



## PU-1H3HBTE

1 HDMI to 3 HDBaseT™ Splitter (100m) including additional HDMI output



Operation Manual

## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

## REVISION HISTORY

VERSION NO.	DATE DD/MM/YY	SUMMARY OF CHANGE
RDV1	27/02/13	Preliminary Release
RDV2	13/06/13	Package Contents
RDV3	17/06/13	Dimension
RDV4	20/06/13	Add IR Cable Pin Define
RDV5	01/07/13	IR Power

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## **1. INTRODUCTION**

The HDMI over HDMI and CAT5e/6/7 Transmitter can support resolutions up to 1080p Full HD, 4Kx2K timing, 3D and multi-channel digital audio formats to one HDTV and three CAT5e/6/7 outputs. The HDMI can be connected to HDMI display for instant nearby display and the CAT5e/6/7 can be connected to CAT5e/6/7 to HDMI Receivers for distance up to 100 meters. Further, a total of 100Mbps Ethernet transmission rate allows all connected device to share the Ethernet service and the PoE function free the power shortage issue from the Receiver end.

## **2. APPLICATIONS**

- Household entertainment sharing and control
- Lecture room display and control
- Showroom display and control
- Meeting room presentation and control
- Classroom display and control

## **3. PACKAGE CONTENTS**

- HDMI over HDMI & CAT5e/6/7 with PoE and Ethernet Transmitter
- IR Receiver x 1
- IR Blaster x 1
- 24V DC Power Adaptor
- Power Cord
- Operation Manual

## **4. SYSTEM REQUIREMENTS**

- Source equipment with HDMI output connector
- Display TV/Monitor with HDMI input connector
- HDMI over CAT5e/6/7 Receivers with industry CAT5e/6/7 cables

## 5. FEATURES

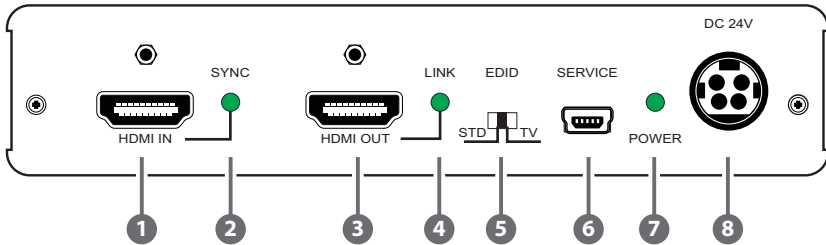
- HDMI with 3D & 4Kx2K supported, HDCP and DVI compliant
- The HDMI and CAT5e/6/7 outputs are playing the same source simultaneously
- Supports data rate from 250Mbps up to 3Gbps
- Supports wide range of PC resolutions from VGA to WUXGA and HDTV resolutions up to 4Kx2K (3840x2160@30Hz and 4096x2160@24Hz)
- Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio transmission (32-192kHz sample rate)
- Supports distances up to 100 meters through CAT5e/6/7 cables
- Supports Ethernet transmission rate up to 100Mbps
- Can select Standard or TV EDID
- Supports USB service port
- The 3D signal display follow by display TV's EDID
- Supports PoE with capable Receiver units
- Supports Bi-directional IR control

### **Note:**

1. *This system was tested with CAT6/23AWG cables, results may vary with cables of a different specification.*
2. *The PoE function is designed for powering compatible Receiver units only non-PoE Receivers will need their own power supply. Receivers of another brand may not be compatible.*
3. *Displaying HDMI 4Kx2K resolution require the standard 4Kx2K HDMI cable and display in order for proper image displaying.*

## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel



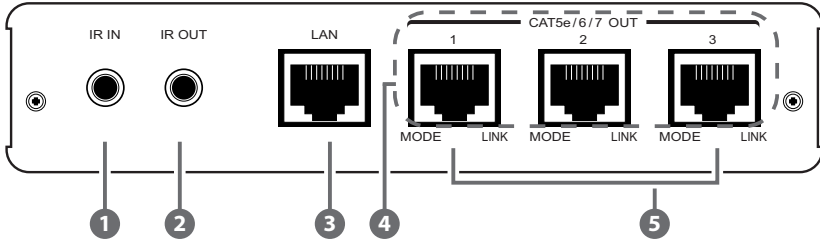
- 1 HDMI IN:** Connect with source equipment such as DVD/Blu-ray or PS3 player.
- 2 SYNC:** This LED will illuminate when the HDMI input port connected to the source.
- 3 HDMI OUT:** Connect to HDMI display for instant image display or cascade with another family type Transmitter.
- 4 HDMI LINK:** This LED will illuminate when HDMI output is connected to TV or display monitor.
- 5 EDID STD/TV:** The default factory setting is on TV, leave as it is when the display is properly. The unit will detect the 1st CAT5e/6/7 output's EDID when it obtain a 4Kx2K EDID and send out the signal accordingly to other output ports. If the 1st CAT5e/6/7 output is without a 4Kx2K's EDID the unit will detect all output's EDID and send out the signal that all outputs can accept.

This device obtain the last memory function therefore, the device will use the last output port 1's EDID when output port 1 is not connected to a display after power cycling or switch in between the EDID setting.

Switch to STD to use build-in EDID if the display has problem. STD EDID's video at 1080p@60Hz and audio at LPCM 2CH.

- 6 SERVICE:** This slot is reserved for factory service only.
- 7 POWER LED:** Once the power supply is connected the LED will illuminate
- 8 DC 24V:** Plug the 24V DC power supply into the unit and connect the adaptor to an AC outlet.

## 6.2 Rear Panel

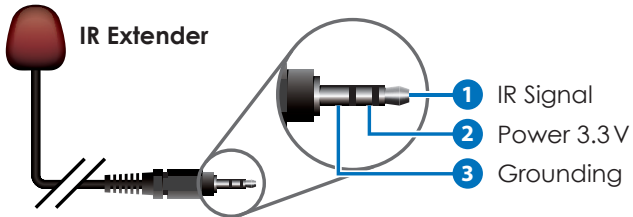
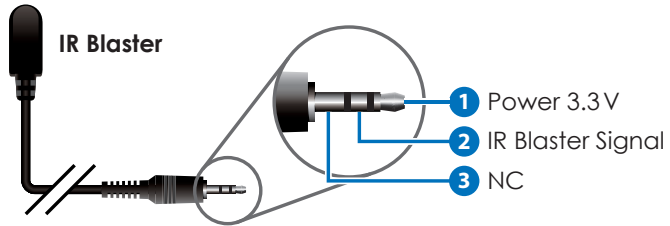


- 1 IR IN:** Connect with IR Extender to receive IR signal from Transmitter side and blast out at Receiver side. Ensure that remote controller being used is within the direct line-of-sight of the IR Extender.
- 2 IR OUT:** Connect with IR Blaster to blast out the IR signal received from the Receiver side. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.
- 3 LAN:** Connect to intra-net or internet service system for a total sharing rate of 100Mbps within the link of Transmitter.

**Warning: DO NOT connect this slot with any of the CAT5e/6/7 port, doing so may trigger a power shot down and ruin the device.**

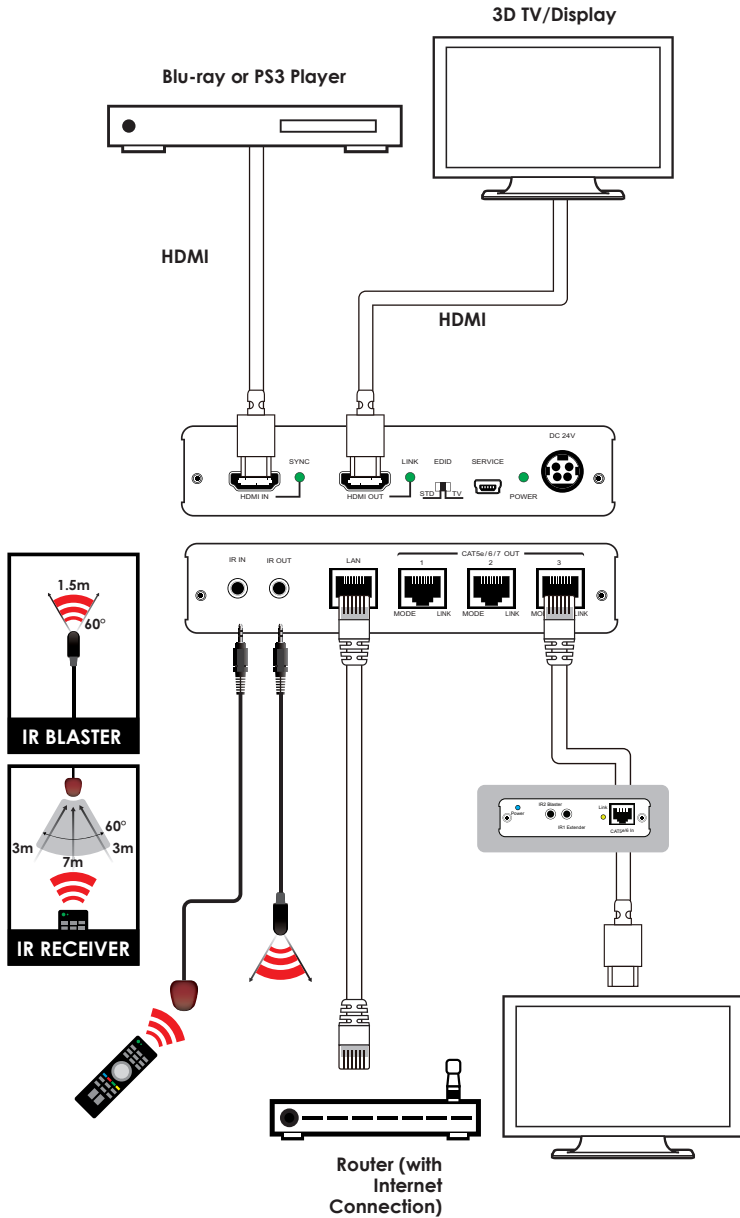
- 4 CAT5e/6/7 OUT 1~3:** Connect these ports to CAT5e/6/7 to HDMI Receivers (with or without PoE function) with CAT5e/6/7 cable to extend the signal up to 100m.
- 5 MODE & LINK 1~3:** The Mode LED will illuminate when the device is connected with power. The link LED will illuminate when CAT5e/6/7 output(s) has been connected to the Receiver(s) and the Receiver(s) has connected with display that shows image on screen.

## 6.3 IR Cable Pin Assignment





# 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

<b>Video Bandwidth</b>	300Mbps/10.2Gbps
<b>Input ports</b>	1 x HDMI, 1 x IR IN, 1 x LAN*, 1 x USB (Service only)
<b>Output ports</b>	1 x HDMI, 3 x CAT5e/6/7 1 x IR OUT,
<b>Resolution</b>	Up to 4Kx2K (3840x2160@30Hz/4096x2160@24Hz)
<b>HDMI Input Cable Distance</b>	N/A
<b>CAT5e/6/7 Output Cable Distance</b>	Up to 100m
<b>IR Frequency</b>	30~50kHz
<b>Power Supply</b>	24V / 2.7A DC (US/EU standards, CE/FCC/ UL certified)
<b>Dimensions</b>	145 mm(W) x 199 mm(D) x 30 mm(H)
<b>Weight</b>	590 g
<b>Chassis Material</b>	Metal
<b>Silkscreen Color</b>	Black
<b>ESD Protection</b>	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
<b>Operating Temperature</b>	0°C ~ 40°C
<b>Storage Temperature</b>	-20°C ~ 60°C / -4 °F ~ 140 °F
<b>Relative Humidity</b>	20 ~ 90% RH (non-condensing)
<b>Power Consumption</b>	36W

## 8.1 CAT5e/6/7 Cable Specification

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).
	70 m	>225 MHz	> 5.3 Gbps (Ultra HD Video)	4K2K, 30Hz video formats

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
4Kx2K	3840x2160 / 4096x2160
DTS	Digital Theater System
EDID	Extended Display Identification Data
HDCP	High-bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
HDTV	High-Definition Television

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