DMI over CAT Cable Receiver w/ 48V PoH - # 15493

Operation Manual

Introduction

This HDBaseT 2.0 Receiver can receive uncompressed UHD video and audio that has been transmitted over a single Cat.5e/6/7 cable up to 100m. It has the added benefit of extending control and communication signals through the built-in Ethernet, USB, RS-232 and IR ports. Independent external digital and analog audio transmission capability gives users the extra convenience of additional audio connections.

This unit's system supports connecting any standard USB 2.0 host to the Transmitter, enabling the extension of the USB connection to up to 2 USB ports located on the Receiver, allowing it to act like a USB hub. The integrated 48V PoH (Power over HDBaseT) support provides power to the Transmitter (PD) from the Receiver (PSE), eliminating the need for a separate power supply for the Receiver. The ultra-thin mechanical design allows for flexibility in mounting locations, saving space and making your presentation space orderly and tidy.

Applications

• Home theater extension and control
• Lecture hall display and control
• Showroom display and control
• Meeting room presentation and control
• Classroom display and control

Features

• Supports the HDBaseT 2.0 specification over a single Cat.6/7 cable up to 100m/328ft and Cat.5e cable up to 90m/295ft

• HDBaseT 5Play™ convergence: High-Definition (HD) Video and Audio, 100BaseT Ethernet, 48V PoH, and Control (Bi-directional IR/ RS-232 pass-through)

• Transmitter (PD) is powered by 48V PoH from the Receiver (PSE)

• HDMI with 3D & 4K@60Hz (YUV 4:2:0) support, DVI 1.0 compatible

• HDCP 2.2 compliant

• 2×USB 2.0 Type A ports

• Supports pass-through of HD audio formats: LPCM 2.0/5.1/7.1, Bitstream, and HD Bitstream

• Supports optical audio sampling rates up to 48kHz

• Supports external analog and digital audio extension including support for ARC (Audio Return Channel)

• Supports RS-232 baud rates from 110~115200bps

• Ultra-thin mechanical design

System Requirements

• HDMI input source equipment such as media players, video game consoles, PCs or set-top boxes.

• HDMI receiving equipment such as HDTVs, monitors or audio amplifiers.
• The use of "Premium High Speed HDMI" cables is highly recommended.
• High quality Cat.5e/6/7 cables (Cat.6 or better is recommended).

Operation Controls and Functions

Front Panel
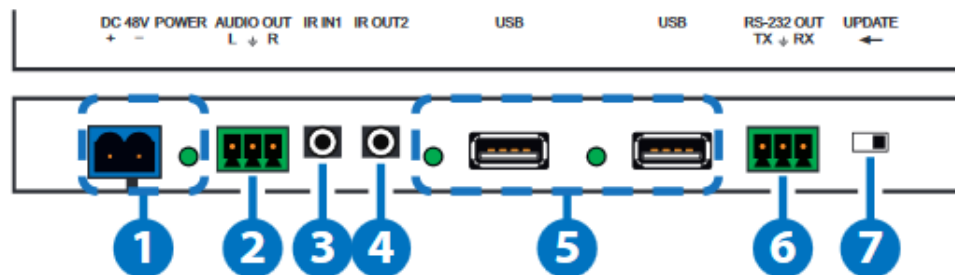
1. DC 48V & POWER LED:
Plug the 48V DC power adapter into this port and connect it to an AC wall outlet for power. The LED will illuminate to indicate the unit is on and receiving power.

2. AUDIO OUT:
Connect to powered speakers or an amplifier for stereo analog audio output.

3. IR IN 1:
Connect to the provided IR Extender to extend the IR control range of remotely located devices. Ensure that the remote being used is within direct line-of-sight of the IR Extender.

4. IR OUT 2:
Connect to the provided IR Blaster to transmit IR signals to devices within direct line-of-sight of the IR Blaster.

5. USB:
Connect to USB peripheral devices such as keyboard, mouse, printer, flash drive, etc. for connection with the USB device connected to the Transmitter.

6. RS-232 OUT:
Connect to the device you wish to control via a 3-pin adapter cable to receive RS-232 commands from the Transmitter.
When sending commands to the Transmitter side, depending on your equipment's pinout, the Tx and Rx pins might need to be reversed.

7. UPDATE:
This is reserved for firmware update use only. During normal operation the dipswitch should be set to the right.

Side Panels
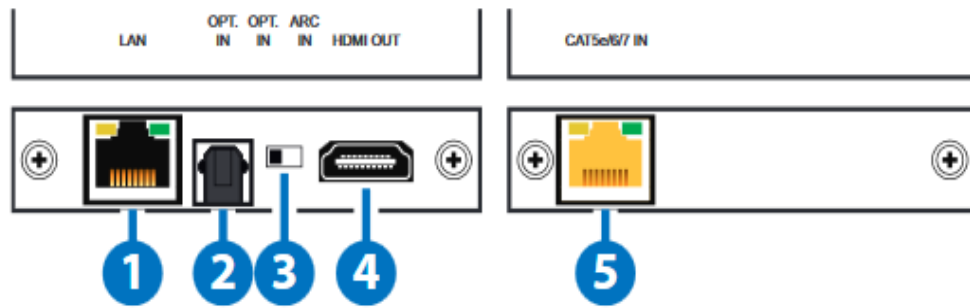
1. LAN:

Connect to an Ethernet supporting device or to your local network as appropriate. The yellow LED will illuminate to indicate a successful LAN connection between the Transmitter and Receiver and will blink to indicate a data transmission. The green LED will illuminate when the connected Ethernet speed is 100Mbit/s.

2. OPT. IN:

Connect to audio source equipment such as a media player or PC to transmit the audio signal to the Transmitter's OPT. OUT port.

3. ARC IN/OPT. IN:

Allows you to switch between sending audio to the Transmitter from the HDMI output's ARC channel or from the Receiver's OPT. IN port.
Note: When ARC is enabled the maximum supported HDMI cable length may vary. It is suggested to use cables under 2 meters long to ensure the best audio quality.

4. HDMI OUT:

Connect to HDMI TVs, monitors or amplifiers for digital video and audio output.

5. CAT5e/6/7 IN:

Connect to the Transmitter unit with a single Cat.5e/6/7 cable for transmission of all data signals. The yellow LED will illuminate to indicate a successful data connection between the Transmitter and Receiver. If the yellow LED blinks irregularly it indicates a data link error. The green LED will illuminate to indicate when PoH is active.

**IR Cable
Pin Assignment**
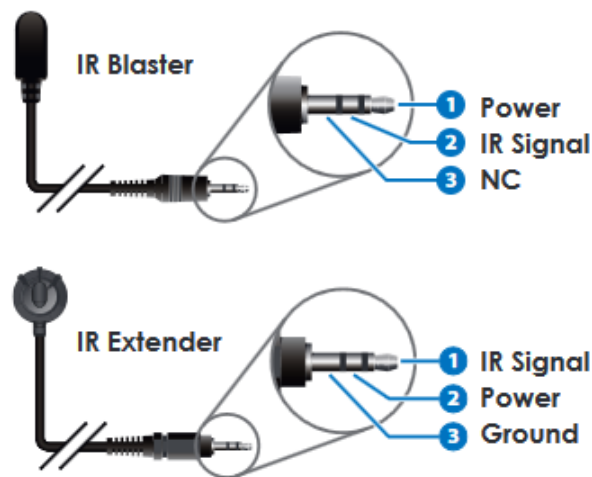
Specifications

Video Bandwidth	340MHz/10.2Gbps
Input Ports	1×Cat.5e/6/7, 1×Optical Audio (TOSLINK), 1×IR Extender (3.5mm)
Output Ports	1×HDMI, 2×USB 2.0 (Type A), 1×Stereo Audio (Terminal Block), 1×LAN (RJ45), 1×IR Blaster (3.5mm),1×RS-232 (Terminal Block)
Supported Resolutions	480i@60Hz - 4K@60Hz (4:2:0, 8-bit) VGA@60Hz - WUXGA@60Hz (RB)
HDMI Cable Length	10m (1080p@60Hz, 12-bit) 5m (4K@60Hz, 4:2:0, 8-bit)
Cat.5e/6 Cable Length	100m (1080p@60Hz, 12-bit) 90m (4K@60Hz, 4:2:0, 8-bit)
Cat.6a/7 Cable Length	100m (1080p@60Hz, 12-bit) 100m (4K@60Hz, 4:2:0, 8-bit)
IR Frequency	30 - 50kHz (30 - 60kHz under ideal conditions)
Baud Rate	Up to 115200bps
Power Supply	48V/0.83A DC (US/EU standards, CE/FCC/ UL certified)
ESD Protection	Human Body Model: ±12kV (Air Discharge) ±8kV (Contact Discharge)
Dimensions	163mm×16mm×79.2mm (W×H×D)
Weight	352g
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	0℃ - 40℃/32℉ - 104℉
Storage Temperature	−20℃ - 60℃/−4℉ - 140℉
Relative Humidity	20 - 90% RH (Non-condensing)
Power Consumption	16.5 W

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Connection Diagram

IR In

DVD/Blu-ray Player

IR Out

3m 7m 3m

60°

1.5m

60°

AV Receiver

Analog
Stereo
Input

HDMI
Input

LAN

Internet
Connected
Router

Optical
Audio
Output
(OAR)

USB

RS-232

RS-232 Equipped
PC/Laptop

TX

Power Supply

Analog
Stereo
Output

CAT5e/6/7
Cable

Powered Speakers

RX

RS-232 Controlled
Device

USB

60° 40°

1.5m

3m 7m 3m

IR Out

RS-232

HDMI Output, LAN
Connection & Optical
Audio Input (OAR)

IR In

USB Peripherals

Smart TV with
Optical Audio Output

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