



PU-507TX-CVGA

CV / PC over HDBaseT™ Transmitter with integrated video scaling (5-Play™ inc. PoE & 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	06//11/2013	First release

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1. INTRODUCTION

The PU-507TX-CVGA is a HDBaseT™ Transmitter which allows transmission of PC or Composite Video sources and audio over a single CAT5e/6/7 cable to the receiver at a distance of up to 100m. The integrated scaler enables the installer to maximise the output resolution and ensure compatibility to the connected display. With full 5-Play convergence for uncompressed high definition video and stereo audio, this transmitter also allows the transfer of LAN serving, Bi-directional Power over Ethernet (PoE), RS-232, and 2-way IR all simultaneously over a single CAT5e/6/7 cable. Control of the transmitter is via IR remote or via selection buttons on the front panel of the device allowing the user to navigate the On-Screen Display (OSD) for selecting the required settings or system information.

2. APPLICATIONS

- /// Analogue to Digital video signal conversion
- /// Up scale standard definition video to High-Definition TVs/displays
- /// Extend the operating distance of a CV/PC video signal
- /// Lecture room/Showroom/Meeting room/Classroom display and control

3. PACKAGE CONTENTS

- /// CV/PC to CAT5e/6/7 with LAN/IR/RS-232/Bidirectional PoE Transmitter
- /// 1×IR Extender
- /// 1×IR Blaster
- /// 24V/2.7 A DC Power Adaptor
- /// Remote control (CR-128)
- /// Operation Manual

4. SYSTEM REQUIREMENTS

CV/PC source equipment such as a DVD/Video player or PC/Laptop and output to HDBaseT compatible Receiver.

5. FEATURES

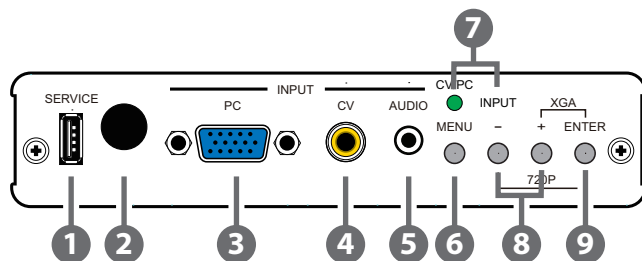
- /// Supports PC/CV scaling to a full range of HDTV or PC resolutions up to 1080p and WUXGA (Reduced Blanking)
- /// Supports uncompressed video/audio up to 10.2Gbps
- /// Supports Ethernet transmission rates up to 100 Mbps
- /// Supports uncompressed data transfer over single CAT cable (100m - CAT6/7; 80m - CAT5e)
- /// 5-Play™ convergence: HDMI, LAN, POE & Control (IR & RS232)
- /// Supports bidirectional PoE when connected to a compatible Bi-directional PoE Receiver
- /// Supports OSD (On-screen Display) selection and system information display
- /// Supports NTSC and PAL formats for Composite Video input
- /// Control via IR remote and on-panel selection buttons

Note:

1. *This system was tested with CAT6/23AWG cables, results may vary with cables of different specifications.*
2. *The PoE function is designed for powering compatible Receiver units only—non-PoE Receivers will need their own power supply. Receivers from other brands may not be compatible.*
3. *DO NOT connect the LAN connection to the CAT5e/6/7 port. Doing so may cause a power shutdown and may damage the device*

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



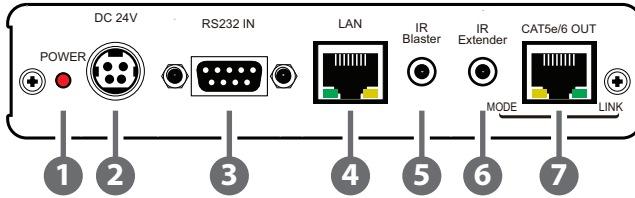
- ❶ **SERVICE:** Reserved for manufacturer use only.
- ❷ **IR Receiver window:** Receives only the IR signal from the supplied remote control.
- ❸ **PC:** Connect to a PC/Laptop source device with a D-Sub 15pin cable.
- ❹ **CV:** Connect to a composite video source such as a DVD/Video player.
- ❺ **AUDIO:** Connect to an analogue stereo (L/R) audio source with a 3.5mm mini-jack cable.
- ❻ **MENU:** Press this button to enter the On-Screen Display (OSD) menu.
- ❼ **INPUT (-) Button & CV/PC LED:** Press the INPUT (-) button to toggle between CV or PC inputs. When in CV mode the LED will be lit, off when in PC mode.
- ❽ **-/+:** Use these buttons to navigate down and up in the on-screen menu.
- ❾ **ENTER:** Press this button to confirm the selection.

Note:

Pressing '-' (MINUS) and ENTER simultaneously will immediately switch the output resolution of the device to 720p60.

Pressing '+' (PLUS) and ENTER simultaneously will immediately switch the output resolution of the device to XGA (1024×768).

6.2 Rear Panel

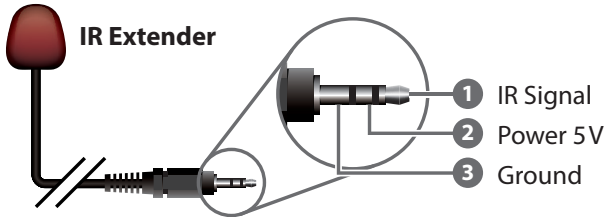
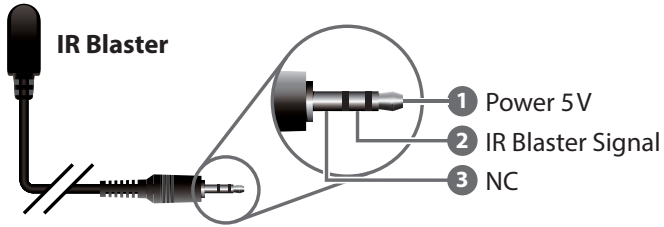


- 1 **Power LED:** This LED will illuminate when the device is connected to an active power supply.
- 2 **DC 24V:** Connect the 24V DC power supply to the unit and plug the adaptor into an AC outlet. Only one unit requires powering if both the Transmitter and Receiver are both PoE compatible.
- 3 **RS-232 IN:** Connect to a PC or RS-232 control system with a D-Sub 9 pin male cable for the transmission of RS-232 commands.
- 4 **LAN:** Connect to an active network for LAN serving. When any compatible LAN equipped receivers are connected, this allows the network access (including internet access if available) to be shared between any connected LAN equipped 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.

Warning: DO NOT connect the LAN connection to the CAT5e/6/7 port. Doing so may cause a power shutdown and may damage the device.

- 5 **IR Blaster:** Connect the supplied IR Blaster cable for IR signal transmission. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.
- 6 **IR Extender:** Connect the supplied IR Receiver cables for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.
- 7 **MODE LED:** This LED will illuminate when the power is connected.
- 8 **Link LED:** This LED will illuminate when connected to a Receiver unit that is connected with a TV/monitor that is displaying the signal.
- 9 **CAT5e/6/7 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

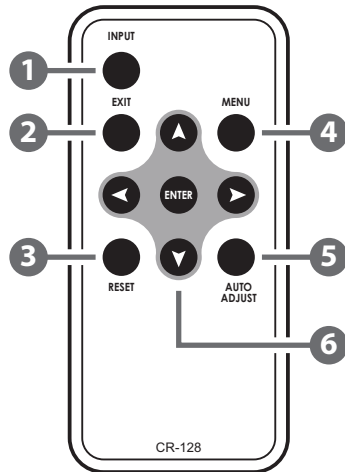


6.4 D-Sub 9 Pin Definitions

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

6.5 Remote Control

- 1 INPUT:** Press this button to toggle between the CV or PC input.
- 2 EXIT:** Press this button to exit the menu or the current selection in the on-screen menu.
- 3 MENU:** Press this button to enter into the OSD menu.
- 4 RESET:** Press this button to return the device to the factory default settings.
- 5 AUTO ADJUST:** Press this button to optimise the positioning of the picture (picture centering) on the screen.
- 6 ENTER & ▲▼◀▶:** Press ENTER to confirm the selection or use the directional buttons to navigate the on-screen menus.



6.6 OSD Menu

1 st Layer	2 nd layer	3 rd Layer	4 th Layer
DISPLAY	OUTPUT	Native	
		640x480 60	
		800x600 60	
		1024x768 60	
		1360x768 60	
		1280x720 60	
		1280x800 60	
		1280x1024 60	
		1440x900 60	
		1400x1050 60	
		1680x1050 60	
		1600x1200 60	
		1920x1080 60	
		1920x1200 60	
		720x480p 60	
		1280x720p 60	
		1920x1080i 60	
		1920x1080p 60	
		720x576p 50	
		1280x720p 50	
1920x1080i 50			
1920x1080p 50			

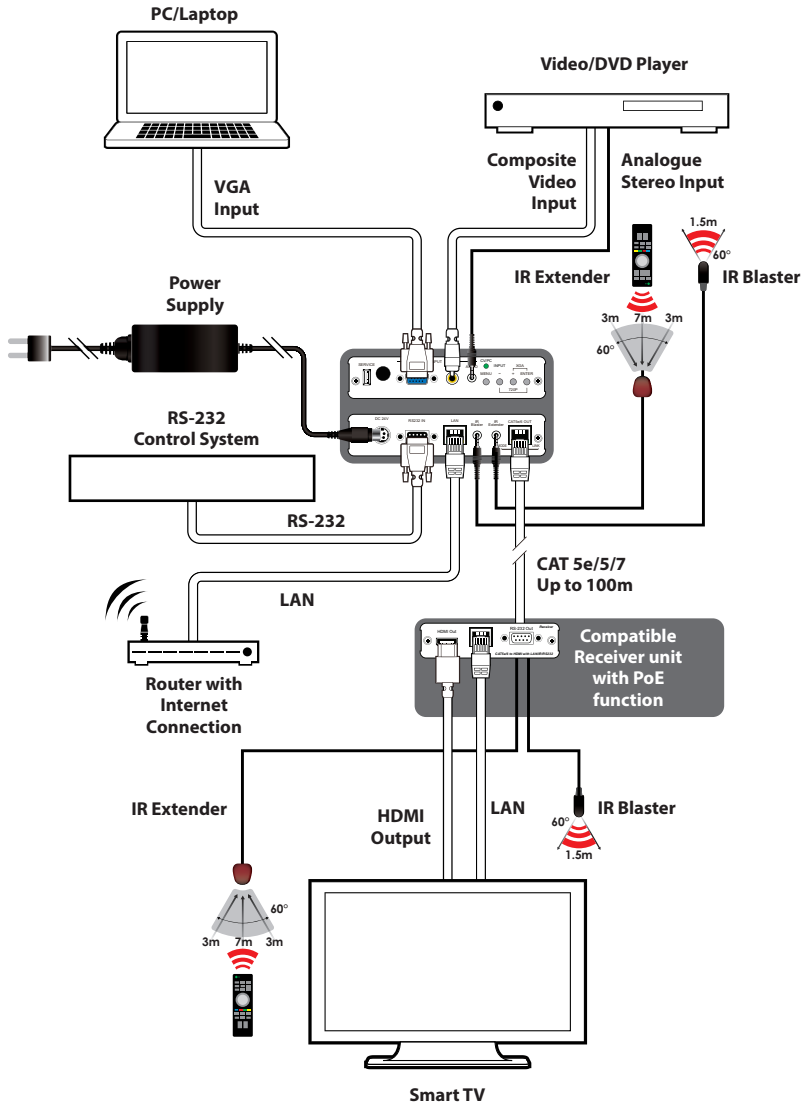
1 st Layer	2 nd layer	3 rd Layer	4 th Layer
	SIZE (VIDEO mode only)	OVER SCAN	
		FULL	
		ASPECT RATIO	
		PAN SCAN	
		LETTER BOX	
		UNDER 2	
		UNDER 1	
	MODE INFO	INFO	
		ON	
		OFF	
	PC(PC mode only)	AUTO SETUP	No
			YES
		H_POSITION	0~60 (30)
		V_POSITION	0~60 (30)
		PHASE	
		CLOCK	
		WXGA/XGA	XGA
			WXGA
		RESET	NO
			YES

1 st Layer	2 nd layer	3 rd Layer	4 th Layer
COLOUR	COLOUR	R	
		G	
		B	
		R OFFSET	
		G OFFSET	
		B OFFSET	
	CONTRAST	0~60	
	BRIGHTNESS	0~60	
	HUE	0~60	
	SATURATION	0~60	
	SHARPNESS	0~60	
	NR.	OFF	
		LOW	
MIDDLE			
HIGH			
AUDIO	VOLUME	0~100	
	DELAY	OFF	
		40mS	
		110mS	
		150mS	
	SOUND	ON	
		MUTE	
SETUP	FACTORY RESET	NO	
		YES	
	KEY LOCK	OFF	
		ON	

1 st Layer	2 nd layer	3 rd Layer	4 th Layer
INFORMA- TION	INPUT		
	OUTPUT		
	REVISION		

Note: Items in **Bold** are the default settings.

7. CONNECTION DIAGRAM



8. SPECIFICATIONS

Output Video Bandwidth	300 MHz / 10.2 Gbps
Ethernet Speed	100 Mbps
Input Ports	1×CV, 1×PC, 1×3.5mm Phone Jack (L/R), 1×RS-232, 1×LAN, 1×IR Extender
Output Ports	1×CAT5e/6, 1×IR Blaster
CAT5e/6 Output Cable Distance	Up to 100 Meters
CV Supports Resolution	NTSC/PAL
PC Supports Resolution	VGA ~ WUXGA(RB)
CAT5e/6 Output Resolution	HD: Up to 1080p@60Hz PC: Up to WUXGA(RB)
IR Frequency	30~50 kHz
ESD Protection	Human body model: ±8 kV (air-gap discharge) ±4 kV (contact discharge)
Dimensions	145 mm (W)×201.5 mm (D)×30 mm(H)
Weight	606 g
Chassis Material	Aluminum
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	W

9. ACRONYMS

ACRONYM	COMPLETE TERM
CAT5e	Category 5 Cable
CAT6	Category 6 Cable
CV	Composite Video
DVI	Digital Visual Interface
HDMI	High-Definition Multimedia Interface
IR	Infrared
WUXGA (RB)	Widescreen Ultra Extended Graphics Array (Reduce blanking)



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