



PU-506-KIT

3-Play HDBaseT™ Extender Kit (2-way IR, RS-232 & HDMI, up to 100m)

OPERATION MANUAL

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. CYP (UK) Ltd assumes no responsibility for any infringements of patents or other rights of third parties which may result from its use.

CYP (UK) Ltd assumes no responsibility for any inaccuracies that may be contained in this document. CYP (UK) Ltd also makes no commitment to update or to keep current the information contained in this document.

CYP (UK) Ltd reserves the right to make improvements to this document and/or product at any time and without notice.

COPYRIGHT NOTICE

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or any of its part translated into any language or computer file, in any form or by any means—electronic, mechanical, magnetic, optical, chemical, manual, or otherwise—without express written permission and consent from CYP (UK) Ltd.

© Copyright 2020 by CYP (UK) Ltd.

All Rights Reserved.

Version 1.1

TRADEMARK ACKNOWLEDGMENTS

All products or service names mentioned in this document may be trademarks of the companies with which they are associated.

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	08/10/2013	First release
v1.02	19/08/2019	Updated Specifications
v1.03	26/02/2020	Corrected the video bandwidth - Technical Specifications

CONTENTS

1. Introduction	6
2. Applications	6
3. Package Contents	6
4. System Requirements	7
5. Features.....	7
6. Operation Controls and Functions	8
6.1 Transmitter Front and Rear Panels.....	8
6.2 Receiver Front and Rear Panels	9
6.3 D-Sub 9-Pin Definitions.....	10
6.4 IR Cable Pin Assignment	10
7. Connection Diagram	11
8. Specifications.....	12
8.1 technical Specifications.....	12
8.2 Cable Specifications	13
9. Acronyms.....	14

1. INTRODUCTION

The HDMI with RS-232 over Single CAT5e/6/7 transmitter and receiver set can send uncompressed audio/video over a single run of CAT5e/6/7 cable up to 100m at 1080p and 70m at 4K and has the added benefit of control through the built-in RS-232 and IR ports.

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

Transmitter Package

- /// 1×HDMI over Single CAT5e/6/7 Transmitter
- /// 2×IR Blaster
- /// 2×IR Extender
- /// 1×3.5 mm Mini-jack to RS-232 Female Cable
- /// 1×5V/2.6 A DC Power Adaptor
- /// Operation Manual

Receiver Package

- /// 1×HDMI over Single CAT5e/6/7 Receiver
- /// 2×IR Blaster
- /// 2×IR Extender
- /// 1×3.5 mm Mini-jack to RS-232 Male Cable
- /// 1×5V/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.

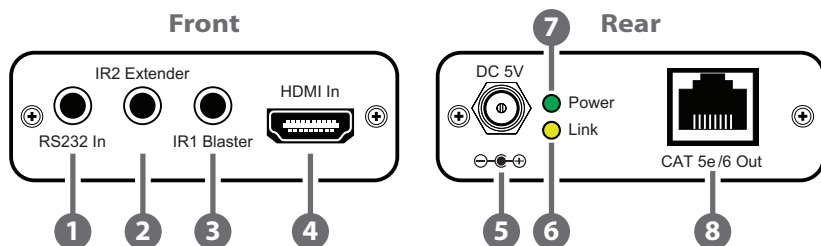
5. FEATURES

- /// HDMI 1.x and DVI 1.0 compliant
- /// HDCP compliant
- /// Supports HDMI 3D and 4K x 2K features
- /// Supports HDCP repeater and CEC function
- /// 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
- /// 3Play convergence: HDMI & Control (IR & RS-232)
- /// Installation friendly
- /// 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 TVs 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.

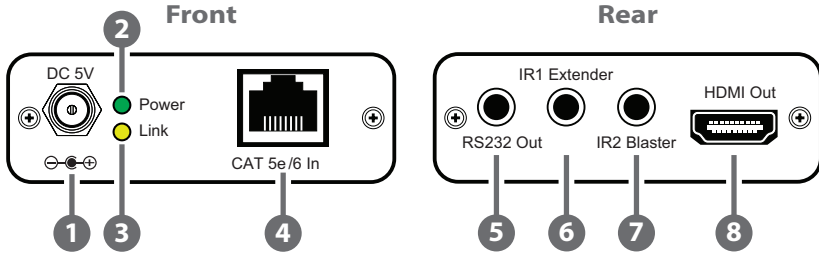
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Transmitter Front and Rear Panels



- 1 **RS-232 In:** Connect to a PC/laptop or RS-232 enabled device (with supplied 3.5 mm phone 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 controller 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 HDMI source equipment such as a DVD or Blu-ray player.
- 5 **DC 5V:** Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet.
- 6 **Link:** The yellow LED will illuminate when both the input and output CAT5e/6/7 signals are connected.
- 7 **Power:** 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

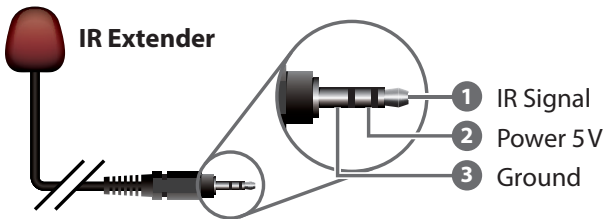
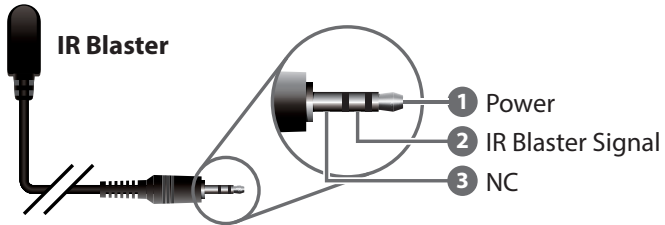


- 1 **DC 5V:** Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet.
- 2 **Link:** The yellow LED will illuminate when both the input and output CAT5e/6/7 signals are connected.
- 3 **Power:** This green LED will illuminate when the device is connected to a power supply.
- 4 **CAT5e/6 In:** Connect to the transmitter unit with a Single CAT5e/6/7 cable for transmission of all data signals.
- 5 **RS-232 Out:** Connect to the device that is to be controlled (with the supplied 3.5mm phone 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 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.

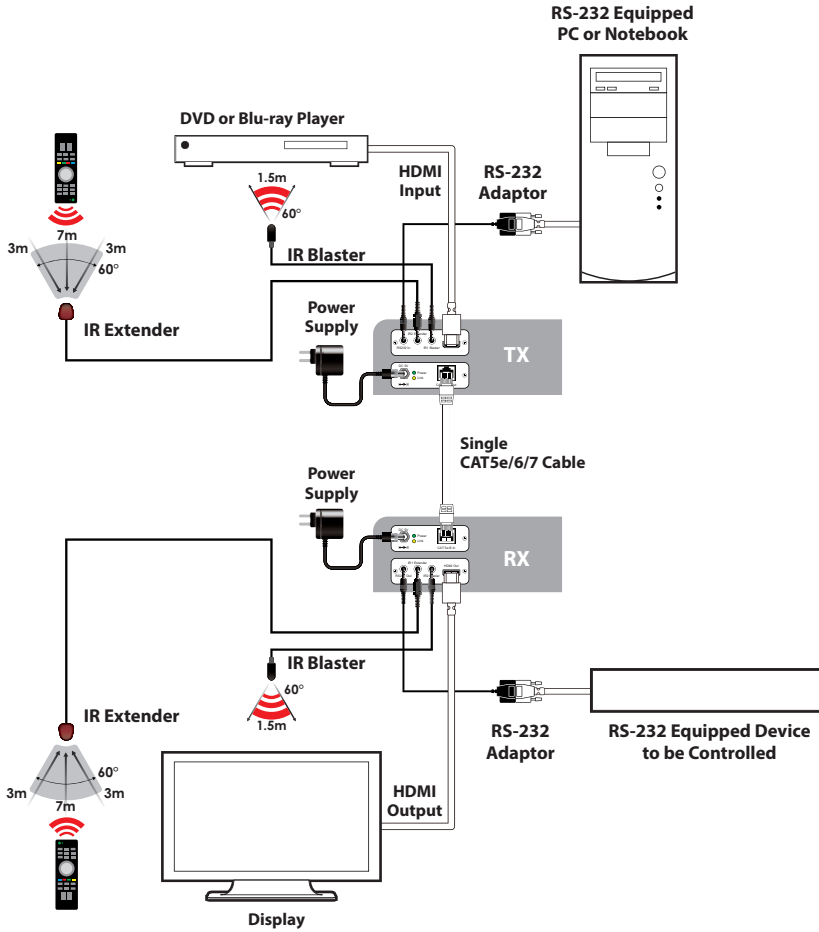
6.3 D-Sub 9-Pin Definitions

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

8.1 technical Specifications

HDMI Bandwidth	10.2Gbps
HDBaseT Bandwidth	10.2Gbps
Transmitter	
Input	1×HDMI, 1×IR Extender, 1×RS-232
Output	1×CAT5e/6/7, 1×IR Blaster
Receiver	
Input	1×CAT5e/6/7, 1×IR Extender
Output	1×HDMI, 1×RS-232, 1×IR Blaster
IR Frequency	30 – 50kHz (30 – 60kHz under ideal conditions)
Baud Rate	up to 115200/sec
Power Supply	5V/2.6A DC (US/EU standards, CE/FCC/ UL certified)
ESD Protection	Human-body Model: ±8 kV (air-gap discharge) ±4 kV (contact discharge)
IR Frequency	30~50 kHz
Dimensions	71 mm (W)×79 mm (D)×23 mm (H)
Weight	240 g (TX), 245 g (RX)
Chassis Material	Aluminum
Silkscreen Colour	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 (non-condensing)
Power Consumption	3W (TX), 6W (RX)

8.2 Cable Specifications

Cable Length	1080p		4K30	4K60
	8-bit	12-bit	8-bit (4:4:4)	8-bit (4:2:0)
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
CAT7	Category 7 Cable
CEC	Consumer Electronics Control
DVI	Digital Visual Interface
HDCP	High-bandwidth Digital Content Protection
HDMI	High Definition Multimedia Interface
IR	Infrared



CYP (UK) Ltd., Unit 7, Shepperton Business Park, Govett Avenue, Shepperton,
Middlesex, TW17 8BA

Tel: +44 (0) 20 3137 9180 | Fax: +44 (0) 20 3137 6279

Email: sales@cypeurope.com

www.cypeurope.com

v1.03

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>