



PU-607BDWP-TX

**HDMI over Single CAT5e/6/7 HDBaseT™ - Bi-Directional PoC
Wallplate Transmitter (Full 5Play™ & Single LAN up to 100m)**

/// OPERATION MANUAL

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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	13/02/2014	First release
v1.01	31/03/2014	Corrected Contents List
v1.02	23/08/2019	Updated Specifications

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1. INTRODUCTION






The PU-607BDWP-TX Wallplate Transmitter allows uncompressed HDMI signals and IP data to be transmitted over a Single CAT5e/6/7 cable. This solution has the added features of RS-232 and 2-way IR control functionality over the same CAT5e/6/7 cable up to 100m/328ft at 1080p and 70m/229ft at 4K.

This Transmitter is designed to be used with the PU-607BD-RX and PU-607BDWP-RX Receivers only, which enables Bi-Directional Power over Cable (PoC) functionality.

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

-  1xHDMI over Single CAT5e/CAT6 Transmitter
-  1xIR Blaster
-  1xIR Receiver
-  1x24V DC Power Adaptor
-  Operation Manual

4. SYSTEM REQUIREMENTS

Input HDMI source equipment such as DVD/Blu-ray player and HDMI equipped output display (TV or monitor) with HDMI input jack.

5. FEATURES

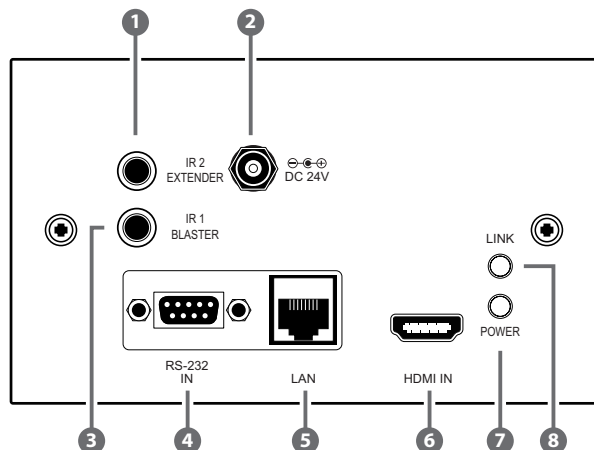
- /// HDMI 1.x and DVI 1.0 compliant
- /// HDCP compliant
- /// Supports HDMI 3D and 4K x 2K features
- /// Supports HDCP repeater and CEC bypass
- /// Supports distance up to 100m/328ft at 1080p and 70m/229ft at 4K through CAT5e/6/7 cable
- /// HDMI input resolutions up to 4K@60Hz (YUV 4:2:0, 8-bit) or 4K@30Hz (YUV 4:4:4, 8-bit)
- /// Supports pass-through of audio formats including LPCM 2.0/5.1/7.1, and Bitstream over HDMI
- /// 5Play™ convergence: HDMI, bi-directional PoC, (bi-directional IR & RS232) & LAN
- /// Wall-plate design and installation Friendly

Note

1. *This system was tested with CAT6/23AWG and CAT5e/24AWG cable, so if using cables of another type, results may vary.*
2. *For playback of 4K2K HDMI source signals, a 4K2K capable display and High Speed HDMI cables are required.*
3. *Only compatible with PU-607BD-TX & PU-607BDWP-TX Receivers*

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Transmitter

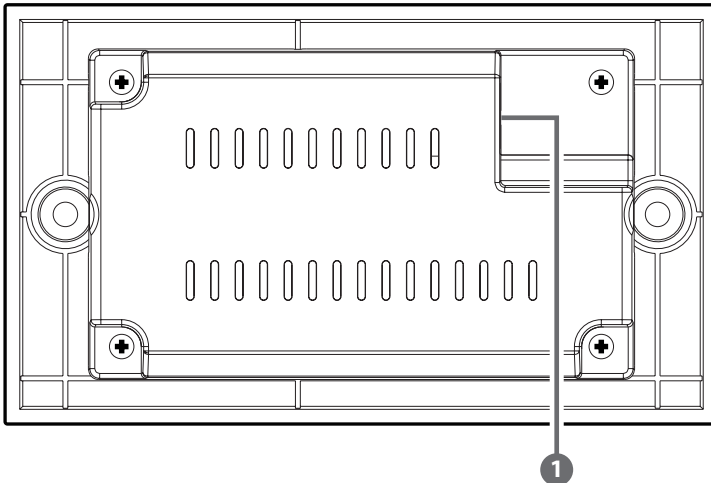


- 1 IR 2 EXTENDER:** Connect to the supplied IR Extender cables for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.
- 2 DC 24V:** Connect the power adaptor included in the package and then connect to AC power to activate the device.
- 3 IR 1 BLASTER:** 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.
- 4 RS-232 IN:** Connect to a PC or Laptop with D-Sub 9 pin male cable for the transmission of RS-232 commands.
- 5 LAN:** Connect to an internet or network connection.

When the Transmitter or any compatible LAN equipped Receivers are connected to a network, this allows the network access (including internet access if available) to be shared between the Transmitter and all connected Receivers. Connect any Ethernet equipped device e.g. a Smart TV or games console to the LAN port of a receiver for that device to share the network/internet access.

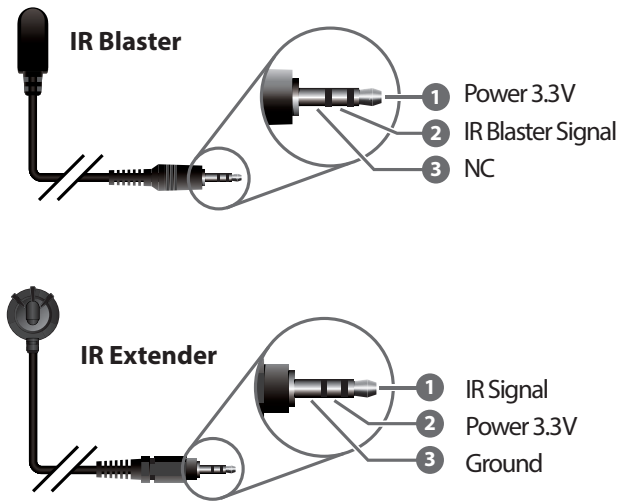
- ⑥ **HDMI IN:** This slot is to connect with HDMI source equipment such as DVD/Blu-ray player with HDMI source signal.
- ⑦ **Power LED:** This LED will illuminate when the device is connected to a power supply.
- ⑧ **LINK LED:** This LED will illuminate when both the input source and output display signals are connected through the CAT cable. When it blinks regularly it indicates the source is NOT sending a signal to the Transmitter but the Transmitter and Receiver are linked and if it blinks irregularly it indicates an error has occurred.

6.2 Rear Panel



- ① **CAT OUT:** Connect to the Receiver unit with a single CAT5e/6/7 cable for transmission of all data signals.

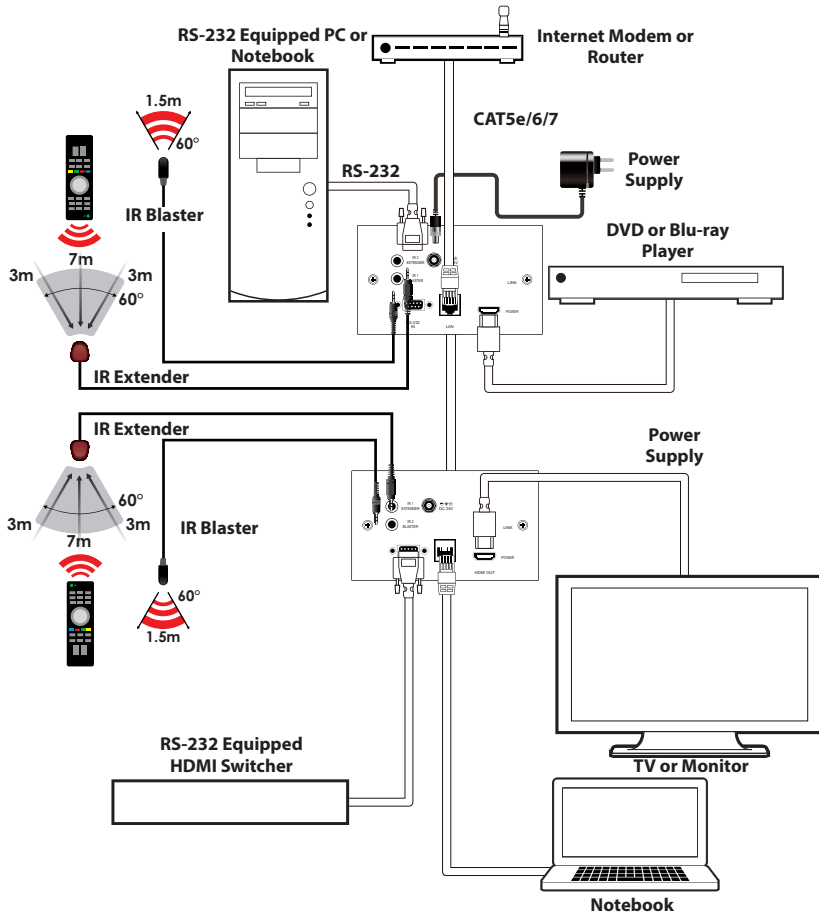
6.3 IR Cable Pin Assignment



6.4. D-Sub 9-Pin Definitions

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

7. CONNECTION DIAGRAMS



8. SPECIFICATIONS

8.1 Technical Specifications

Video Bandwidth	340MHz/10.2Gbps
Input Ports	1×HDMI, 1×IR Extender, 1xLAN, 1×RS-232
Output Ports	1×CAT5e/6, 1×IR Blaster
IR Frequency	30 - 50kHz (30 - 60kHz under ideal conditions)
Baud Rate	up to 115200/sec
Power Supply	24V DC / 1.25A (US/EU standards, CE/FCC/ UL certified)
ESD Protection	Human-body Model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Dimensions (mm)	145.7(W) x 85.7(D) x 36.5(H)/Jacks Excluded 145.7(W) x 85.7(D) x 39.5(H)/Jacks Included
Weight (g)	156/Tx
Chassis Material	Plastic
Silkscreen Colour	White
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 (non-condensing)
Power Consumption	12W/PoC, 9W/Stand Alone

8.1 Cable Specifications

Cable Length	1080p		4K30	4K60
	8-bit	12-bit	(4:4:4) 8-bit	(4:2:0) 8-bit
High Speed HDMI Cable				
HDMI Input	15m	10m	5m	5m
HDMI Output	15m	10m	5m	5m
Ethernet Cable				
Cat.5e/6/7	100m		70m	

1080p (FHD Video)

- Up to 1080p@60Hz, 12-bit colour
- Data rates lower than 5.3Gbps or below 225MHz TMDS clock

4K30 (UHD Video)

- 4K@24/25/30Hz & 4K@50/60Hz (4:2:0), 8-bit colour
- Data rates higher than 5.3Gbps or above 225MHz TMDS clock but below 10.2Gbps

9. ACRONYMS

ACRONYM	COMPLETE TERM
CAT5e	Category 5 Cable
CAT6	Category 6 Cable
CEC	Consumer Electronics Control
DVI	Digital Visual Interface
HDCP	High-bandwidth Digital Content Protection
HDMI	High Definition Multimedia Interface
IR	Infrared



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