

# Setup and Install Guide

020-102814-01

## Terra Transmitter and Receiver

## NOTICES

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- a) Problems or damage occurring during shipment, in either direction.
- b) Problems or damage caused by combination of a product with non-Christie equipment, such as distribution systems, cameras, DVD players, etc., or use of a product with any non-Christie interface device.
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- g) Defects caused by normal wear and tear or otherwise due to normal aging of a product.

The warranty does not apply to any product where the serial number has been removed or obliterated. The warranty also does not apply to any product sold by a reseller to an end user outside of the country where the reseller is located unless (i) Christie has an office in the country where the end user is located or (ii) the required international warranty fee has been paid.

The warranty does not obligate Christie to provide any on-site warranty service at the product site location.


### REGULATORY

The product 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 product is operated in a commercial environment. The product 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 the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

CAN ICES-3 (A) / NMB-3 (A)

**이 기기는 업무용(A급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.**

### ENVIRONMENTAL

The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol  means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

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# Important Safeguards

To prevent personal injury and to protect the device from damage, read and follow these safety precautions.

## General Safety Precautions

To prevent personal injury and to protect the device from damage, read and follow these safety precautions.



**Warning!** If not avoided, the following could result in death or serious injury.

- SHOCK HAZARD! Disconnect the product from AC before moving, servicing, cleaning, removing components, or opening any enclosure.
- Motors and fans may start without warning.

## Power Precautions

Ensure all power precautions are understood before installing the product.



**Warning!** If not avoided, the following could result in death or serious injury.

- FIRE AND SHOCK HAZARD! Do not operate the system unless certified power connections, providing the recommended voltage, are used.
- FIRE AND SHOCK HAZARD! Do not attempt operation unless the power cord, power socket, and power plug meet the appropriate local rating standards.



**Caution!** If not avoided, the following could result in minor or moderate injury.

- SHOCK HAZARD! Only use the AC power cord provided with the product or recommended by Christie.
- TRIP OR FIRE HAZARD! Position all cables where they cannot contact hot surfaces, be pulled, be tripped over, or damaged by persons walking on or objects rolling over the cables.
- FIRE HAZARD! Do not use a power cord, harness, or cable that appears damaged.
- FIRE OR SHOCK HAZARD! Do not overload power outlets and extension cords.
- SHOCK HAZARD! The AC power cord must be inserted into an outlet with grounding.
- SHOCK HAZARD! Do not attempt operation if the AC supply is not within the specified voltage and power range, as specified on the license label.

## Service Warning

All servicing instructions are for use by qualified service personnel only. There are no procedures, exchange, or parts that are inside the unit that are intended to be performed by the user.

Unplug all power and power supply cords from the apparatus before servicing.

# Product Overview

Christie Terra is an AV over IP solution enabling the transport, processing and control of audiovisual content, including 4K@60Hz video formats, over 10G Ethernet networks. Built on standardized SDVoE technology, Christie Terra provides unprecedented performance capabilities including the delivery of uncompressed, zero-frame latency, artifact-free video over readily available and affordable 10G components.

For additional information, view the Terra product literature at <http://ChristieTerra>.

## Hardware

The Terra solution consists of transmitters, receivers, and a controller. Each features front-facing LED indicators providing quick status.

	<p>Transmitter processes audiovisual sources and control signals to deliver uncompressed, zero-frame latency, artifact-free content over 10G networks. The Terra Transmitter supports video resolutions up to 4K@60Hz and accepts multiple content and control connections, including HDMI 2.0, USB, HDCP 2.2, DisplayPort 1.2, serial RS-232, EDID and more. This powerful and flexible component does not require additional devices to process signals.</p>
	<p>Receiver delivers audiovisual data and control from an SDVoE system to displays and other devices. Benefit from full signal management and processing including magnification, downscaling, KVM, PIP, image compositing and multiviewer application. Terra Receiver delivers artifact-free video at resolutions up to 4K@60Hz with zero-frame latency, and device control over standard 10G networks.</p>
	<p>Terra Controller provides secure operational control and management of SDVoE systems.</p>

## Related Documentation

Access the latest documentation from the Christie website at <http://ChristieTerra>

Additional information is available in the following documents:

- Terra Install and Setup Guide for Controlled Systems (020-102804-*nn*)
- Terra Product Safety Guide (020-102786-*nn*)
- Terra User Guide (020-102838-*nn*)

# Install and Setup

Use the following information to install Terra Transmitters and Receivers for Extender applications.

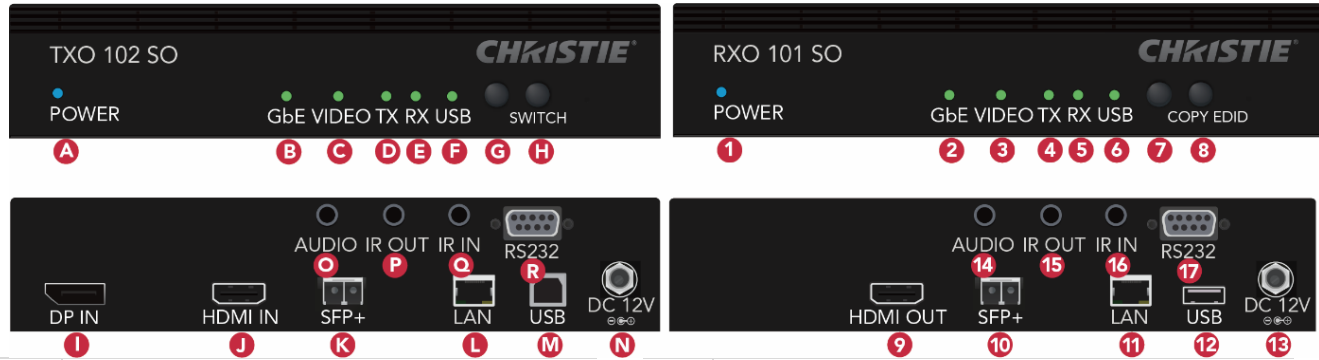
## Extender Applications

Christie Terra Transmitters and Receivers extend and process audiovisual content, including 4K@60Hz video formats, over fiber connections.

### Accessories

Required	Optional
OM3 multimode 850nm fiber cable with duplex LC-LC connectors (300m maximum distance) Single mode fiber or Category cable such as CAT-6a can be used with Terra Transmitters and Receivers by substituting compatible 10G SFP+ transceivers and compatible cables. 10G SFP+ Direct Attach Cables or Twinax copper cables with hard wired SFP+ transceivers can also be used.	Audio cable: 3.5 mm stereo mini-jack
HDMI IN cable or DisplayPort cable	Remote control cables: IR transmitter 3.5 mm DC mini-jack cable; IR receiver 3.5 mm stereo mini-jack cable
HDMI out cable	USB 2.0 type-A cable, keyboard, mouse
AV source device	Speaker for analog audio
AV display device (embedded audio ready for HDMI audio)	

# Transmitters and Receivers Ports and Status Indicators



A	Power indicator	1	Power indicator
B-F	Signal and system indicators	2-6	Signal and system indicators
G	Button (currently unused)	7	Button (currently unused)
H	Switch button to switch between inputs; or to reset to factory defaults.	8	Button used to copy EDID to Transmitter; or to reset to factory defaults.
I	DisplayPort 1.2 input port	9	HDMI 2.0 output port
J	HDMI 2.0 input port	10	10G SFP+ Transceiver for with LC-LC port
K	10G SFP+ Transceiver with LC-LC port	11	1G Ethernet (RJ-45) port
L	1G Ethernet (RJ-45) port	12	USB 2.0 type-A port
M	USB 2.0 Type-B port	13	External power port
N	External power port		
O	Analog stereo audio (3.5 mm stereo mini-jack) female port	14	Analog stereo audio (3.5 mm stereo mini-jack) female port
P	Serial IR remote control out (3.5 mm DC mini-jack) female port	15	Serial IR control out (3.5 mm DC mini-jack) female port
Q	Serial IR remote control in (3.5 mm stereo mini-jack) female port	16	Serial IR control in (3.5 mm stereo mini-jack) female port
R	Serial RS-232 (9Pin DIN) female port	17	Serial RS-232 (9Pin DIN) female port

## Extension Setup

**!** For proper ventilation and to prevent damage to the unit, ensure the wiring or other material does not obstruct the air flow to or from the air vents.

- Power off all equipment and install in a rack or set on a table.
- Connect AV source to the DP IN (I) or HDMI IN (J) port on the TXO using a DisplayPort cable or HDMI cable.
- Optionally, connect a stereo analog audio source to the TXO (O) using an audio cable.
- Connect the TXO and RXO using OM3 multimode 850nm fiber cable with duplex LC-LC connectors on each end by inserting the cable into the SFP+ transceivers on the TXO (K) and RXO (10).
- Connect an AV display to the HDMI OUT (9) port on the RXO using an HDMI cable.
  - i** Use the supplied HDMI Cable Lock to secure the HDMI cables to the TXO and RXO.
- Optionally, to transport IR control commands between units, connect an IR receiver to the IR IN (Q or 16) port on the TXO or RXO near the remote control source; and connect an IR emitter to the IR OUT (P or 15) port on the opposite (far) TXO or RXO that is near the device you want to control.

7. Optionally, make connections from the source USB connection to the USB (M) on the TXO and connect a mouse and/or keyboard to the USB (12) on the RXO.
8. Supply power to the units by connecting the external power supply to the units (N and 13) and to a power source. The power indicator on the TXO (A) and RXO (1) should light up. Green signal indicators (C-E and 3-5, and optionally F and 6 for USB) light when a signal is present and transported between the TXO and RXO.



If the source is not displayed, change the source signal that is transmitted (HDMI or DisplayPort) by pressing the SWITCH (H) button on the TXO.

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# Specifications

Due to continuing research, specifications are subject to change without notice. The latest specifications are available on the Christie website at <http://ChristieTerra>.

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