

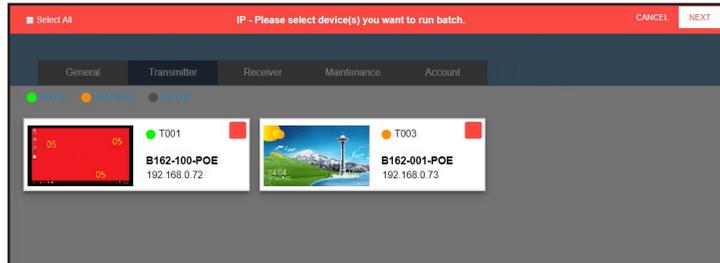
10.5 Batch Configuration

A batch configuration option is available for both Transmitters and Receivers. It appears on the top right corner of the page as **Quick Configuration**. If you wish to adjust a particular setting for a group of devices, do the following:

1. Click **Quick Configuration** for a dropdown menu.



2. Select a setting you wish to configure. The available options for the dropdown menu will depend on whether you're in the Transmitter or Receiver settings. The interface will allow you to select which devices you wish to configure.



3. Check the devices you wish to configure or, if you wish to select all the devices on the list, check **Select All** (on the top left-hand corner) and click **Next**. The **Quick Configuration** window will appear and you can see each device's status. A dropdown menu is available at the bottom of the window for the configuration.



4. Select the desired setting and click **Apply** to apply the setting to all the devices.

10. System Settings

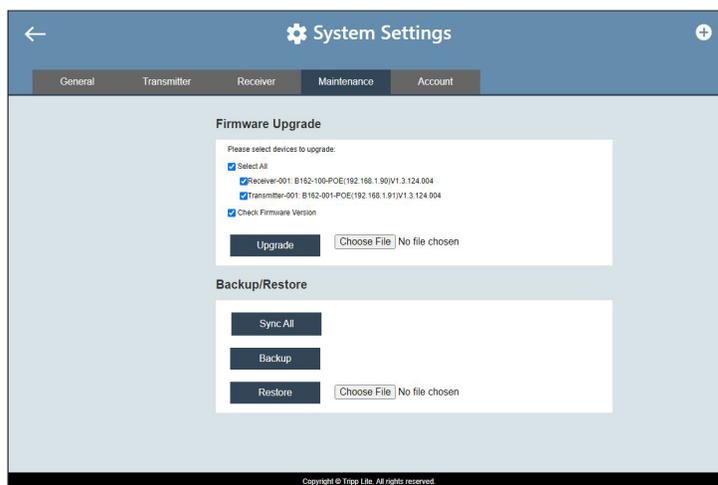
10.6 Maintenance

The Maintenance tab allows you to upgrade device firmware, back up transmitter and receiver layouts and restore devices to previously backed up settings.

10.6.1 Upgrading Device Firmware

To upgrade firmware, follow the steps below.

1. From the main screen, click the gear icon and click the **Maintenance** tab. The following screen appears. The *Firmware Upgrade* section lists the detected transmitter and receiver devices and their firmware versions.



2. Click **Choose File** to locate a previously saved firmware file.
3. Click to uncheck any devices that do not require the upgrade.
4. By default, any upgrades that involve a version rollback will be ignored. To apply both upgrades and version rollbacks, uncheck **Check Firmware Version**.
5. Click **Upgrade** to start upgrading.

10.6.2 Synchronizing All Devices

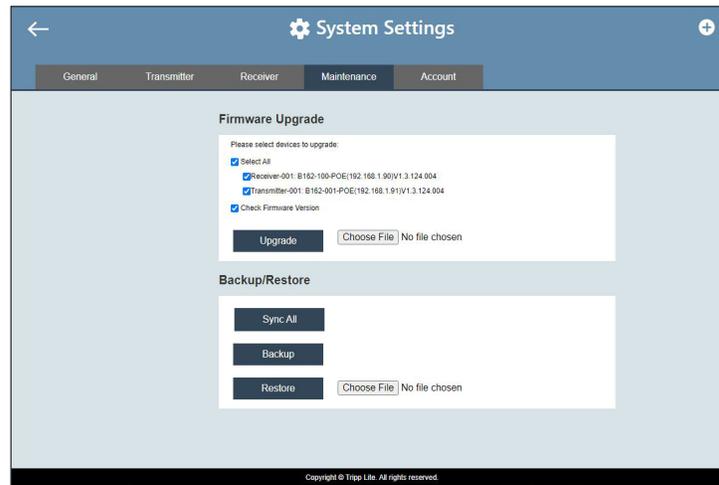
When you wish to add or replace devices, click **Sync All** for the system to recognize the added/replaced device.

10. System Settings

10.6.3 Backing Up Device Settings

You can export transmitter and receiver layouts for backup or migration purposes.

1. From the main screen, click the gear icon and then click the **Maintenance** tab. This screen appears:

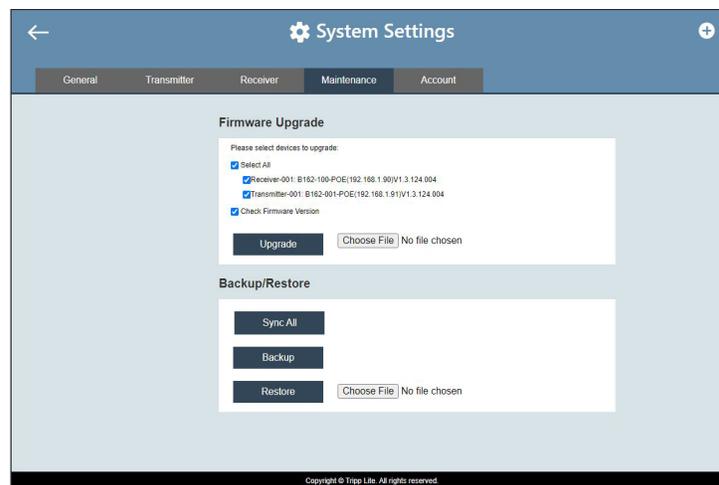


2. Click **Backup**. A confirmation message appears when the backup is complete.

10.6.4 Restoring Device Settings

You can restore your DVOE Manager to a previously saved set of settings on transmitter and receiver layouts.

1. From the main screen, click the gear icon and then click the **Maintenance** tab. This screen appears:



2. Click **Choose File** to locate a previously saved settings file.
3. Click **Restore** to start overwriting the settings to the DVOE Manager. A confirmation message appears when the backup is complete.

10. System Settings

10.6.5 Recovery Mode

Four conditions require Recovery Mode:

1. When a firmware upgrade is manually aborted.
2. When the mainboard firmware upgrade fails.
3. When the I/O firmware upgrade fails.
4. The unit is not powered on for an unknown reason.

To set the B162 units to recovery mode, do the following:

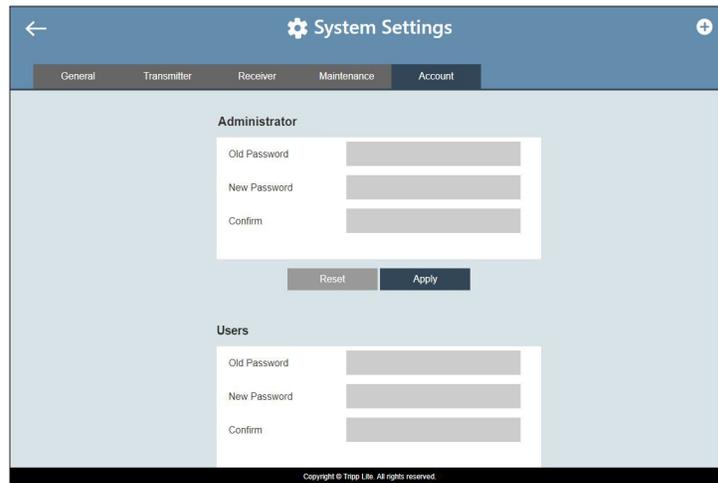
1. Press and hold the **Prev (+)** push button.
2. Power on the B162 units.

10.7 Account Settings

DVOE Manager contains two account levels: *Administrator* and *User*. The default passwords and privileges are detailed in the table below:

| Account Level | Default Password | Privileges |
|---------------|------------------|---|
| Administrator | password | All settings |
| User | password | Source assignment and B162-100-POE receiver allocation on video wall layouts only |

To change the default password, click the gear icon from the main screen and then click the **Account** tab.



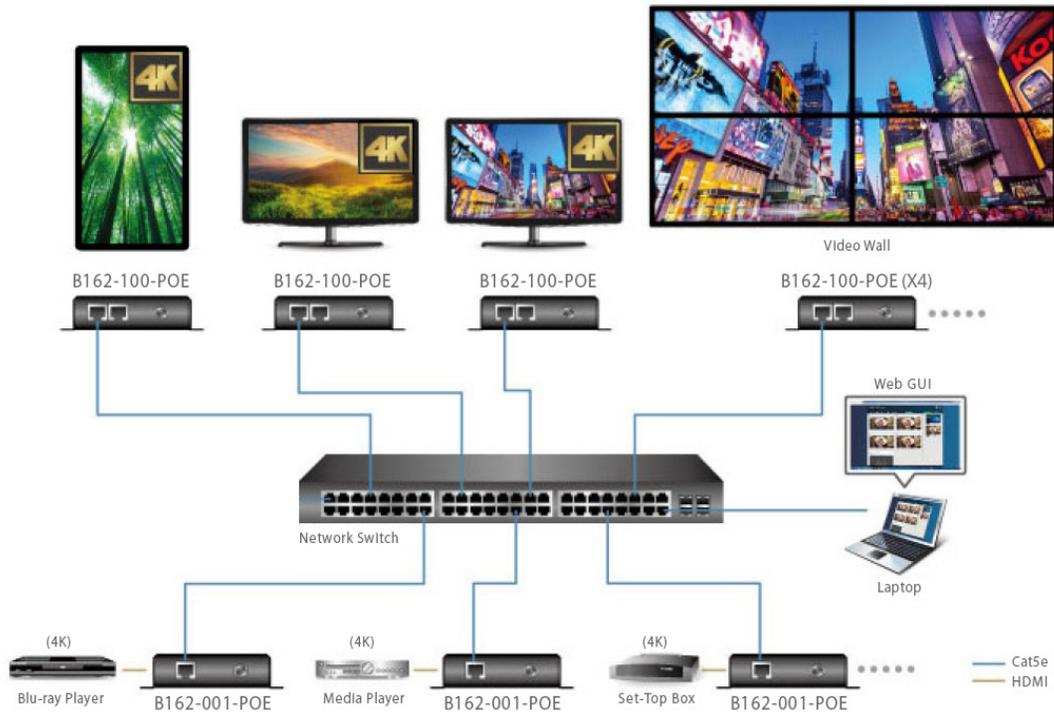
11. CLI Commands

11.1 Overview

You can manage and configure the B162 devices using Telnet, TCP or RS-232 commands from a PC.

11.2 Before You Start

Make sure you have installed a PC to the Ethernet switch in your setup, as illustrated below:

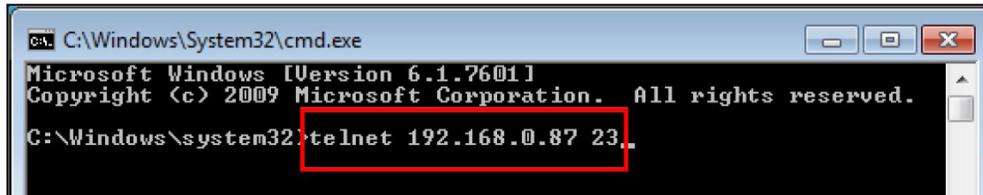


11. CLI Commands

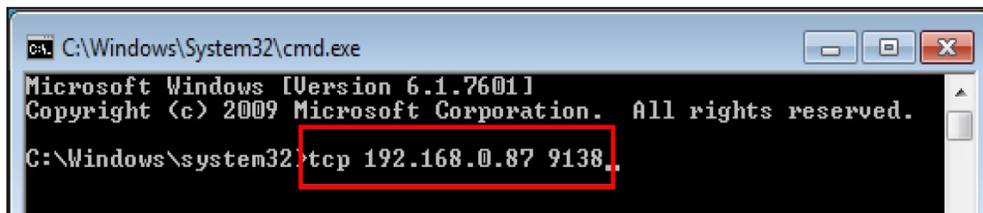
11.3 Executing Commands

The following instructions presume command operations using a PC. To execute a command, do the following:

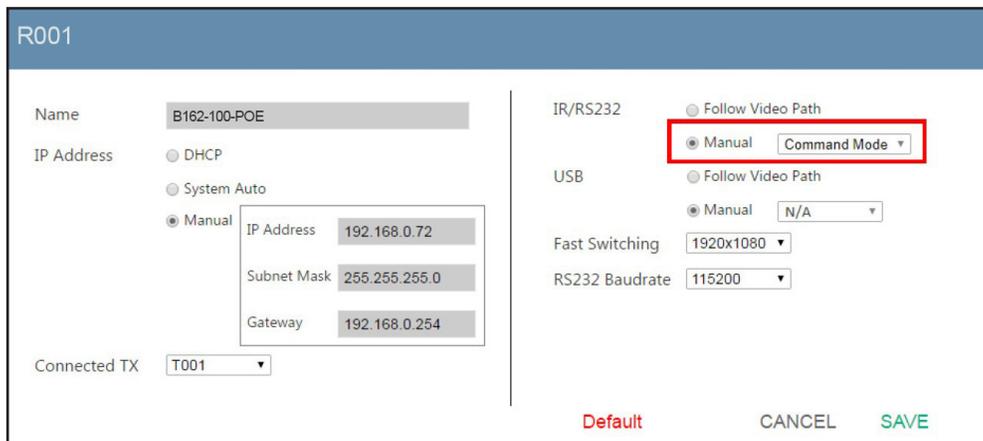
1. On a connected PC, open a command prompt as administrator.
2. Depending on the supported command type for your PC, do the following to connect to your deployment:
 - Telnet connections - In the command prompt, type the IP address of any B162-100-POE receiver in your setup and use port 23. For example:



- TCP connections - In the command prompt, type the IP address of any B162-100-POE receiver in your setup and use port 9138. For example:



- RS-232 connections - In the DVOE Manager, set the IR/RS-232 of all B162-100-POE receivers to **Manual** and select the **Command Mode** option.



3. When the connection is established, the message "Welcome to CLI mode" appears.
4. Type the command you wish to execute. For information on command syntax, see *Commands*.
5. Press **Enter** to execute the command.
6. When the command is successfully executed, the system returns a confirmation message.
7. To end the session, type **logout** in the command prompt and press **Enter**.

11. CLI Commands

11.4 Commands

11.4.1 Guidelines

- The general form of a command is **command name + parameter 1 + parameter 2 + control 1 + control 2**.
- Always specify the command name first, followed by one or more parameters, and then the controls, if any.
- 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:
 - o **command name + parameter 1 + parameter 2**
 - o **command name + parameter 2 + parameter 1**
- If you have two or more controls, the order of these controls among themselves does not affect the result of the operation. For example, both of the following commands execute the same task:
 - o **command name + control 1 + control 2**
 - o **command name + control 2 + control 1**
- The command syntax uses the following notations:

| Notation | Description |
|------------|--|
| + | Indicates a space in the command. |
| [] | Indicates optional items. Only type the information inside the brackets, not the brackets themselves. |
| <argument> | Indicates the name of the value the user must provide. Only type the information within the angle brackets, not the brackets themselves. |
| | Indicates 2 or more mutually exclusive choices in a command line. Only type one choice in the command line, not the symbol. |

11.4.2 Switching Sources

To switch source on a display, type the command in this format: **sw + i<port> + [o<port>] + on|off + \r\n**

| Control | Description |
|---------|---|
| i<port> | Indicates the device ID, MAC address or IP address of the input device (B162-001-POE). |
| o<port> | Indicates the device ID, MAC address or IP address of the output device (B162-100-POE). Omit this variable to assign the specified source to the display you used to make the CLI connection. |
| on | Enables the specified command. |
| off | Disconnects from the current connection. |
| \r\n | Ends the command. |

Examples:

- To switch the source to a B162-001-POE transmitter with the IP address of 10.0.90.11 to the B162-100-POE receiver you used to make the CLI connection, type **sw i10.0.90.11 on**
- To switch the source to a B162-001-POE transmitter with the ID of 1 on a B162-100-POE receiver with the ID of 5, type **sw i1 o5 on**
- To stop source transmission from a B162-001-POE transmitter with the IP address of 10.0.70.43 to a B162-100-POE receiver with the ID of 3, type **sw i10.0.70.43 o3 off**

11. CLI Commands

11.4.3 Switching Video, USB, RS-232 and/or IR Paths

Use this command to switch video, USB, RS-232 and/or IR transmission paths. To use this function, type the command in this format: **sw + i<port> + all | video | usb | serial | ir + o<port> + \r\n**

| Control | Description |
|---------|--|
| i<port> | Indicates the device ID of the input device (B162-001-POE). |
| o<port> | Indicates the device ID of the output device (B162-100-POE). |
| all | Stands for all transmission paths, including video, USB and IR of the specified transmitter. |
| video | Stands for video path of the specified transmitter. |
| usb | Stands for USB path of the specified transmitter. |
| serial | Stands for RS-232 path of the specified transmitter. |
| ir | Stands for IR path of the specified transmitter. |
| \r\n | Ends the command. |

Examples:

- To switch the video path of a B162-001-POE transmitter with the ID of 3 to a B162-100-POE receiver with an ID of 4, type **sw i3 video o4**
- To switch the USB path of a B162-001-POE transmitter with the ID of 1 to a B162-100-POE receiver with an ID of 6, type **sw i1 usb o6**

11.4.4 Disabling Video, USB, RS-232 and/or IR Paths

Use this command to disable video, USB, RS-232 and/or IR transmission paths for the specified B162-100-POE receiver. To use this function, type the command in this format: **sw + o<port> + all | video | usb | serial | ir + off + \r\n**

| Control | Description |
|---------|---|
| o<port> | Indicates the device ID of the output device (B162-100-POE). |
| all | Stands for all transmission paths, including video, USB and IR of the specified receiver. |
| video | Stands for video path of the specified receiver. |
| usb | Stands for USB path of the specified receiver. |
| serial | Stands for RS-232 path of the specified receiver. |
| ir | Stands for IR path of the specified receiver. |
| \r\n | Ends the command. |

Example:

To disable the video, USB, RS-232, and IR paths for a B162-100-POE receiver with an ID of 4, type **sw o4 all off**

11. CLI Commands

11.4.5 Displaying Port-Switching Alerts

Use this command to display an alert message in the command line interface whenever a port is switched via the DVOE Manager, the B162 device push buttons or the IR remote control. To enable or disable this function, type the command in this format:

echo + on | off + \R\N

| Control | Description |
|---------|--|
| on | Sends an alert in the command prompt window to inform port switching configuration. For example, when the user assigns the B162-001-POE with the device ID of 2 to the B162-100-POE with the device ID of 3, the system sends this message in the command prompt window: sw o2 i3 on |
| off | Disables the alert for port switching. |
| \r\n | Ends the command. |

11.4.6 Looking Up System Settings

You can look up the following system settings using the list command:

- Video Wall IDs
- Device ID, MAC address, IP address, firmware version and device name of B162 transmitters and receivers

To look up system settings, type the command in this format: **list + rx | tx | device | videowall + \r\n**

| Control | Description |
|-----------|--|
| rx | Lists the system information of all B162-100-POE receivers in the environment, including the device IDs, MAC addresses, IP addresses, firmware versions and device names. |
| tx | Lists the system information of all B162-001-POE transmitters in the environment, including the device IDs, MAC addresses, IP addresses, firmware versions and device names. |
| device | Lists the system information of all B162 transmitters and receivers in the environment, including the device IDs, MAC addresses, IP addresses, firmware versions and device names. |
| videowall | Lists the video wall settings. |
| \r\n | Ends the command. |

11. CLI Commands

11.4.7 Configuring Video Wall Settings

To apply a layout to a video wall and assign sources for display, type the command in this format:

vw + f<video_wall_ID> + l<layout_name> + [o<port>] + i<port> + on|off + /r/n

| Control | Description |
|-----------------|--|
| <video_wall_ID> | Indicates the ID of the video wall on which you wish to display the specified layout and sources. You can also substitute this ID with the ID of any B162-100-POE receiver used in the target video wall. To look up video wall IDs, use the list command. For details, see <i>Looking Up System Settings</i> . |
| <layout_name> | Indicates the name of the layout that you wish to apply to the specified video wall. To look up layout IDs, use the list command. For details, see <i>Looking Up System Settings</i> . Omit this element when you want to use the same layout that is applied to the target video wall. |
| i<port> | Indicates the device ID, MAC address or IP address of the input device (B162-001-POE) you wish to use. |
| o<port> | Indicates the device ID, MAC address or IP address of the output device (B162-100-POE) on which you wish to display the specified source (i<port>). Note: If the specified layout contains 4 displays, 2 of which are merged, you will need 3 pairs of o<port> + i<port> to indicate the source to be displayed on each display. Omit the o<port> element when specified layout does not contain any merged screens. |
| \r\n | Ends the command. |

Example:

- To apply Layout 1 to a video wall with the ID of 8c8f12e62d3c87ef and assign the source connected to B162-001-POE (device ID: 2) to the video wall, where one display is connected to B162-100-POE (IP address: 10.0.66.73), type the following: **vw + f8c8f12e62d3c87ef + lLayout 1 + o10.0.66.73 + i2 + on**

11.4.8 Muting Receivers or Video Walls

To mute audio output on a B162-100-POE receiver or a video wall, type the command in this format:

mute + o<port> | f<video_wall_ID> + on|off + /r/n

| Control | Description |
|-----------------|--|
| o<port> | Indicates the device ID, MAC address or IP address of the output device (B162-100-POE) you wish to mute. Use an asterisk (*) to mute all receivers in the setup. |
| <video_wall_ID> | Indicates the ID of the video wall you wish to mute. You can also substitute this ID with the ID of any B162-100-POE receiver used in the target video wall. To look up video wall IDs, use the list command. For details, see <i>Looking Up System Settings</i> . |
| on | Mutes the specified receivers or video walls. |
| off | Unmutes the specified receivers or video walls. |
| \r\n | Ends the command. |

Example:

- To mute a receiver with the IP address 10.0.90.22, type **mute o10.0.90.22 on**
- To mute a video wall with the Video Wall ID 0, type **mute f0 on**
- To unmute a video wall with the Video Wall ID 1, type **mute f1 off**

11. CLI Commands

11.4.9 Disabling a Video Output

To disable video output from a specific receiver or on a particular video wall, type the command in this format:

blankscreen + o<port> | f<video_wall_ID> + on|off + \r\n

| Control | Description |
|-----------------|--|
| o<port> | Indicates the device ID, MAC address or IP address of the output device (B162-100-POE) from which you wish to disable the video output. Use an asterisk (*) to disable video output from all receivers in the setup. |
| <video_wall_ID> | Indicates the ID of the video wall of which you wish to disable the video output. You can also substitute this ID with the ID of any B162-100-POE receiver used in the target video wall. To look up video wall IDs, see <i>Looking Up System Settings</i> . |
| on | Stops video output from the specified receivers or specified video wall. |
| off | Allows video output from the specified receivers or specified video wall. |
| \r\n | Ends the command. |

Example:

- To disable video output on the receiver with the IP address of 10.0.90.22, type **blankscreen o10.0.90.22 on**
- To enable video output on the video wall with the Video Wall ID 0, type **blankscreen f0 off**

11.4.10 Enabling or Disabling a Receiver's OSD Display

To enable or disable the OSD display of a specified receiver, type the command in this format:

osd + o<port> | f<video_wall_ID> + on|off + \r\n

| Control | Description |
|-----------------|--|
| o<port> | Indicates the device ID, MAC address or IP address of the output device (B162-100-POE) for which you wish to display the OSD. |
| <video_wall_ID> | Indicates the ID of the video wall for which you wish to display the OSDs. You can also substitute this ID with the ID of any B162-100-POE receiver used in the video wall. To look up video wall IDs, see <i>Looking Up System Settings</i> . |
| on | Displays the OSD of the specified receiver. |
| off | Hides the OSD of the specified receiver. |
| \r\n | Ends the command. |

Example:

- To display the OSD of a B162-100-POE receiver with the IP address 10.0.90.22, type **osd o10.0.90.22 on**
- To hide the OSDs of the B162-100-POE receivers for a video wall with the Video Wall ID 0, type **osd f0 off**

11. CLI Commands

11.4.11 Configuring EDID Mode

To set the EDID mode of a specified B162-001-POE transmitter, type the command in this format:

edid + i<port> + <EDID_mode> + \r\n

| Control | Description |
|-------------|---|
| i<port> | Indicates the device ID, MAC address or IP address of the transmitter (B162-001-POE) connected to the source of the target display. |
| <EDID_mode> | Indicates the EDID mode you wish to set to the specified transmitter. Valid inputs include: <ul style="list-style-type: none">• Default – Sets up the input to an optimum configuration based on EDID predefined by Tripp Lite.• Auto – Sets up the input to the highest resolution of the connected displays.• Manual – Sets up the input to user's configuration.• Remix – Sets up the input to an optimum resolution of the connected displays. |
| \r\n | Ends the command. |

Example:

- To set the EDID mode of a transmitter with the device ID of 16 to auto, type **edid i016 auto**

11.4.12 Rebooting the B162 Units

To reboot a B162 transmitter or receiver, type the command in this format: **reset + a<port> | i<port> | o<port> + \r\n**

| Control | Description |
|---------|---|
| a<port> | Indicates the device ID or IP address of the target transmitter or receiver. |
| i<port> | Indicates the device ID of the target input device (B162-001-POE). Use an asterisk (*) to target all transmitters in the environment. |
| o<port> | Indicates the device ID of the target output device (B162-100-POE). Use an asterisk (*) to target all receivers in the environment. |
| \r\n | Ends the command. |

Example:

- To reboot the transmitter with the IP address of 10.0.60.13, type **reset i10.0.60.13** or **reset a10.0.60.13**
- To reboot all receivers, type **reset o***

11. CLI Commands

11.4.13 Setting the Baud Rate

To set the baud rate of RS-232 serial transmission for B162 devices, type the command in this format:

baud + a<port> | i<port> | o<port> + <baud_rate> + \r\n

| Control | Description |
|-------------|---|
| a<port> | Indicates the MAC address or IP address of the target transmitter or receiver. Use an asterisk (*) to target all transmitters and receivers in the environment. |
| i<port> | Indicates the device ID of the target input device (B162-001-POE). Use an asterisk (*) to target all transmitters in the environment. |
| o<port> | Indicates the device ID of the target output device (B162-100-POE). Use an asterisk (*) to target all receivers in the environment. |
| <baud_rate> | Indicates the baud rate to which you wish to set the target devices. Valid inputs include 9600, 19200, 38400 and 115200. |
| \r\n | Ends the command. |

Example:

- To set the baud rate of a transmitter with the device ID of 3 to 115200, type **baud a3 115200**
- To set all receivers to default, type **baud o* 9600**

11.4.14 Displaying Device Status

You can display the status of B162 transmitters or receivers or the connection status of B162-001-POE transmitters to B162-100-POE receivers. To do this, type the command in this format: **read + [i<port>] | [o<port>] + \r\n**

| Control | Description |
|---------|--|
| i<port> | Indicates the device ID, MAC address or IP address of the target input device (B162-001-POE). Use an asterisk (*) to target all transmitters in the environment. |
| o<port> | Indicates the device ID, MAC address or IP address of the target output device (B162-100-POE). Use an asterisk (*) to target all receivers in the environment. |
| \r\n | Ends the command. |

Example:

- To look up the device status of all transmitters, type **read i***
- To look up the device status of a receiver with the IP address of 10.0.80.66, type **read o10.0.80.66**
- To look up the connection status of transmitters to receivers in the environment, type **read**

12. Important Safety Instructions

12.1 General Safety Instructions

- 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 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.

12.2 Rack-Mounting Safety Instructions

- 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.

13. Specifications

| Function | B162-100-POE (Output) | B162-001-POE (Input) |
|----------------------------|--|--|
| Video Output/Input | | |
| Interfaces | (1x) HDMI (Female) | |
| Impedance | 100 Ω | |
| Maximum Distance | 3 m | |
| Video | | |
| Maximum Data Rate | Avg: 150 ~ 500 Mbps | |
| Compliance | HDMI (4K), HDCP | |
| Max. Resolutions/Distances | 4096 x 2160 (@ 30 Hz) with 4:4:4 @ 100 m (Cat5e/6, point to point) | 4096 x 2160 (@ 30 Hz) with 4:4:4 or 4096 x 2160 (@ 60 Hz) with 4:2:0 @ 100 m (Cat5e/6, point to point) |
| Audio | | |
| Output/Input | (1x) HDMI (Female) (1x) 3.5 mm Mini Stereo (Female) | |
| Connectors | | |
| Unit to Unit | (2x) RJ45 (Female) | (1x) RJ45 (Female) |
| Power | (1x) DC Power Jack with locking (1x) RJ45 (PoE) | |
| Control | | |
| IR | (1x) 3.5 mm Mini Stereo (Female) | |
| RS-232 Connector | Terminal Block, (3x) Pole | |
| RS-232 Baud Rate | 19200 | |
| RS-232 Data Bits | 8 | |
| RS-232 Stop Bits | 1, no parity and flow control | |
| USB | (2x) USB-A (Female) | (1x) USB-B (Female) |
| Push Buttons | | |
| ID Number Selection | (3x) Push Buttons | (2x) Push Buttons |
| Power | | |
| Power Consumption | DC5V:5.22W:46BTU DC48V:6.52W:52BTU | DC5V:3.49W:16BTU DC48V:4.36W:20BTU |
| Environmental | | |
| Operating Temperature | 32° to 104°F (0° to 40°C) | |
| Storage Temperature | -4° to 140°F (-20° to 60°C) | |
| Humidity | 0 to 80% RH, Non-Condensing | |

13. Specifications

| Function | B162-100-POE (Output) | B162-001-POE (Input) |
|------------------------------|--|----------------------|
| Physical Properties | | |
| Housing | Metal | |
| Weight | 1.5 lb. (0.68 kg) | |
| Size (L x W x H) w/Bracket | 6.7 x 5.78 x 1.18 in. (17.02 x 14.69 x 3 cm) | |
| Size (L x W x H) w/o Bracket | 6.54 x 4.92 x 1.14 in. (16.6 x 12.49 x 2.9 cm) | |

Note: Supports 1920 x 1200 @ 60 Hz reduced blanking (Default EDID only).

14. Supported Browsers

- Google Chrome: 60.0.3112 or later
- Mozilla Firefox: 54.0.1 or later
- Opera: 46 or later

15. Warranty and Product Registration

1-Year Limited Warranty

TRIPP LITE warrants its products to be free from defects in materials and workmanship for a period of one (1) year from the date of initial purchase. TRIPP LITE's obligation under this warranty is limited to repairing or replacing (at its sole option) any such defective products. To obtain service under this warranty, you must obtain a Returned Material Authorization (RMA) number from TRIPP LITE or an authorized TRIPP LITE service center. Products must be returned to TRIPP LITE or an authorized TRIPP LITE service center with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment which has been damaged by accident, negligence or misapplication or has been altered or modified in any way.

EXCEPT AS PROVIDED HEREIN, TRIPP LITE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL TRIPP LITE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, TRIPP LITE is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise.

PRODUCT REGISTRATION

Visit triplite.com/warranty today to register your new Tripp Lite product. You'll be automatically entered into a drawing for a chance to win a FREE Tripp Lite product!*

* No purchase necessary. Void where prohibited. Some restrictions apply. See website for details.

Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, your Tripp Lite product has been assigned a unique series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to the series number. The series number should not be confused with the marketing name or model number of the product.

WEEE Compliance Information for Tripp Lite Customers and Recyclers (European Union)

 Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical

and electronic equipment from Tripp Lite they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send the new equipment back for recycling when this ultimately becomes waste

Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended.

Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice. Photos and illustrations may differ slightly from actual products.



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