



## PU-506-KIT

3-Play HDBaseT™ Extender Kit (2-way IR, RS-232 & HDMI,  
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
v1.01	08/10/13	First release

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## 1. INTRODUCTION

The PU-506-KIT allows uncompressed HDMI signals 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. These combined HDMI and control signals can be transmitted up to lengths of 100 metres. Utilise the USB power output from a TV as an optional way of powering the PU-506-RX receiver unit alternative to a mains power supply.

## 2. APPLICATIONS

- /// Domestic HDMI installation
- /// University lecturing systems
- /// Retail showroom systems
- /// Conference presentation and control

## 3. PACKAGE CONTENTS

- /// 1xHDMI over Single CAT5e/6/7 Transmitter
- /// 1xHDMI over Single CAT5e/6/7 Receiver
- /// 2xIR Blaster
- /// 2xIR Extender
- /// 1x3.5 mm Mini-jack to RS-232 Female Cable
- /// 1x3.5 mm Mini-jack to RS-232 Male Cable
- /// 2x5V/2.6 A DC Power Adaptor
- /// Operation Manual

## 4. SYSTEM REQUIREMENTS

HDMI source equipment such as a DVD or Blu-ray player and HDMI equipped display (TV or monitor). HDMI and CAT5e/5/7 connection cables.

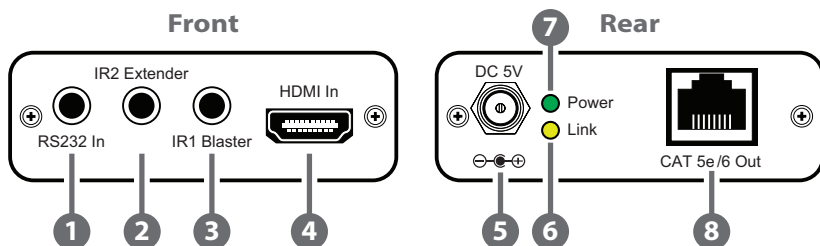
## 5. FEATURES

- /// 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; 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
- /// 3-Play™ convergence
- /// Compact design
- /// Supports 3D signals
- /// Choose to power the PU-506-RX via the USB output from a TV (Cable available separately - APC-USB) : \* Please note the performance and consistency of USB power outputs from TV's can vary and cannot be guaranteed by CYP.

*Note: This system was tested with CAT6/23AWG cable. Results may vary with cables of different specifications.*

## 6. OPERATION CONTROLS AND FUNCTIONS

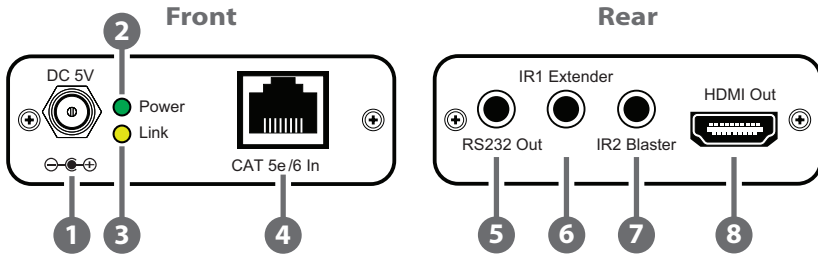
### 6.1 Transmitter Front and Rear Panels



- 1 **RS232 In:** Connect to a PC/laptop or RS-232 enabled device (with supplied 3.5 mm mini-jack to D-sub 9-pin adaptor) for the transmission of RS-232 commands.
- 2 **IR2 Extender:** Connect to the supplied IR extender cable for IR signal reception. Ensure that remote control being used is within the direct line-of-sight of the IR extender.
- 3 **IR1 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 **HDMI In:** Connect to the HDMI source equipment such as a DVD or Blu-ray player.
- 5 **DC 5V:** Connect the 5V DC power supply to the unit and plug the adaptor into an AC outlet.
- 6 **Link LED:** The yellow LED will illuminate when both the input and output CAT5e/6/7 signals are connected.
- 7 **Power LED:** This green LED will illuminate when the device is connected to a power supply.
- 8 **CAT5e/6 Out:** Connect to the receiver unit with a single CAT5e/6/7 cable for transmission of all data signals.



## 6.2 Receiver Front and Rear Panels

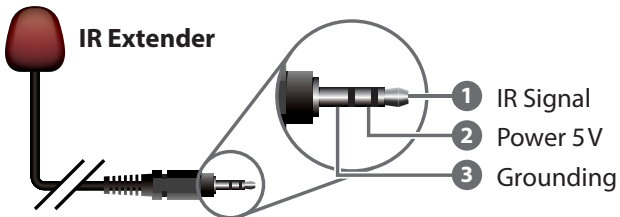
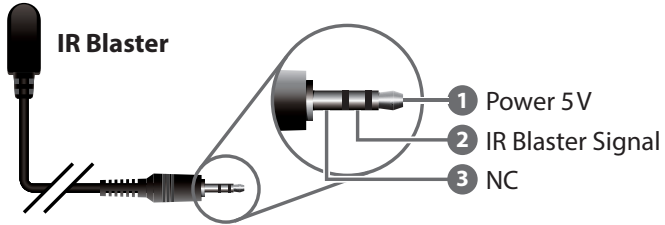


- 1 **DC 5V:** Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet.
- 2 **Power LED:** This green LED will illuminate when the device is connected to a power supply.
- 3 **Link LED:** The yellow LED will illuminate when both the input and output CAT5e/6/7 signals are connected.
- 4 **CAT5e/6 In:** Connect to the transmitter unit with a Single CAT5e/6/7 cable for transmission of all data signals.
- 5 **RS232 Out:** Connect to the device that is to be controlled (with the supplied 3.5mm mini-jack to D-sub 9-pin adaptor) by RS-232 commands.
- 6 **IR1 Extender:** Connect to the supplied IR extender cable for IR signal reception. Ensure that the remote being used is within the direct line-of-sight of the IR extender
- 7 **IR2 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.
- 8 **HDMI Out:** Connect to a HDMI equipped TV/monitor for display of the HDMI input source signal.

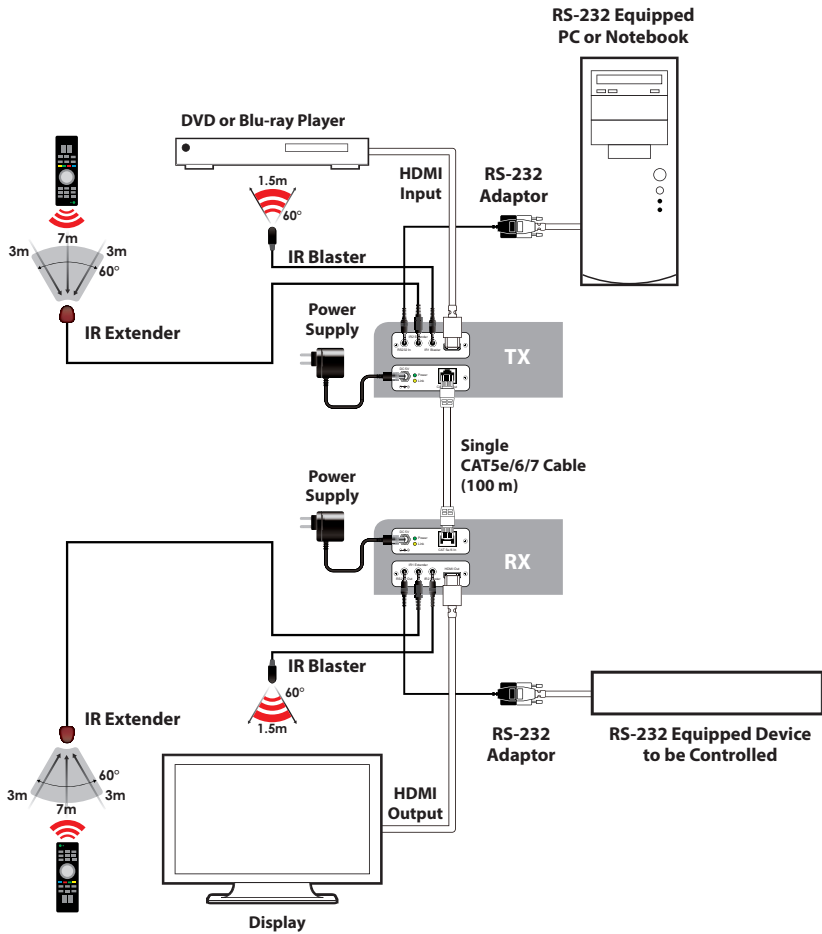
### 6.3 D-Sub 9-Pin Definitions

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

### 6.4 IR Cable Pin Assignment



# 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

<b>Video Bandwidth</b>	225 MHz/6.75 Gbps
<b>Transmitter</b>	
<b>Input Ports</b>	1×HDMI, 1×IR Extender, 1×RS-232
<b>Output Ports</b>	1×CAT5e/6, 1×IR Blaster
<b>Receiver</b>	
<b>Input Ports</b>	1×CAT5e/6/7, 1×IR Extender
<b>Output Ports</b>	1×HDMI, 1×IR Blaster, 1×RS-232
<b>CAT5e/6/7 Cable Distance</b>	Up to 100m
<b>HDMI Cable Input Distance</b>	10 meters/8-bit, 6 meters/12-bit
<b>HDMI Cable Output Distance</b>	10 meters/8-bit, 15 meters/12-bit
<b>ESD Protection</b>	Human-body Model: ±8kV (air-gap discharge) ±4kV (contact discharge)
<b>Power Supply</b>	5 V/2.6 A DC (US/EU standards, CE/FCC/ UL certified)
<b>IR Frequency</b>	30 ~ 50 kHz
<b>Dimensions</b>	71 mm (W)×79 mm (D)×23mm (H)/Each
<b>Weight</b>	240 g/TX, 245g/RX
<b>Chassis Material</b>	Aluminum
<b>Colour</b>	Black
<b>Operating Temperature</b>	0 °C~40 °C/32 °F~104 °F
<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>	3 W/TX, 6 W/RX

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
<b>CAT5e</b>	Category 5 Cable
<b>CAT6</b>	Category 6 Cable
<b>CAT7</b>	Category 7 Cable
<b>CEC</b>	Consumer Electronics Control
<b>DVI</b>	Digital Visual Interface
<b>HDCP</b>	High-bandwidth Digital Content Protection
<b>HDMI</b>	High Definition Multimedia Interface
<b>IR</b>	Infrared







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