User Manual

CT-HDBASET-330

330 Feet HDBaseT Extender with Bi-directional PoE

Version: V1.0.0

Important Safety Instructions

Warnings

To reduce the risk of fire, electric shock or product damage:

1. Do not expose apparatus to rain, moisture, dripping, or splashing. Do not place objects filled with liquids, such as vases, on apparatus.

**6.** Clean this apparatus only with dry cloths.

2. Ensure the unit is well ventilated. Do not install or place unit in a bookcase, built-in cabinet or other confined space.

7. Unplug device during lightning storms or when unused for long periods of time.

3. To prevent risk of electric shock or fire hazard due to overheating, do not obstruct ventilation openings of unit with, tablecloths, curtains, or similar items.
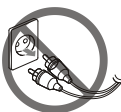
8. Protect the power cord from being walked on or pinched, particularly at plugs.

4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Only use attachments/accessories specified by the manufacturer.

5. Do not place sources of open flames, such as lighted candles, on the unit.

10. Refer all servicing to qualified service personnel.

Introduction

Overview

The CABLETRONIX CT-HDBASET-330 is a cost effective HDBaseT extender solution featuring Power over Ethernet (PoE), and offers distribution of uncompressed 4K@60Hz UHD video, HD audio, Ethernet, RS232, and two-way IR control up to 100m/330ft along a single CAT5E/6 cable.The unit also features HDCP 2.2 compatibility for distribution of encrypted content.

The bi-directional Power over Ethernet technology of the CT-HDBASET-330 ensures only one power adapter is needed at either TX (transmitter) or RX (receiver) side to power both units. LEDs indicate power is being supplied to the units, and indicates an established connection between connected devices.

Features

- Via Cat 6a/7 cables:
    - 4K@60Hz output up to 70m/230ft
    - 1080p up to 100m/330ft.
- Via Cat 5e/6 cables
    - 4K@60Hz output up to 60m/195ft
    - 1080p up to 100m/330ft.
- HDMI 1.4 with 4k@60Hz (Chroma sub-sampling 4:2:0 8-bit only) and HDCP 2.2 compliance.
- Bi-directional PoE - Only one power adapter required at either TX or RX side.
- Bi-directional RS232 and IR pass-through over HDBaseT.
- Automatic EDID management.
- DIP adjustment to update Valens firmware via RS232.
- All connectors on one side for easy cable management.

Note:

Actual signal transmission distance can vary depending on signal resolution, cable quality, graphics card, and/or display used in the system.

Package Contents

- 1 x Transmitter CT-HDBASET-330
- 1 x Receiver CT-HDBASET-330
- 1 x 18V 1A DC Power Supply
- 1 x Power Cable
- 4 x Mounting Ears
- 2 x IR Emitter Cables
- 2 x IR Receiver Cables

Specifications

Transmitter

Technical Specifications	
Video	
Input	1 x HDMI
Input Signal Type	HDMI: HDMI1.4 w/ HDCP 2.2 pass through
Input Resolution Support	4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080p, 1080i, 720p, 576p, 576i, 480p, 480i;
Input Video Level	0.5~1.0 Vp-p
Maximum Pixel Clock	297MHz
Output	1 x HDBT
Output Signal Type	HDBT
Output Resolution Support	4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080p, 1080i, 720p, 576p, 576i, 480p, 480i;
Video Impedance	100ohms

Transmission Distance	Cat 5e/6: 4K: max. 60m/195ft; 1080p: max. 100m/330ft Cat 6a/7: 4K: max. 70m/230ft; 1080p: max. 100m/330ft
Audio	
Support Audio Format	Stereo, LPCM 5.1, LPCM 7.1; Dolby True HD, DTS-HD Master Audio
Control	
Control Method	1x IR TX, 1x IR RX, 1 x RS232, 1 x Ethernet
General	
Operating Temperature	0°C ~ 45°C (32 ~ 113 °F), 10% ~ 90%, non-condensing
Storage Temperature	-20°C ~ 70°C (-4 ~ 158 °F), 10% ~ 90%, non-condensing
Product Weight	250g/8.8oz
Power Supply	DC 18V 1A
Power Consumption	11W Max (Pair)

Case Dimension	175mm x 135mm x 90mm (Pair) 7in x 5.5 in x 3.5in
Product Dimension (L x W x H)	162mm × 74mm × 25mm 6in x 3in x 1in
ESD Protection	±8kV(Air-gap discharge)/ ±4kV(Contact discharge)

Receiver

Technical Specifications	
Video	
Input	1 x HDBT
Input Signal Type	HDBT
Input Resolution Support	4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080p, 1080i, 720p, 576p, 576i, 480p, 480i;
Input Video Level	0.5~1.0 Vp-p
Maximum Pixel Clock	297MHz
Output	1 x HDMI
Output Signal Type	HDMI: HDMI1.4 w/ HDCP 2.2 pass through
Output Resolution Support	4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080p, 1080i, 720p, 576p, 576i, 480p, 480i;
Video Impedance	100ohms
Transmission Distance	Cat 5e/6:

	4K: max. 60m/195ft; 1080p: max. 100m/330ft
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Support Audio	Stereo, LPCM 5.1, LPCM 7.1; Dolby True HD, DTS-HD Master Audio
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Panel

Transmitter

Front Panel

ID	Name	Description
1	Power LED	**On:** Transmitter is powered on. **Off:** Transmitter is powered off.
2	Link LED	**On:** Transmitter and Receiver are linked. **Blinking:** Poor connection **Off:** No link.

Rear Panel
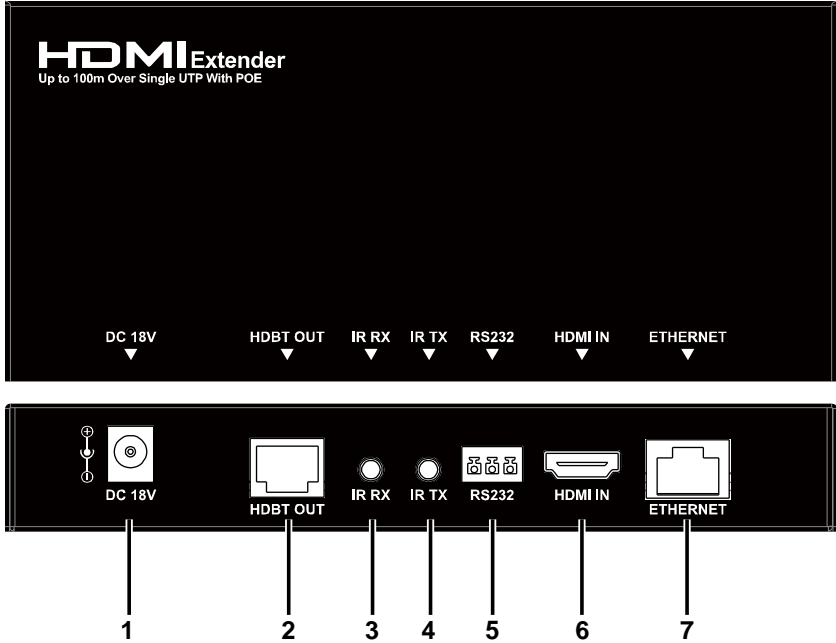
ID	Name	Description
1	Power	Connects to a power supply via power adapter. If Transmitter is connected to a power supply, Receiver will be powered over PoE.
2	HDBT OUT	Connects to the Receiver via a CAT5E/6 cable.
3	IR RX	Connects to an IR receiver cable.
4	IR TX	Connects to an IR emitter cable.
5	RS232	RS232 pass through
6	HDMI IN	Connects to a source device via an HDMI cable.

ID	Name	Description
7	ETHERNET	Connects to an Ethernet device.

Receiver

Front Panel

ID	Name	Description
1	Power LED	**On:** Receiver is powered on. **Off:** Receiver is powered off.
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**Rear Panel**
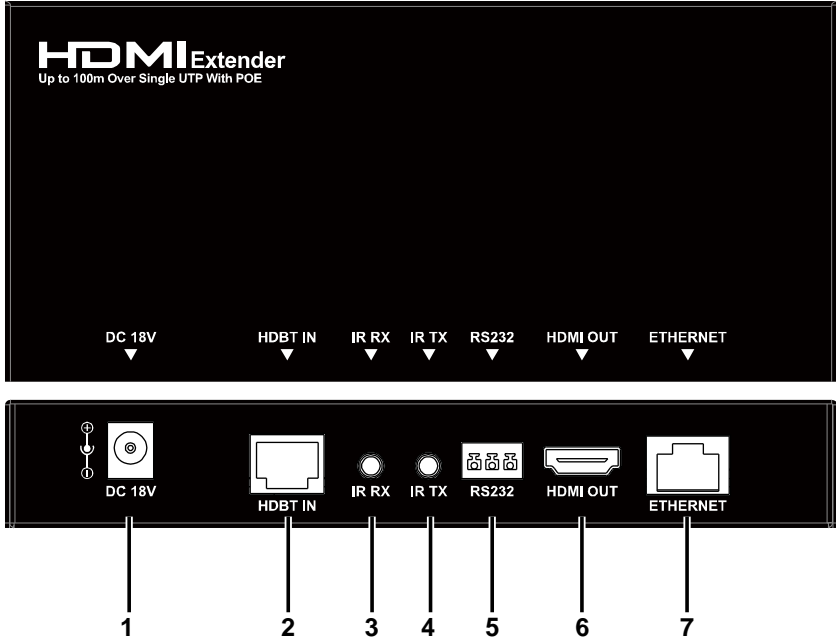
ID	Name	Description
1	Power	Connects to a power supply via power adapter. If Transmitter is connected to a power supply, receiver will be powered over PoE.
2	HDBT IN	Connects to the Transmitter via a CAT5E/6 cable.
3	IR RX	Connects to an IR receiver cable.
4	IR TX	Connects to an IR emitter cable.
5	RS232	RS232 pass through

ID	Name	Description
6	HDMI OUT	Connects to a display via an HDMI cable.
7	ETHERNET	Connects to an Ethernet device.

Hardware Installation

1. Connect an HDMI source (such as a Blu-Ray, gaming console, media server etc.) to Transmitter using high-quality HDMI cables.
2. Connect a high-quality, well terminated Cat5e/6 cable between the HDBT output of the Transmitter and HDBT input of the Receiver.
3. Connect the HDMI display (LED/LCD display or projector) to the HDMI output of the Receiver
4. Connect IR emitters from the IR OUT ports of the Transmitter and Receiver and firmly attach the IR emitter eye directly over the infrared receiving sensors of the source and display device to be controlled. Location of the emitter eye on each device may need to be adjusted later to achieve best IR performance.
5. Insert IR receivers into IR IN ports of the Transmitter and Receiver. Position the IR receiver eye on or near the display or source device, ensuring a clear line of sight to the remote handset used to control it.
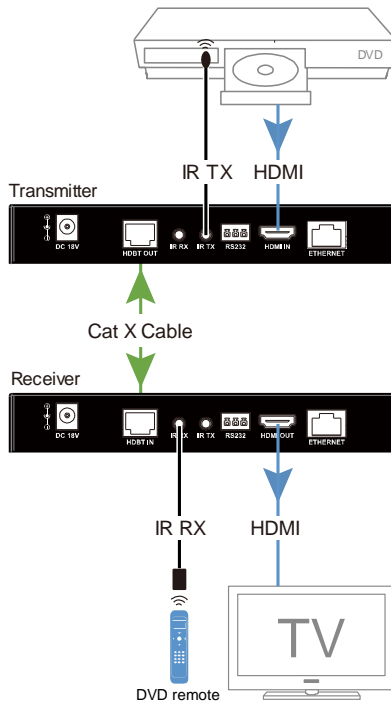6. Connect the power supply to the Transmitter or Receiver and power on all devices.
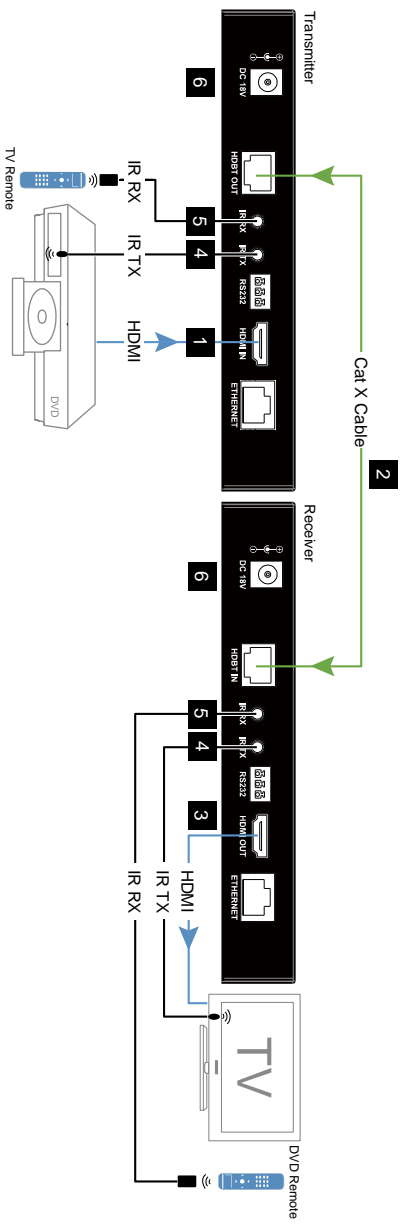
IR Control

IR pass-through function allows you to control the source from the display location or control the display from source location.
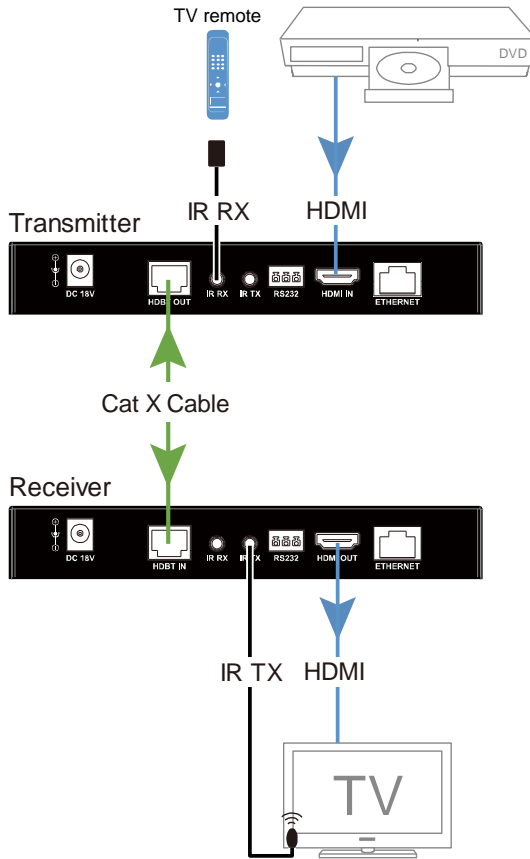
Scenario 1

In this case, you can control the TV on the Transmitter side.

Scenario 2

In this case, you can control the Blu-Ray on the Receiver side.

Troubleshooting

1. Why is the power LED off?

- Check that all the devices are powered on.
- Check that all the cables are qualified and connected properly.

2. Why is the Link LED off or blinking?

- Check that all the devices are powered on.
- Check that all the cables are qualified and connected properly.
- Check that the length of Cat5e/Cat6 is appropriate. For more information, see cable requirements under specification charts.
- Check that Transmitter and Receiver work properly.

3. Why does the display connected to the Receiver show no picture?

- Check that all the devices are powered on.
- Check that all the cables are qualified and connected properly.
- Check that the display works properly, and that source devices have normal signal output.
- Check that your display is switched to the correct source input mode, such as switching to HDMI-1 if HDMI-1 interface is connected to the Receiver via HDMI cable.
- Check that no compatibility issues exist between Receiver and display.

4: Why does the display connected to the Receiver show a snowy picture?

- Check that all the cables are qualified and connected properly.

- Check that Ethernet cables are Cat5e/Cat6 or better cables.

- Check that the input sources have no problems, such as snow, mosaic or a damaged disc. If so, replace them with the normal input sources.

- Check that no compatibility issues exist between Receiver and display. If so, attempt testing with a different model of display.

Glossary

Acronym	Complete Term
DVD	Digital Video Disc
ESD	Electro-static Discharge
HD	High Definition
HDBT	HDBaseT
HDCP	High-bandwidth Digital Content Protection
HDMI	High Definition Multimedia Interface
IR	Infra-red
LCD	Liquid Crystal Display
LED	Light Emitting Diode
PoE	Power over Ethernet

CABLETRONIX 1-Year Limited Warranty

CABLETRONIX. (the "Company") warrants to the Original Purchaser that the item purchased is free from defects in workmanship or material under normal use. This warranty starts on the date of shipment of the hardware to the Original Purchaser.

During the warranty period, the Company agrees to repair or replace, at its sole option, without charge to Original Purchaser, any defective component. To obtain service, the Original Purchaser must return the item to the Company properly packaged for shipping. All defective products must be returned to the Company within thirty (30) days of failure. Products must be returned with a description of the failure and Return Merchandise Authorization (RMA) number supplied by the Company. To receive a RMA number and a return shipping address on where to deliver the hardware, call 610-429-1821. The shipping, and insurance charges incurred in shipping to the Company will be paid by Original Purchaser, and all risk for the hardware shall remain with the Original Purchaser until such time as Company takes receipt of the hardware. Upon receipt, the Company will promptly repair or replace the defective unit, and then return said unit to Original Purchaser, shipping prepaid. The Company may use reconditioned or like-new parts or units, at its sole option, when repairing any hardware. Repaired products shall carry the same amount of outstanding warranty as from original purchase. Any claim under the warranty must include dated proof of purchase or invoice. In any event, the Company's liability for defective hardware is limited to repairing or replacing the hardware.

This warranty is contingent upon proper use of the hardware by Original Purchaser and does not cover: if damage is due to Acts of God (including fire, flood, earthquake, storm, hurricane or other natural disaster), accident, unusual physical, electrical, or electromechanical stress, modifications, neglect, misuse, operation with media not approved by the Company, tampering with or altering of the hardware, riot, war, invasion, act of foreign enemies, hostilities (regardless of whether war is declared), civil war, rebellion, revolution, insurrection, military or usurped power or confiscation, terrorist activities, nationalization, government sanction, blockage, embargo, labor

dispute, strike, lockout or interruption or failure of electricity, air conditioning, or humidity control, internet, network, or telephone service.

The warranties given herein, together with any implied warranties covering the hardware, including any warranties of merchantability or fitness for a particular purpose, are limited in duration to one year from the date of shipment to the Original Purchaser. Jurisdictions vary with regard to the enforceability of warranty limitations, and you should check the laws of your local jurisdiction to find out whether the above limitation applies to you.

The Company shall not be liable to you for loss of data, loss of profits, lost savings, special, incidental, consequential, indirect, or other similar damages arising from breach of warranty, breach of contract, negligence, or other legal action even if the Company or its agent has been advised of the possibility of such damages, or for any claim brought against your by another party. Jurisdictions vary with regard to the enforceability of provisions excluding or limiting liability for incidental or consequential damages. You should check the laws of your local jurisdiction to find out whether the above exclusion applies to you.

This warranty allocates risks of product failure between Original Purchaser and the Company. The Company's hardware pricing reflects this allocation of risk and the limitations of liability contained in this warranty. The warranty set forth above is in lieu of all other express warranties, whether oral or written. The agents, employees, distributors, and dealers of the Company are not authorized to make modification to this warranty, or additional warranties binding on the Company. Accordingly, additional statements such as dealer advertising or presentations, whether oral or written, do not constitute warranties by the Company and should not be relied upon. This warranty gives you specific legal rights. You may also have other rights which vary from one jurisdiction to another.