

Installation Guide for the EasyIP Tx/Rx

This guide contains only the information required to install this product. Refer to the **Complete Manual for EasyIP Tx/Rx HDMI to AV-over-IP Encoder and AV-over-IP to HDMI Decoder** for information on configuring and using this product.

Overview

This guide provides information about:

- **EasyIP Tx/Rx** HDMI to AV-over-IP Encoder and AV-over-IP to HDMI Decoder, 999-60600-000 (worldwide)



What's in this Guide

This guide covers:

- The EasyIP Ecosystem
- Product Features
- Tips for a successful installation
- Information on connecting the system components
- System power-on

The EasyIP Ecosystem

Vaddio® EasyIP is an AV-over-IP solution designed for flexible and approachable conferencing, extension, and presentation systems. EasyIP products are designed to be used together, and have limited or no compatibility with other types of products.

- EasyIP cameras deliver video in Vaddio's proprietary EasyIP format.
- An EasyIP host device (EasyIP Decoder, EasyIP Mixer) is required to convert the cameras' output signal to a USB stream.
- Other EasyIP receivers (such as EasyIP PCC or EasyIP Tx/Rx units in Rx Mode) can take in EasyIP streams and convert to other outputs.
- Only paired EasyIP cameras can be controlled by the EasyIP host device.
- EasyIP host devices automatically detect EasyIP cameras and EasyIP Tx/Rx units in Tx Mode on its own subnet for easy pairing.
- Cameras are not required to be on the same subnet as the device that manages them.
- EasyIP products require PoE+ power. Typically the EasyIP system is powered by a PoE+ switch.

EasyIP Tx/Rx Features

- Dual-purpose device offers two modes of operation:
 - Tx Mode (transmit mode) converts HDMI signals to EasyIP streams for transmission over the network to EasyIP endpoints (aka receivers)
 - Rx Mode (receive mode) receives EasyIP signals over the network and converts to HDMI for local viewing
- Easily change a unit's mode if you need to redesign your system.
- Balanced line-level audio input and output
- 2x2 Dante audio support for microphones and speakers with Dante® connectivity
- Tx Mode units can multicast stream their EasyIP output, allowing connectivity to several networked EasyIP endpoints
- Rx Mode units can pair with up to 20 EasyIP video sources (like Tx Mode units and EasyIP cameras) on your network for flexible video routing.
- Rx Mode units are user-configurable to automatically switch video sources.
- Enterprise-class IT administrative capabilities with full web controls for remote management

Unpacking EasyIP Tx/Rx

Make sure you received all the items you expected.



The box should contain these items:

- EasyIP Tx/Rx
- 3 ft (0.9 m) HDMI cable, black
- 2 qty 3-position phoenix-style connectors

A Quick Look at the EasyIP Tx/Rx

Physical features of the device – controls, status lights, and connectors.

Front panel



- **Status light** – Multicolor LED shows device status:
 - Purple – Booting up/initializing
 - Blue – Normal operation
 - Blinking green – Identify Mode active
 - Blinks white – IP button has been pushed. One blink indicates the unit is in Tx Mode, two blinks indicate Rx Mode.
 - Blinking Red – Video is muted
 - Yellow – Firmware update in progress
 - Blinking Yellow – Factory Reset Mode active

Side panel



- **Kensington lock** – Keep your device from adventuring away into the wide, wonderful world...

Back panel



From left to right:

- **NETWORK PoE+** (RJ-45 connector) – Power, control via web interface, and Dante audio. Connect to a powered port on a PoE+ switch.
- **PWR light** – Illuminated when the device has power or blinks during device identification.
- **HDMI OUT** (HDMI connector) – Scalable HDMI output.
 - **Tx Mode:** Outputs video signal from the HDMI IN port; configurable audio.
 - **Rx Mode:** Displays the currently selected video source; either a decoded EasyIP stream or video signal from the HDMI IN port. Audio mix configurable in audio matrix.
- **HDMI IN** (HDMI connector) – Accepts non-HDCP HDMI signals.
 - **Tx Mode:** HDMI input signal is converted to EasyIP audio/video source.
 - **Rx Mode:** HDMI input signal is available as a selectable source for the HDMI OUT port.
- **IP button** – Toggles the IP address display over video outputs. Also prompts the device's front Status light to indicate the current device mode (flashes white once for Tx or flashes white twice for Rx) . Press and hold while applying power to perform physical factory reset. Feels satisfying to press, very clicky.
- **Audio IN** – Balanced Line-level audio input.
- **Audio OUT** – Balanced Line-level audio output, configured in the audio matrix.

Installation and connections

This section covers how to install and connect the product. It also provides safety information and other guidance related to installing the product.

Don't void your warranty!

Caution

This product is for indoor use. Do not install it outdoors or in a humid environment without the appropriate protective enclosure. Do not allow it to come into contact with any liquid.

Do not install or operate this product if it has been dropped, damaged, or exposed to liquids. If any of these things happen, return it to Vaddio for safety and functional testing.

Before you start

Prepare for a successful installation:

- Be sure you can identify all cables correctly.
- If you make cables for this installation, check them for continuity.
- Talk to the network administrator. If installing the device in a non-DHCP network (one that does not automatically assign IP addresses), you will need to configure the device with a static IP address as directed by the network administrator.

Cabling notes

Caution

Do not use pass-through RJ-45 connectors when making cables for this product. Poorly crimped connectors of this type can cause intermittent connections and degraded signal quality. They can also damage the connectors on the product, which will void your warranty



Intact – will make reliable contact with cable connector



Damaged – Bent contact fingers will NOT make reliable contact with cable connector

When making category cables for this product, use Cat-5e or better cable. We recommend using high-quality connectors and a high-quality crimping tool.

We recommend shielded cabling if the cables will be coiled, run tightly with other cables, or routed near sources of electromagnetic interference such as power lines or fluorescent light fixtures.

Caution

Check your cables. Connecting a cable to the wrong port or using the wrong pin-out can result in equipment damage and will void the warranty.

Pro Tip

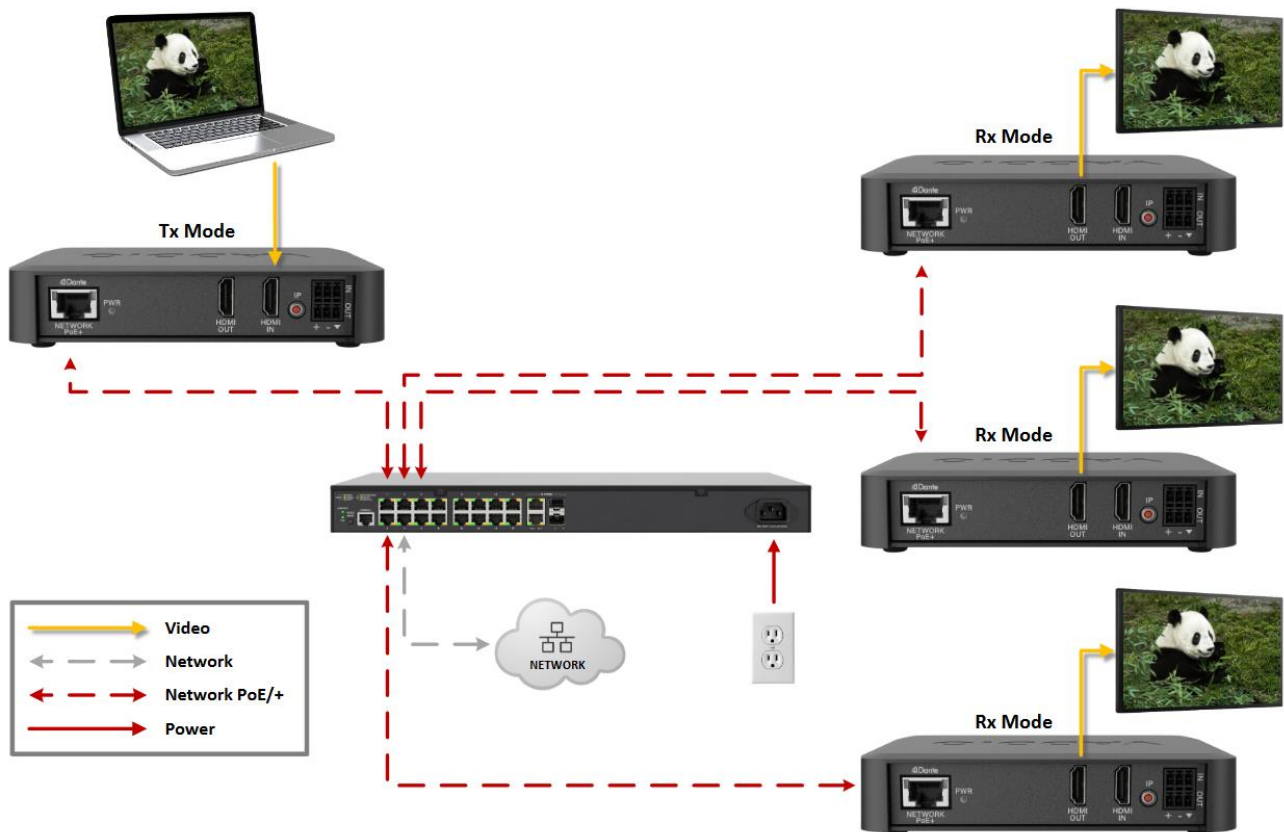
Label all cables at both ends.

Basic connections – AV extension and distribution

An example of an EasyIP Tx/Rx being used for content distribution. An HDMI source is connected to the HDMI IN port of a unit set to Tx (transmit) Mode. The HDMI video and audio is converted to an EasyIP multicast stream to send over the network. Three EasyIP Tx/Rx units set to Rx (receive) Mode on the same network are paired to the Tx Mode unit and convert the received EasyIP signal to HDMI audio and video. The HDMI out port on these units is then connected to a display.

A PoE+ switch provides power and network connectivity to the EasyIP Tx/Rx units. If no PoE+ switch is used, a mid-span PoE+ power injector (sold separately) is required for each EasyIP device.

Vaddio recommends making all connections while the PoE+ switch is turned off.



Caution

Do not connect the PoE+ switch to the network without guidance from an on-site network specialist.

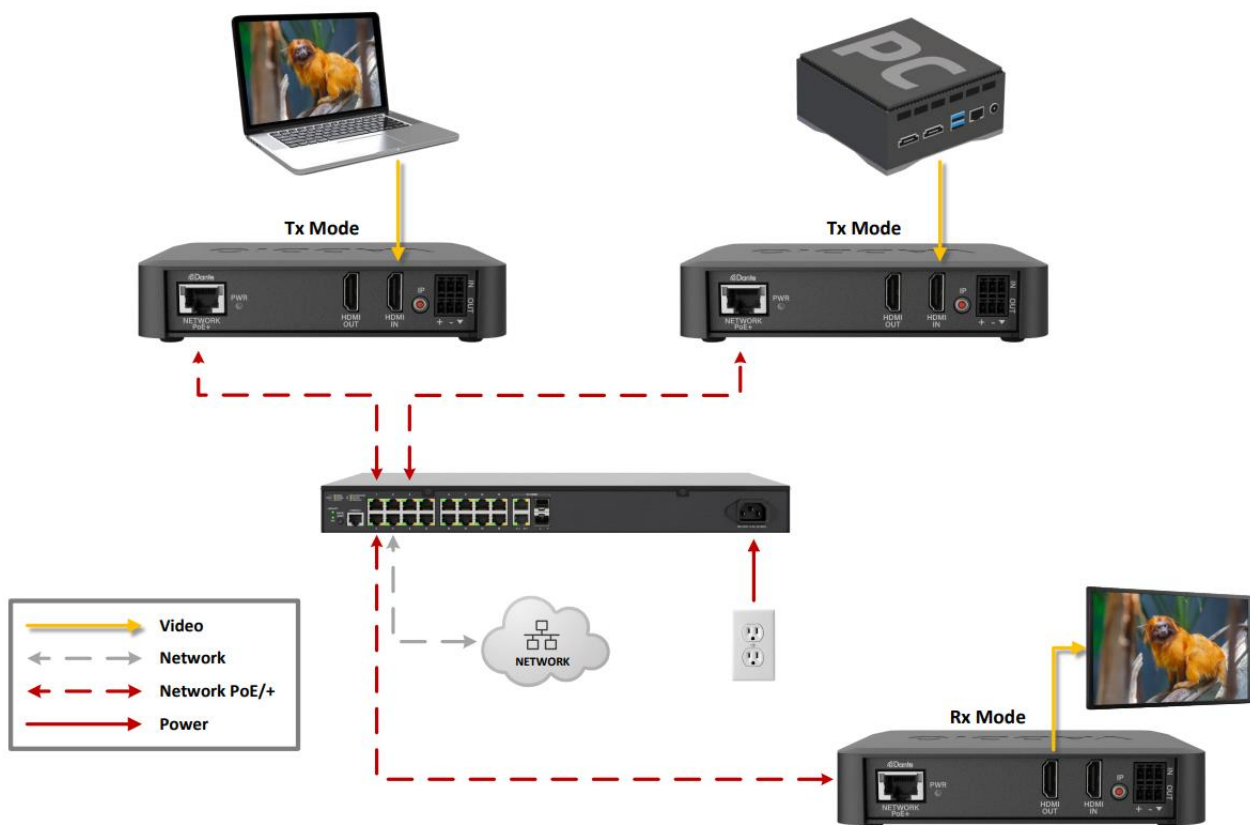
Basic connections – Automatic source switching

An example of an EasyIP deployment that takes advantage of the EasyIP Tx/Rx's automatic switching feature, which can be enabled on Rx Mode units. In the user interface, the network administrator can set priorities for the paired EasyIP video sources in the network.

This means the Rx Mode unit in the example below (connected to the in-room display) will output audio and video from the room's local PC until someone connects HDMI from a laptop/tablet to the Tx Mode unit at the conference room table. The Rx Mode unit then automatically switches to the laptop's audio and video. When the laptop HDMI is unplugged, it automatically switches back to displaying the PC. Easy Peasy Lemon Squeezy.

A PoE+ switch provides power and network connectivity to the EasyIP products. If no PoE+ switch is used, a mid-span PoE+ power injector (sold separately) is required for each EasyIP device.

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Basic Connections - with EasyIP Mixer

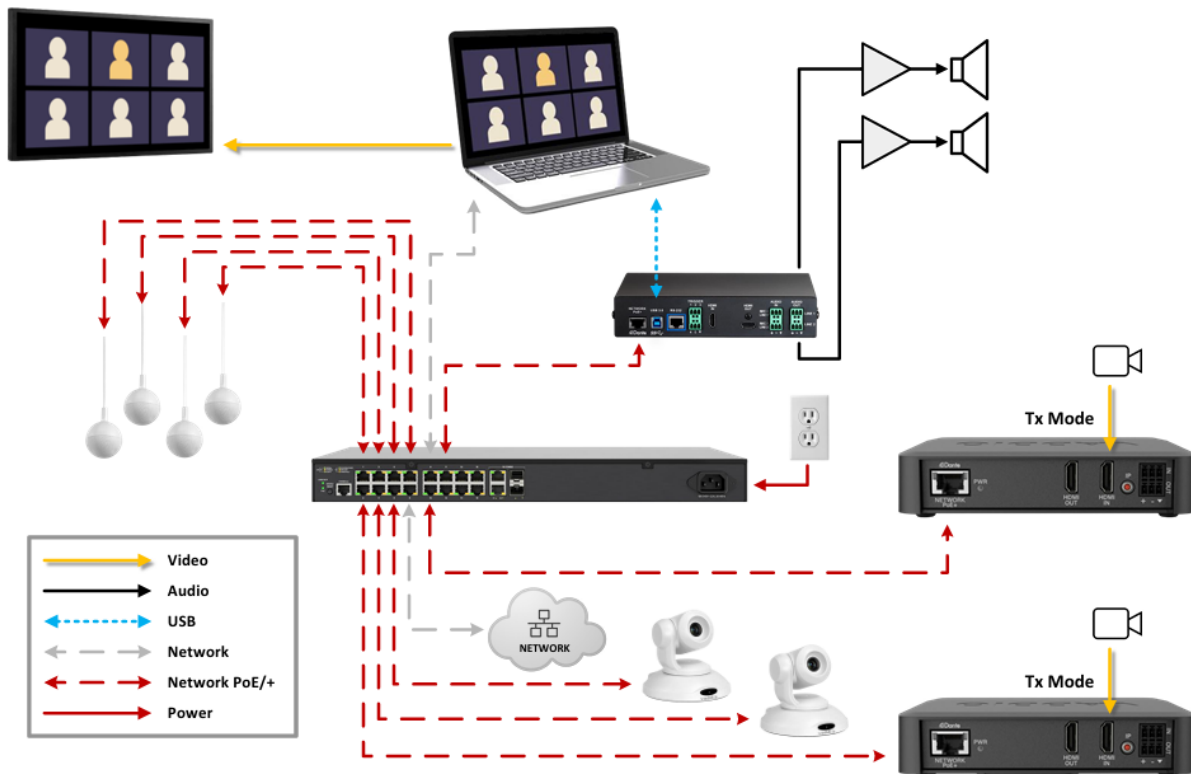
An example of an EasyIP deployment using the EasyIP Tx/Rx with an EasyIP Mixer. In this setup, the EasyIP Mixer manages up to 4 EasyIP video sources (in this case, 2 EasyIP cameras and 2 EasyIP Tx/Rx units set to Tx Mode which each convert an HDMI video source to EasyIP video and audio). A computer connected to the system provides USB connectivity for conferencing or recording.

This system also provides audio with acoustic echo cancellation. EasyIP CeilingMIC D units provide Dante networked audio microphone input, and an amplifier takes the output of the EasyIP Mixer to speakers. This is only one of many possible audio configurations.

The HDMI from the computer is connected to the HDMI IN of the EasyIP Mixer. This both integrates the computer audio into the audio matrix, and converts the signal into an EasyIP audio and video source that can connect over the network to one (or more) EasyIP Tx/Rx units set to Rx Mode. This Rx Mode unit then converts back to HDMI to connect to a display for easy video extension.

A PoE+ switch provides power and network connectivity to the EasyIP products. If no PoE+ switch is used, a mid-span PoE+ power injector (sold separately) is required for each EasyIP device.

Vaddio recommends making all connections while the PoE+ switch is turned off.



Caution

Do not connect the PoE+ switch to the network without guidance from an on-site network specialist.

Note

The EasyIP Mixer is compatible with EasyIP video sources only (EasyIP Tx/Rx, EasyIP cameras). It does not detect or pair with other types of cameras.

Powering up the EasyIP System

Vaddio recommends making all connections while the PoE+ switch is turned off. To power the system, turn on the PoE+ switch

- The EasyIP Tx/Rx's front status light turns blue and the rear power light will illuminate green when the device is ready
- The EasyIP cameras initialize if they are powered from the same PoE+ switch. This will take a few seconds. PTZ models will move their pan/tilt motors. When each camera's status light turns blue, the camera is ready to accept control information.
- The following EasyIP USB endpoint devices are ready when:
 - The EasyIP Decoder's status light illuminates blue.
 - The EasyIP Mixer's reset button illuminates red.

A connected computer will then recognize it as a USB peripheral.

Note

If a camera has already been in use and is paired with the host device, its indicator light may change to red when it finishes booting. This happens if the camera is the selected video input and is using the pro A/V color scheme. Pro A/V is the default color scheme for EasyIP 20 cameras.

Next Steps

No video is available from the EasyIP system until it is configured. Refer to the Complete Manual for the EasyIP Tx/Rx for information on initial device set-up and pairing EasyIP video sources (EasyIP cameras, EasyIP Tx/Rx) to EasyIP destinations (EasyIP Decoder, EasyIP Mixer, EasyIP PCC, and EasyIP Tx/Rx).

Operation, Storage, and Care

For smears or smudges on the product, wipe with a clean, soft cloth. Do not use any abrasive chemicals.

Keep this device away from food and liquids.

Do not operate or store the device under any of the following conditions:

- Temperatures above 40° C (104° F) or below 0° C (32° F)
- High humidity, condensing or wet environments
- Inclement weather (you know — storms, very hot weather, and any other weather that makes you want to stay indoors and perhaps go back to bed)
- Severe vibration
- Corrosive atmosphere
- While trying to escape a time loop
- While trying to escape a time loop
- While trying to escape a time loop
- Dry environments with an excess of static discharge

Do not attempt to take this product apart. There are no user-serviceable components inside.

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