



PU-507TX-1H

5-Play™ HDBaseT™ Transmitter with simultaneous HDMI output (inc. PoE & single LAN, up to 100m)

OPERATION MANUAL

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Version 1.1 August 2011

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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	SUMMARY OF CHANGE
v1.00	22/10/2013	First release

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1. INTRODUCTION

The PU-507TX-1H Transmitter allows uncompressed HDMI signals and IP data to be transmitted over a Single CAT5e/6/7 cable. This solution has a simultaneous HDMI output enabling a local HDMI display to be connected. This device also features full 5-Play convergence allowing the distribution of Video, Audio, LAN serving, Power over Ethernet (PoE), RS-232 and 2-way IR control functionality over the same CAT5e/6/7 cable. These combined HDMI and control signals can be transmitted up to lengths of 100 metres.

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

- /// 1xPU-507TX-1H Transmitter
- /// 1xIR Blaster
- /// 1x3.5mm Phone Jack to RS-232 Cable
- /// 1x24V DC Power Adaptor
- /// 1xPower 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 standard CAT5e/6/7 cables

5. FEATURES

- /// Supports all v1.4 HDMI resolutions plus 4k.
- /// Supports uncompressed video/audio up to 10.2Gbps
- /// Common supported resolutions: HDTV: 480p, 576p, 720p, 1080i, 1080p, 1080p24, 4K; PC: VGA, SVGA, XGA, WXGA, SXGA, UXGA, WUXGA.
- /// HDMI, HDCP, & DVI compliant
- /// Supports HDCP repeating and CEC functions
- /// Uncompressed data transfer over single CAT cable (100m - CAT6/7; 80m - CAT5e)
- /// Audio support up to 7.1CH & Dolby TrueHD, DTS-HD
- /// 5-Play™ convergence: HDMI, LAN, POE & Control (IR & RS232)
- /// Supports 3D signals

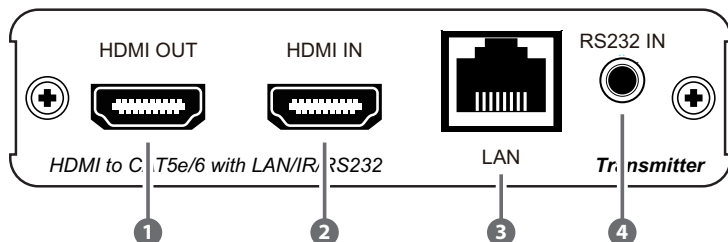
Note:

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.*
4. *This device obtain the last memory function therefore, the device will use last CAT5e/6 output port's EDID when CAT5e/6 output is not connected to a display after power cycling.*

The unit will detect CAT5e/6 output's EDID when it obtain a 4Kx2K EDID and send out the signal accordingly to other output ports. If the CAT5e/6 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.

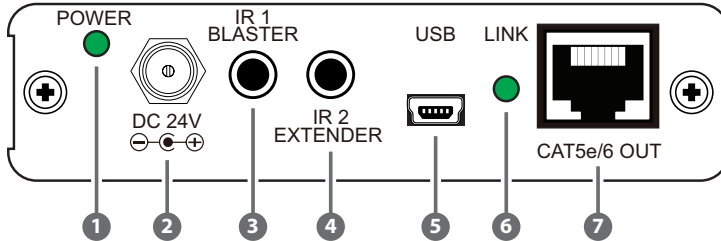
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



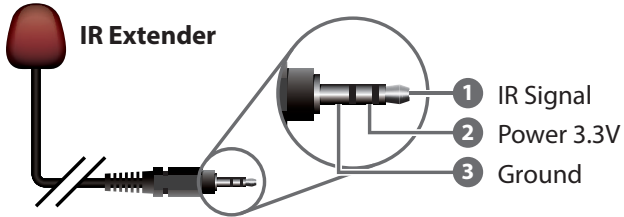
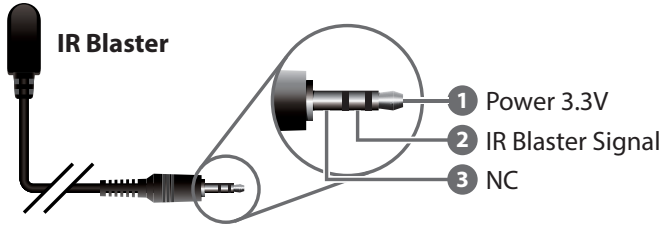
- ① **HDMI OUT:** Connect to HDMI display for instant image display or cascade with another family type Transmitter.
- ② **HDMI IN:** Connect with source equipment such as DVD/Blu-ray or PS3 player.
- ③ **LAN:** Connect to intra-net or internet service system for a total sharing rate of 100Mbps within the link of Transmitter. Warning: DO NOT connect this slot with any of the CAT5e/6/7 port, doing so may trigger a power shut down and ruin the device.
- ④ **RS-232 IN:** Connect to a PC/Laptop or RS-232 enabled device (with supplied 3.5mm Phone Jack to D-Sub 9-Pin adaptor) to transmit of RS-232 commands.

6.2 Rear Panel



- 1 POWER LED:** Once the power supply is connected the LED will illuminate.
- 2 DC 24V:** Plug the 24V DC power supply into the unit and connect the adaptor to an AC outlet.
- 3 IR 1 BLASTER:** Connect with the supplied 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.
- 4 IR 2 EXTENDER:** Connect with the supplied 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.
- 5 USB:** This slot is reserved for firmware update only.
- 6 LINK:** This LED will illuminate when CAT5e/6/7 output have been connected to the Receiver and the Receiver have connected with display that shows image on screen.
- 7 CAT5e/6/7 OUT:** Connect this port to CAT5e/6/7 to HDMI Receiver with CAT5e/6/7 cable to extend the signal up to 100m.

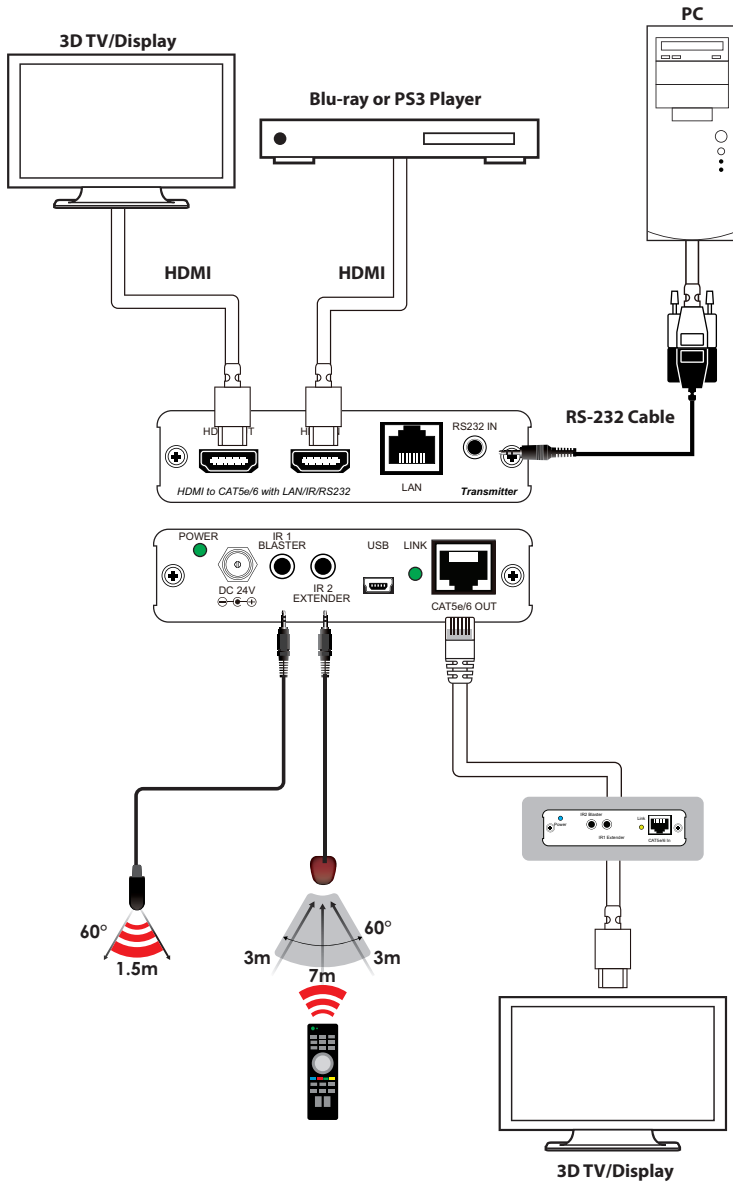
6.3 IR Cable Pin Assignment



6.4 D-Sub 9 Pin Definitions

Pin	Define TX / R
1	N/C
2	TxD/RxD
3	RxD/TxD
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

7. CONNECTION DIAGRAM



8. SPECIFICATIONS

Video Bandwidth	300Mbps/10.2Gbps
Input ports	1 x HDMI, 1 x 3.5mm Phone Jack for RS-232, 1 x IR IN, 1 x LAN*, 1 x USB (Service only)
Output ports	1 x HDMI, 1 x CAT5e/6/7 1 x IR OUT,
Resolution	Up to 4Kx2K (3840x2160@30Hz/4096x2160@24Hz)
HDMI Input Cable Dis- tance	N/A
CAT5e/6/7 Output Cable Distance	Up to 100m
IR Frequency	30~50kHz
Power Supply	24V / 1.25A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102 mm(W) x 109 mm(D) x 25 mm(H)
Weight	252g
Chassis Material	Metal
Colour	Black
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Operating Temperature	0°C ~ 40°C
Storage Temperature	-20°C ~ 60°C / -4 °F ~ 140 °F
Relative Humidity	20 ~ 90% RH (non-condensing)
Power Consumption	18.7W

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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