

**HDBaset HDMI over CAT Cable Transmitter
with ARC and 48V PoE - # 15386**



Operation Manual

Introduction

This HDMI and Audio over Single CAT5e/6/7 Transmitter and Receiver set can send uncompressed audio/video along with controls, IP and USB data over a single run of CAT5e/6/7 cable up to 100m. It has the added benefit of control through the built-in RS-232 and IR ports. With LAN serving connection and external digital and analog audio capability that gives users the convenience of additional audio connection. This system also allows the connection of any USB host, enabling a USB connection to up to 2 USB ports, giving the Receiver the ability to act like a USB hub. The 48V PoE design can power the Receiver (PD) from the Transmitter (PSE), eliminating the need for a separate power supply for the Receiver. Also, the ultra-thin mechanical designs allow flexibility mounting position saving more space and make presentation orderly and tidy.

Applications

- 48V PoE from Transmitter (PSE) to Receiver (PD)
- Household entertainment extending and control
- Lecture room display and control
- Showroom display and control
- Meeting room presentation and control
- Classroom display and control

Features

- Supports HDBaseT 2.0 specification supporting over a single CAT6/7 cable up to 100m/328ft and CAT5e cable up to 90m/295ft
- Receiver features 2 USB 2.0 ports
- HDMI (with 3D & 4K2K 60_YUV420 support), HDCP 2.2 and DVI compatible
- HDBaseT 5Play™ convergence: High-Definition (HD) Video and Audio, 100BaseT Ethernet, PoE and Control (Bidirectional IR/RS-232 pass-through)
- Supports pass-through of HD audio formats: LPCM 2/5.1/7.1CH, Dolby Digital 2/5.1CH, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos and DTS-HD Master Audio
- Supports optical sampling rate up to 48kHz
- Supports Ethernet network connection
- Supports external analog and digital audio transmission
- Supports RS-232 baud rate from 110~115200bps

System

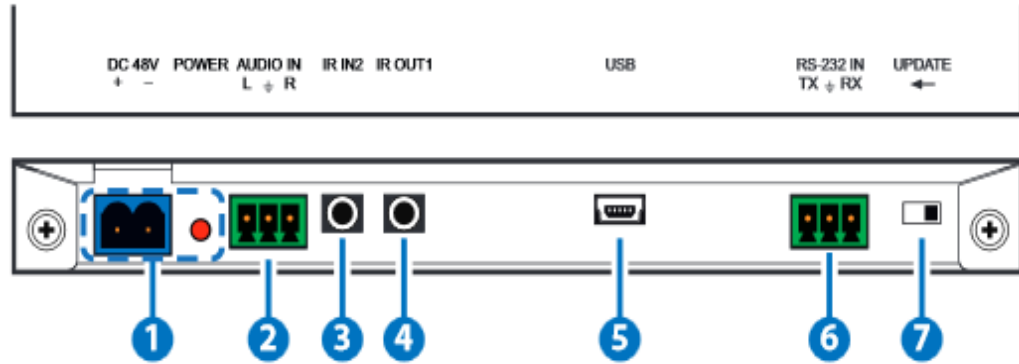
Requirements

Input source equipment such as DVD/Blu-ray player, host PC/Laptop and HDMI equipped output display (TV or monitor) with amplifier or active speakers.



Operation Controls and Functions

Transmitter Front Panel



1. DC 48V and POWER LED:

Plug the 48V DC power supply into the unit and connect the adaptor to an AC outlet and the LED will illuminate.

2. AUDIO IN L/R:

Connect with audio source equipment such as PC or CD player for audio signal sending to Receiver's AUDIO OUT L/R.

3. IR IN 2:

Connect to the supplied IR Extender cable for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.

4. IR OUT 1:

Connect to the supplied IR Blaster Cable for IR signal transmission. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.

5. USB:

Connect from PC or Laptop for data transmit to or control from the Receiver's USB slots.

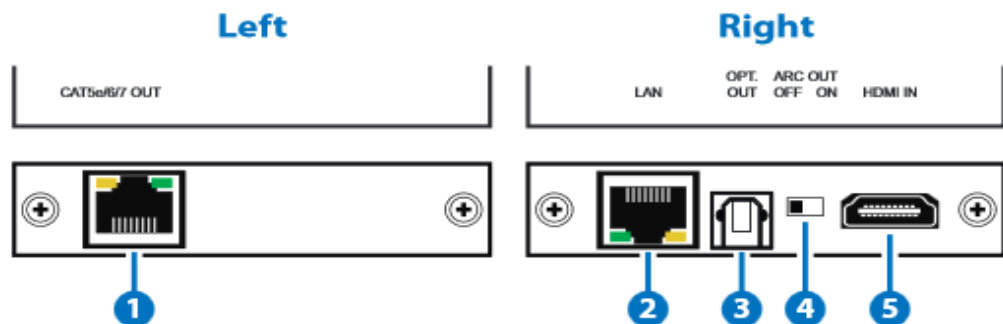
6. RS-232 IN TX/RX:

Connect to a PC or Laptop with 3-pin Relay cable for the transmission of RS-232 commands. For receiving command from Receiver side, the TX and Rx pin must be reversed.

7. UPDATE:

This is reserved for firmware update use only. Switch this deep switch to left for firmware update use, under normal operation, leave the switch on right. Update procedure may be done from the same USB port for both Transmitter and Receiver.

Transmitter Left & Right Panels



1. CAT5e/6/7 OUT:

Connect to the Receiver unit with a single CAT5e/6/7 cable for transmission of all data signals. Under proper connection the green LED will illuminate to indicate PoE activated.

The yellow LED will illuminate to indicate successful connection between Transmitter and Receiver, when it blink irregularly it represent the link error or when not illuminate it means no link with Reciever.

2. LAN:

Connect to an internet or network connection. The yellow LED will illuminate to represent the link with Receiver is steady, when it blink irregularly it represent the link error or when not illuminate it means no link with Receiver. The green LED will illuminate to represent the Ethernet speed is with 100Mbit/s.

3. OPT. OUT:

Connect to speaker with coaxial input for audio signal output from Receiver's OPTICAL IN.

4. ARC OUT OFF/ON SWITCH:

Switch this dip switch to allows ARC (Audio Return Channel) function to be activate or not. Switch to OFF to disable ARC function. Switch to ON allows Receiver's HDMI output audio to be routed back and output to both HDMI IN and Optical OUT on the transmitter side.

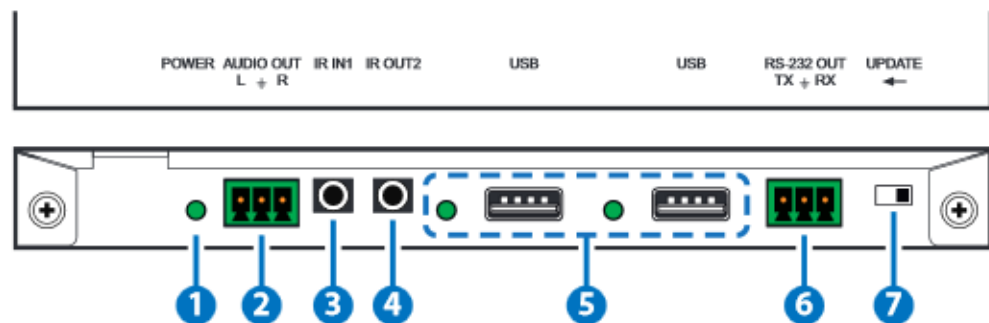
Note:

When ARC switch to ON, depending on the connected devices of the HDMI OUT & Optical in, the ARC input/output transmission distance may be varied. It is suggested to use cable within 2 meters long to ensure the best audio quality.

5. HDMI IN:

Connect to HDMI source equipment such as a DVD or Blu-ray player

Receiver Front Panel



1. POWER LED:

This LED will illuminate when device is connected with USB power supply.

2. AUDIO OUT L/R:

Connect to speaker with RCA input for audio signal output.

3. IR IN 1:

Connect to the supplied IR Extender cable for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.

4. IR OUT 2:

Connect to the supplied IR Blaster cable for IR signal transmission. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.

5. USB:

Connect to USB peripheral devices such as printer, keyboard, flash driver or ...etc. for data receiving or sending back to Transmitter.

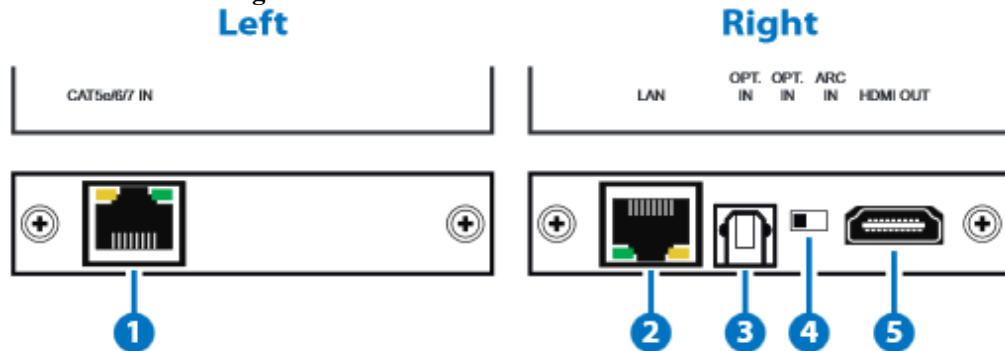
6. RS-232 OUT TX/RX:

Connect to the device that is to be controlled via 3-pin Relay cable by RS-232 commands. For sending command to Transmitter side, the TX and Rx pin must be reversed.

7. UPDATE:

This is reserved for firmware update use only. Switch this deep switch to left for firmware update use, under normal operation, leave the switch on right. Update procedure may be done from the same USB port for both Transmitter and Receiver

Receiver Left and Right Panels



1. CAT5e/6/7 IN:

Connect to the Transmitter unit with a single CAT5e/6/7 cable for transmission of all data signals. The yellow LED will illuminate to represent the link from Receiver is steady, when it blink irregularly it represent the link error or when not illuminate it means no link with Receiver. The green LED will illuminate to represent the PoE function active.

2. LAN:

Connect to a PC or Laptop to the internet or network connection. The yellow LED will illuminate to represent the link with Transmitter is steady, when it blink irregularly it represent the link error or when not illuminate it means no link with Receiver. The green LED will illuminate to represent the Ethernet speed is with 100Mbit/s.

3. OPT. IN:

Connect to audio source equipment such as DVD or Blu-ray player for audio signal sending to Transmitter's OPTICAL OUT.

4. ARC IN or OPT. IN SWITCH:

Switch this switch to select ARC channel.

Switch to ARC in to use HDMI OUT's audio or switch to Optical IN to use Optical 1's audio.

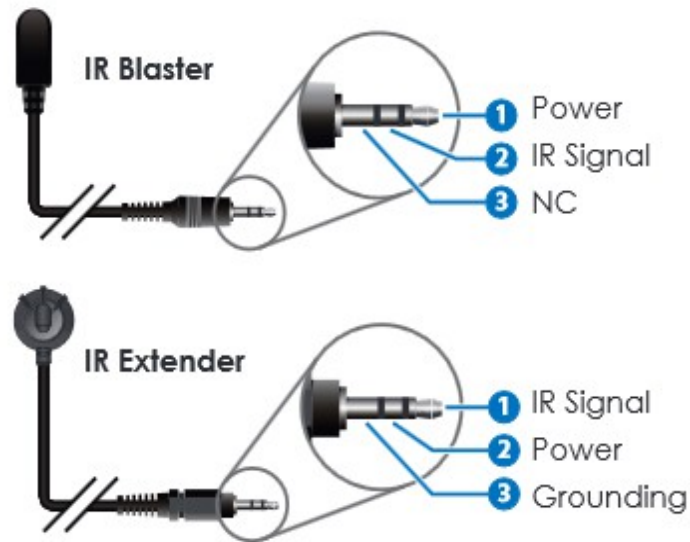
Note:

Depending on the connected devices of the HDMI OUT & Optical in, the ARC input/output transmission distance may be varied. It is suggested to use cable within 2 meters long to ensure the best audio quality.

5. HDMI OUT:

Connect to a HDMI equipped TV/monitor for display of the HDMI input source signal.

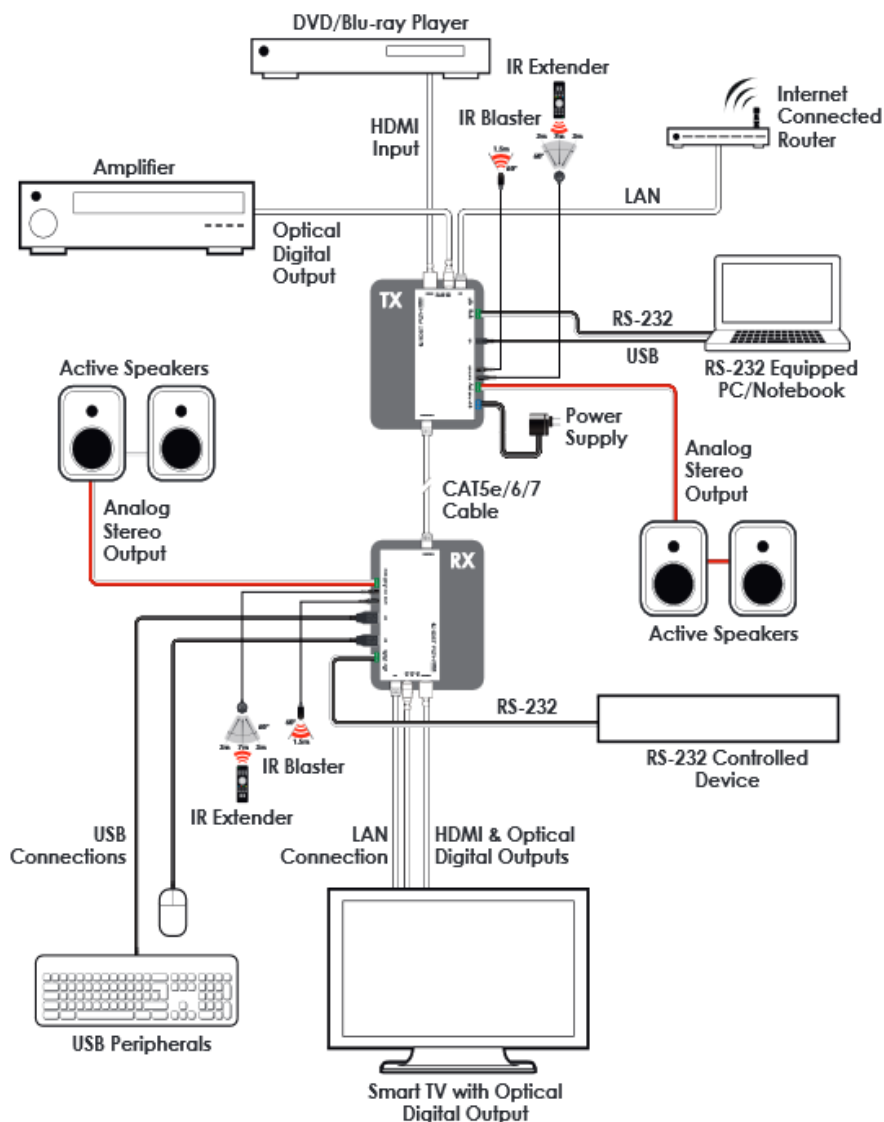
IR Cable Pin Assignment



Specifications

Video Bandwidth	340MHz/10.2Gbps
Transmitter	
Input Ports	1×HDMI, 1×USB, 1×L/R (Terminal Block), 1×LAN, 1×IR Extender, 1×RS-232 (Terminal Block)
Output Ports	1×CAT5e/6/7, 1×Optical, 1×IR Blaster
Receiver	
Input Ports	1×CAT5e/6/7, 1×Optical, 1×IR Extender
Output Ports	1×HDMI, 2×USB, 1×L/R (Terminal Block), 1×LAN, 1×IR Blaster, 1×RS-232 (Terminal Block)
IR Frequency	30~50kHz
Baud Rate	Up to 115200bps
Power Supply	48V/0.83A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human Body model: ± 8kV (air-gap discharge) ± 4kV (contact discharge)
Dimensions	80mm(W)×180mm(D)×16mm(H)
Weight	354g/TX, 356g/RX
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	0 °C~40 °C/32 °F~104 °F
Storage temperature	-20 °C~60 °C/-4 °F~140 °F
Relative Humidity	20~90% RH (no condensation)
Power Consumption	16.72W

Connection Diagram



CAT5e/6/7 Cable Specifications

Cable Type	Range	Pixel Clock Rate	Video Data Rate	Supported Video
CAT5e/6/7	100 m	≤ 225 MHz	≤ 5.3 Gbps (HD Video)	Up to 1080p, 60 Hz, 36 bits, 3D (data rates lower than 5.3 Gbps or below 225 MHz TMDS clock).
	90m/CAT5e 100 m/ CAT6/7	> 225 MHz	> 5.3 Gbps (Ultra HD Video)	4K2K, 30Hz video formats