

# User Manual



## TP408P HDBaseT Extender Set



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Version: TP408P\_V1.0

## **Preface**

Read this user manual carefully before using this product. Pictures shown in this manual is for reference only, different model and specifications are subject to real product.

This manual is only for operation instruction only, not for any maintenance usage. The functions described in this version are updated till November 2016. Any changes of functions and parameters since then will be informed separately. Please refer to the dealers for the latest details.

**All product function is valid till 2016-11-28.**

## **Trademarks**

Product model and logo are trademarks. Any other trademarks mentioned in this manual are acknowledged as the properties of the trademark owner. No part of this publication may be copied or reproduced without the prior written consent.

## **FCC Statement**

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



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## **SAFETY PRECAUTIONS**

To insure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

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# 1. Introduction

## 1.1 Brief Introduction

TP408P is an HDBaseT Extender Set which contains a Transmitter and a Receiver.

It uses HDBaseT technology to deliver HDMI/DVI/VGA signal, and the max transmission is up to 70m. Moreover, bi-directional RS232 control, RS232 pass-through, IR control and PoC are supported by this product.

TP408P has a good application in various occasions, such as computer realm, monitoring, big screen displaying, meeting room, education and bank & securities institution etc.

## 1.2 Features

- HDMI/DVI/VGA output resolution up to 1920x1200 @60HZ.
- Support bi- directional PoC.
- Maximum transmission distance is up to 70m for 1080p.
- In-built scaler function, support scaling HDMI/ DVI/VGA signals to match the native resolution of the displays.
- Provide external audio input for DVI video signal.
- HDMI/DVI/VGA input signal can be switched automatically.
- Supports firmware upgrading via USB.
- Control methods: front panel buttons of transmitter, bi-directional RS232 control.
- LED indicators show work status.

## 1.3 Package Contents

- 1 x Transmitter
- 1 x Receiver
- 4 x Mounting Ears
- 8 x Screws
- 2 x RS232 Cable
- 8 x Rubber Feet
- 1 x Power Adapter (DC24V 1.25A)
- 1 x User manual

**Notes:** If you find any defective or missing parts, please contact your local dealer.

## 2. Panel Description

### 2.1 Transmitter

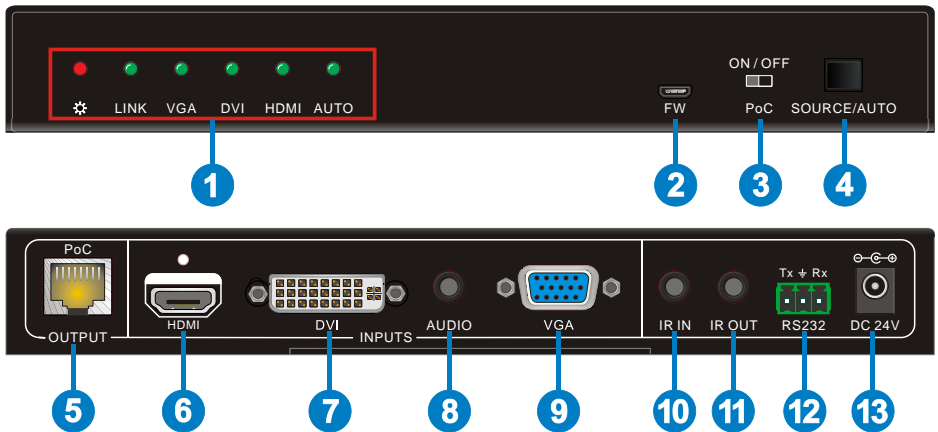


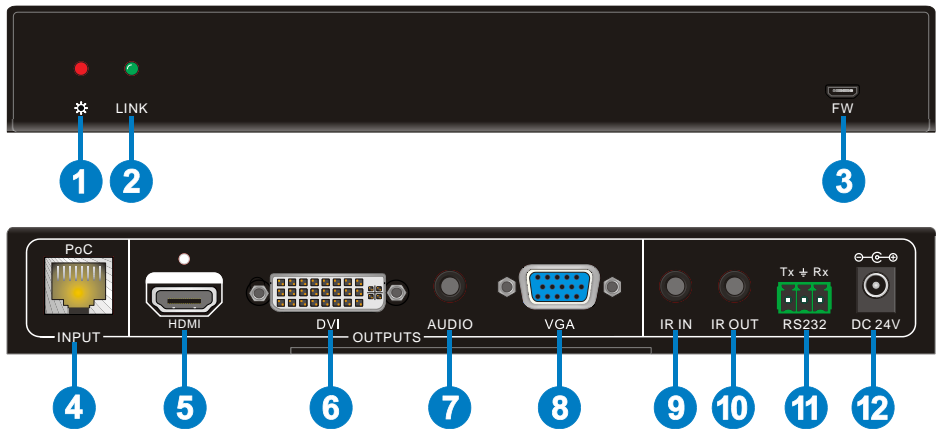
Figure 2-1 Transmitter

No.	Name	Description
①	Indicators	<ul style="list-style-type: none"> <li>➤ Power: Illuminates red when power on.</li> <li>➤ LINK: Twisted Pair Link status indicator, illuminates green when successfully connected.</li> <li>➤ VGA: Illuminates green when there is VGA signal input</li> <li>➤ DVI: Illuminates green when there is DVI signal input.</li> <li>➤ HDMI: Illuminates green when there is HDMI signal input.</li> <li>➤ AUTO: Illuminates green under auto-switching mode.</li> </ul>
②	FW	<p>Micro USB port, used for firmware update.</p> <p>Plug a flash disk or other storage device with update file (MERGE.bin), and send command <b>50698%</b> to update firmware.</p>
③	PoC switcher	<ul style="list-style-type: none"> <li>➤ ON: Enable bi-directional PoC function.</li> </ul> <p>In this model, Transmitter and Receiver cannot be connected with power adaptors at the same time. Only one power adaptor needed.</p> <ul style="list-style-type: none"> <li>➤ OFF: Disable bi-directional PoC.</li> </ul> <p>In this model, you can connect power adaptors to Transmitter</p>

## HDBaseT Extender Set

		and Receiver at the same time, or only connect one power adaptor to Receiver, Transmitter can be powered.
④	SOURCE/ AUTO	<ul style="list-style-type: none"> <li>➤ Press to select one source, press again to select next source, switching circularly between HDMI, DVI and VGA input. The indicator of the selected input source will illuminate green.</li> <li>➤ Long-press this button for 5 seconds or more to enter in auto-switching mode and the indicator <b>AUTO</b> will lights green. Under this mode, the last signal source connected to transmitter will be recognized as input signal. Press and hold for 5 seconds or more again to exit auto-switching mode.</li> </ul>
⑤	OUTPUT	Connect to the INPUT port of Receiver with a CAT5e cable.
⑥	HDMI INPUT	Connect with HDMI source device.
⑦	DVI INPUT	Connect with DVI source device.
⑧	AUDIO INPUT	Connect with the audio input socket of DVI or VGA source device, provide external audio signal for DVI or VGA video signal.
⑨	VGA INPUT	Connect with VGA source device.
⑩	IR IN	Connect with IR receiver to collect infrared signal, work with far-end IR OUT port.
⑪	IR OUT	Connect with IR Emitter to send infrared signal, work with far-end IR IN port.
⑫	RS232	Serial port, 3-pin pluggable terminal block, supports bi-directional RS232 control and pass-through function, connect with the control PC or other devices needed to be controlled.
⑬	DC 24V	Connect with DC24V 1.25A power adaptor (not necessary if Receiver connects with power adaptor and the PoC button is switched on).

## 2.2 Receiver



**Figure 2-2 Receiver**

No.	Name	Description
①	Power	Illuminates red when power on.
②	LINK	Twisted Pair link status indicator, illuminates green when successfully connected.
③	FW	Micro USB port, used for firmware update. Firmware updated need auxiliary equipment, please contact with our after-sales department for more details.
④	INPUT	Connect to the OUTPUT port of Transmitter with a CAT5e cable.
⑤	HDMI OUTPUT	Connect with HDMI displayer.
⑥	DVI OUTPUT	Connect with DVI displayer.
⑦	AUDIO OUTPUT	Connect with audio player, synchronously output audio signal with DVI or VGA video signal output.
⑧	VGA OUTPUT	Connect with VGA displayer.
⑨	IR IN	Connect with IR receiver to collect infrared signal, work with far-end IR OUT port.
⑩	IR OUT	Connect with IR Emitter to send infrared signal, work with far-end



## HDBaseT Extender Set

		IR IN port.
⑪	RS232	Serial port, 3-pin pluggable terminal block, supports bi-directional RS232 control and passthrough function, connect with the control PC or other devices needed to be controlled.
⑫	DC 24V	Connect with DC24V 1.25A power adaptor (not necessary if Transmitter connects with power adaptor and the PoC button is switched on).

**Note:** Pictures shown on this manual are for reference only, different model and specifications are subject to real product.

## 3. System Connection

### 3.1 Usage Precautions

- 1) System should be installed in a clean environment and has a prop temperature and humidity.
- 2) All of the power switches, plugs, sockets and power cords should be insulated and safety.
- 3) All devices should be connected before power on.

### 3.2 System Diagram

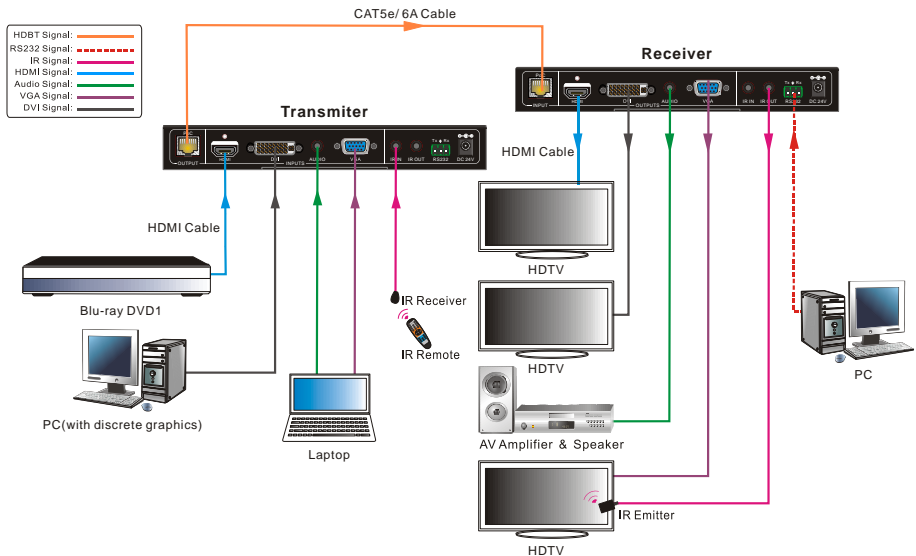


Figure 3-1 System Connection Diagram

### 3.3 Connection Procedure

- Step1.** Connect a HDMI source device (such as Blue-ray DVD) to **HDMI INPUT** port of Transmitter with HDMI cable.
- Step2.** Connect a DVI source device (e.g. PC) to the **DVI INPUT** port of Transmitter VI cable.
- Step3.** Connect a VGA source device (e.g. Laptop) to the **VGA INPUT** port of Transmitter cable.
- Step4.** Connect a VGA source device (e.g. Laptop) or other audio source device to the **AUDIO INPUT** port of Transmitter with audio cable.
- Step5.** Connect **OUTPUT** port of Transmitter and **INPUT** port of Receiver with single

## HDBaseT Extender Set

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CAT5e/CAT6 cable.

**Step6.** Connect HDMI displayer (such as HDTV) to **HDMI OUTPUT** port of Receiver with HDMI cable.

**Step7.** Connect DVI displayer to **DVI OUTPUT** port of Receiver with HDMI cable.

**Step8.** Connect VGA displayer to **VGA OUTPUT** port of Receiver with HDMI cable.

**Step9.** Connect audio device (such as AV amplifier) to the **AUDIO OUTPUT** port of Receiver with audio cable.

**Step10.** When using the bi-directional IR control, do the following.

- a) Connect an IR receiver to the **IR IN** port at either the Transmitter or the Receiver.
- b) Connect an IR Emitter to the **IR OUT** port at the other end.

**Step11.** TP408P supports bi-directional RS232 control. Connect control device (e.g. PC) to **RS232** port of Transmitter or Receiver, and then send commands to control Transmitter or Receiver. Please refer to **4.2 R2323 control** for more details.

**Step12.** Connect a DC24V 1.25A power adaptor to the **DC 24V** port of the transmitter; and make sure the switch “**PoC**” is turned on, the receiver will be energized synchronously.



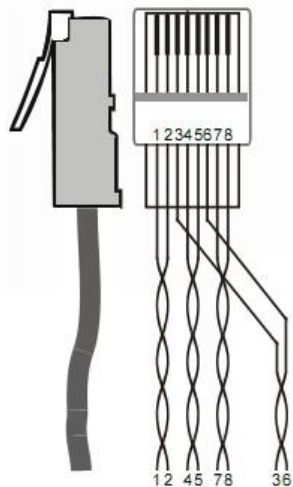
- ✧ System Diagram shown in this manual are for reference only, more specific schemes depend on real devices.
- ✧ When the **IR IN** port receive the IR signal from IR remote, the IR signal can't be sent out via the **IR OUT of the** native unit.
- ✧ When using PoC solution, the switch “**PoC**” must be turned on.
- ✧ Connect HDBT ports via straight-thru CAT5e/6 cable with TIA/EIAT568B standard terminations at both ends.

### 3.4 Twisted Pair Cable Connection

The twisted pair used in this extender **MUST** be a straight-through cable.

# HDBaseT Extender Set

TIA/EIA T568A		TIA/EIA T568B	
Pin	Cable color	Pin	Cable color
1	green white	1	orange white
2	green	2	orange
3	orange white	3	green white
4	blue	4	blue
5	blue white	5	blue white
6	orange	6	green
7	brown white	7	brown white
8	brown	8	brown
1st Ground	4--5	1st Ground	4--5
2nd Ground	3--6	2nd Ground	1--2
3rd Group	1--2	3rd Group	3--6
4th Group	7--8	4th Group	7--8



## 4. Operations

### 4.1 Operations of front panel buttons

Transmitter has a channel switching button **SOURCE/ AUTO** on the front panel, through which users can switch input source signals.

It supports both manual and auto mode. (Default: Auto switching) Press and hold the button **SOURCE/AUTO** for 5 seconds or send command “**50770%**” and “**50771%**” to switch between the two modes.

#### Switching modes:

##### ➤ Manual switching mode

Long-press the button **SOURCE/ AUTO** for 5 seconds or more to enter manual switching mode and the green indicator **AUTO** will extinguish. Press **SOURCE/ AUTO** to switch circularly between HDMI, DVI and VGA input signal source.

When the format of VGA input signal is CVBS or YPbPr, the manual mode cannot be switched to manual switching mode automatically.

##### ➤ Auto switching mode

Under manual switching mode, long-press the button **SOURCE/ AUTO** for 5 seconds or more to enter auto mode, Transmitter will automatically recognize the signal source device that it was last connected to as input source.

### 4.2 RS232 Control

As RS232 can be transmitted bi-directionally between Transmitter and Receiver, so it is able to control Receiver from local or control Transmitter from remote.

#### 4.2.1 Installation/uninstallation of RS232 Control Software

##### ● Installation

Copy the control software file to the computer connected with Transmitter or Receiver.

##### ● Uninstallation

Delete all the control software files in corresponding file path.

#### 4.2.2 Basic Settings

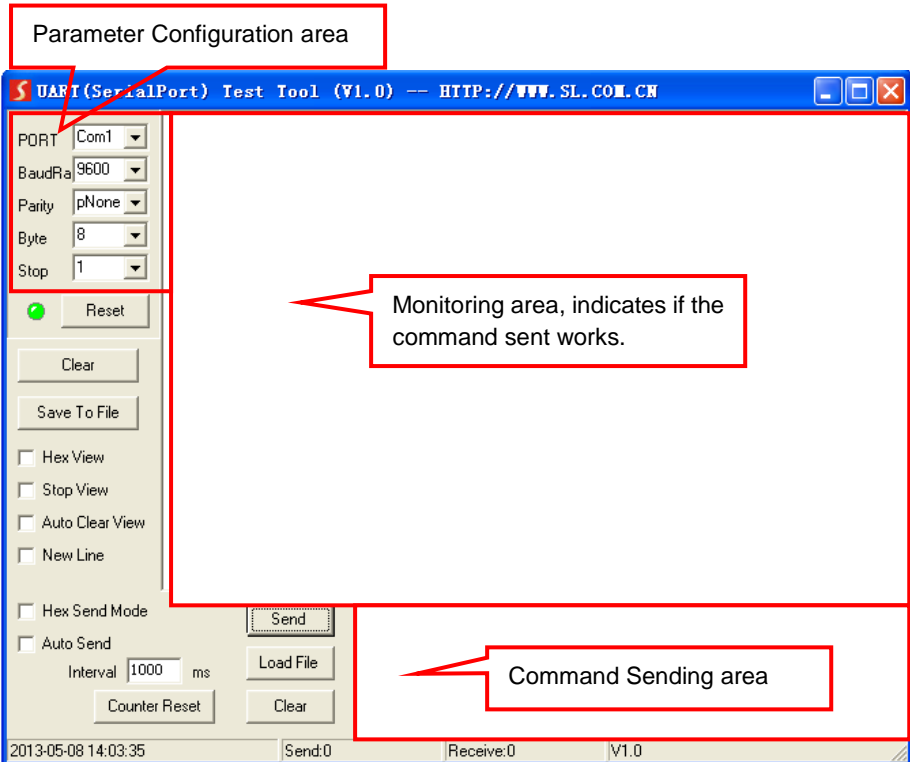
First, connect Transmitter with all input devices and output devices needed, then to connect it with a computer which is installed with RS232 control software. Double-click the software icon to run this software.

Here we take the software **CommWatch.exe** as example. The icon is showed as below:



CommWatch.exe

The interface of the control software is showed as below:



Please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, and then you are able to send command in Command Sending Area.

#### 4.2.3 RS232 Communication Commands

**Communication protocol:** RS232 Communication Protocol

Baud rate: 9600      Data bit: 8      Stop bit: 1      Parity bit: none

Command	Function	Feedback Example
Transmitter		
Setup Commands		

## HDBaseT Extender Set

<b>502xx%</b>	Set the brightness to xx. XX ranges from 00 to 99	Brightness: xx
<b>503xx%</b>	Set the contrast to xx. XX ranges from 00 to 99	Contrast: xx
<b>504xx%</b>	Set the saturation to xx. XX ranges from 00 to 99	Saturation: xx
<b>505xx%</b>	Set the sharpness to xx. XX ranges from 00 to 99	Sharpness: xx
<b>50606%</b>	Auto-adjust the input parameter	VGA Input Auto
<b>50607%</b>	Adjust the color temperature	Color Temperature: xx (xx can be medium, warm, user, or cool)
<b>50608%</b>	Set the aspect ratio	Aspect Ratio: xx (xx can be 16:9, 4:3, or auto.)
<b>50614%</b>	Set the picture mode	Picture Mode: xx (xx can be dynamic, standard, mild, or user.)
<b>50705%</b>	Change the horizontal polarity to the opposite	Hpolarity:0/1
<b>50706%</b>	Change the vertical polarity to the opposite	Vpolarity:0/1
<b>50701%</b>	Switch to HDMI input	Switch to HDMI
<b>50702%</b>	Switch to DVI input	Switch to DVI
<b>50704%</b>	Switch to VGA/YPbPr/AV input	Switch to VGA/YPbPr/AV
<b>50710%</b>	Set the VGA port to input VGA signal	Port VGA Set & Switch to VGA!
<b>50711%</b>	Set the VGA port to input YPbPr signal	Port VGA Set & Switch to YPbPr!
<b>50712%</b>	Set the VGA port to input AV signal	Port VGA Set & Switch to AV!
<b>50770%</b>	Enable auto-switching	Auto Switching
<b>50771%</b>	Disable auto-switching	Manual Switching

## HDBaseT Extender Set

<b>50779%</b>	Switch to RS232 mode 1, enable this unit to control far-end devices	RS232 Mode 1: RS232 Control Scaler & Remote
<b>50780%</b>	Switch to RS232 mode 2, enable far-end devices to control this unit	RS232 Mode 2: RS232 & Remote Control Scaler
<b>50790%</b>	Set the HDCP status of HDMI output socket to Active	HDCP Active
<b>50791%</b>	Set the HDCP status of HDMI output socket to On	HDCP On
<b>50792%</b>	Set the HDCP status of HDMI output socket to Off	HDCP Off
<b>50603%</b>	Embed Audio into DVI signal	DVI Audio from Embedded
<b>50604%</b>	Connect external audio to DVI signal	DVI Audio from LINE
<b>50698%</b>	Software update	
<b>50617%</b>	Reset to factory default	
<b>Resolution Commands</b>		
<b>50619%</b>	Change the resolution to 1360X768 HD	Resolution: 1360x768
<b>50626%</b>	Change the resolution to 1024X768 XGA	Resolution: 1024x768
<b>50627%</b>	Change the resolution to 1280X720 720P	Resolution: 1280x720
<b>50628%</b>	Change the resolution to 1280X800 WXGA	Resolution: 1280x800
<b>50629%</b>	Change the resolution to 1920X1080 1080P	Resolution: 1920x1080
<b>50620%</b>	Change the resolution to 1920X1200 WUXGA	Resolution: 1920x1200
<b>50621%</b>	Change the resolution to 1600X1200 UXGA	Resolution: 1600x1200
<b>Inquire Commands</b>		
<b>50632%</b>	Check the output resolution	Resolution: xx
<b>50633%</b>	Check the picture mode	Picture Mode: xx
<b>50635%</b>	Check the image aspect ratio	Aspect Ratio: xx



## HDBaseT Extender Set

<b>50636%</b>	Check the brightness	Brightness: xx
<b>50637%</b>	Check the contrast	Contrast: xx
<b>50638%</b>	Check the saturation	Saturation: xx
<b>50639%</b>	Check sharpness	Sharpness: xx
<b>50640%</b>	Check the color temperature	Color Temperature: xx
<b>50707%</b>	Check the present resolution and polarity	1920x1080 Hpolarity:1 Vpolarity:0
<b>50699%</b>	Check the system version	Version Vx.x.x
<b>50642%</b>	Check the input signal format of VGA	Port VGA Set & VGA Port VGA Set & YPbPr Port VGA Set & CVBS
<b>50631%</b>	Check the input signal	Input:XXX (XXX=YPbPr, VGA, HDMI, DVI, AV)
<b>50767%</b>	Check the signal source switching mode	Auto Switching Manual Switching
<b>50641%</b>	Check the RS232 mode	RS232 Mode 1: RS232 Control Scaler & Remote RS232 Mode 2:RS232 & Remote Control Scaler
<b>50605%</b>	Check the audio source for DVI signal	DVI Audio from Embedded DVI Audio from LINE
<b>Adjustment Commands</b>		
<b>50678%</b>	Enable screen output adjusting	Enter Output Position Adjust
<b>50679%</b>	Disable screen output adjusting	Exit Output Position Adjust
<b>50670%</b>	Move the image to left	Output Position Adjust X xx

## HDBaseT Extender Set

<b>50671%</b>	Move the image to right	Output Position Adjust X xx
<b>50672%</b>	Move the image up	Output Position Adjust Y xx
<b>50673%</b>	Move the image down	Output Position Adjust Y xx
<b>50674%</b>	Pull left from right side (decrease image width)	Output Width Adjust xx
<b>50675%</b>	Stretch right from right side (increase image width)	Output Width Adjust xx
<b>50676%</b>	Stretch upwards from bottom side (decrease image height)	Output Height Adjust xx
<b>50677%</b>	Stretch downwards from bottom side (increase image height)	Output Height Adjust xx
<b>EDID Commands</b>		
<b>50769%</b>	Load EDID data from U-disk.	EDID read ok!
<b>50772%</b>	Restore EDID default.	EDID restore to default!
<b>50773%</b>	EDID pass-through.	EDID: bypass.
<b>50774%</b>	Customize EDID.	EDID: user.
<b>50778%</b>	Check EDID mode.	EDID: initial. EDID: bypass. EDID: user.
<b>50799%</b>	Program EDID file, send EDID data within 10s.	Waiting for edid within 10 secs!
<b>Receiver</b>		
80800%	Reset to factory default	
80600%	Open analog audio output	Analog Audio Open
80601%	Close analog audio output	Analog Audio Close
80643%	Check the status for analog audio output	AUDIO MUTE /UNMUTE
80605%	Check the signal format for VGA output signal.	Output Format is RGB/ YPBPR

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80606%	Change the resolution to 1920x1080i for all displays.	Resolution:1920x1080i
80612%	Change the resolution to 1920x1080p for all displays.	Resolution:1920x1080p
80613%	Change the resolution to 800x600p for all displays.	Resolution:800x600p
80614%	Change the resolution to 1024x768p for all displays.	Resolution:1024x768p
80615%	Change the resolution to 1280x1024p for all displays.	Resolution:1280x1024p
80616%	Change the resolution to 1920x1200p for all displays.	Resolution:1920x1200p
80627%	Change the resolution to 1280x720p for all displays.	Resolution:1280x720p
80623%	Set the signal format as YPBPR for VGA output signal	Switch To YPBPR
80622%	Set the signal format as VGA for VGA output signal	Switch To VGA
80687%	Inquire current resolution(including CVBS&YPBPR&RGB )	Resolution: xxxxxxxx
80700%	Enable far-end device to control this unit	RS232 Mode 1: RS232 Control Scaler & Remote
80701%	Enable this unit to control far-end devices	RS232 Mode 2:RS232 & Remote Control Scaler
80300%	Move the image up	Picture Move Up
80301%	Move the image down	Picture Move Down
80302%	Move the image to left	Picture Move Left
80303%	Move the image to right	Picture Move Right
80200%	Check the brightness	BRIGHTNESS is XX
80201%	Check the contrast	CONTRAST is XX
80202%	Check the saturation	SATURATION is XX
80203%	Check the chrominance	HUE is XX

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80204%	Check the video format for output video signal	Video output Is YPBPR/RGB/CVBS
80207%	Check the resolution mode	Resolution is Auto/Resolution is Manual
80208%	Check the version	Versions X.X.XT
80214%	Check the RS232 mode	RS232 Mode 2: RS232 & Remote Control Scaler RS232 Mode 1: RS232 Control Scaler & Remote
80212%	Auto mode for adjusting output resolution.	Switch Auto Mode
80213%	Manual mode for adjusting output resolution.	Switch Manual Mode
11xxx%	Set the brightness value	Brightness:
12xxx%	Set the contrast value	Contrast:
13xxx%	Set the saturation value	Saturation:
14xxx%	Set the chromaticity value	Hue:

### Note:

- ✧ EDID and HDCP commands are for HDMI sources only.
- ✧ 50790%、50791%、50792% only used for Transmitter.
- ✧ By default, Both Transmitter and Receiver are in **RS232 Mode 1**, the PC that is connected to Transmitter can control Receiver by sending commands.
- ✧ If you want to control Transmitter via the PC that is connected to Receiver, please send 50780% and 80701% to make Transmitter and Receiver into **RS232 Mode 2**.

## 4.3 RS232 Passthrough Feature

Besides RS232 control function, TP408P supports bi-directional RS232 passthrough feature. Connect a control device to the RS232 port of Transmitter or Receiver, and connect a device that need to be controlled to the remote RS232 port of Transmitter or Receiver. The remote device can be controlled by sending commands via control device.

For example, connect a PC to RS232 port of Transmitter, and then connect a projector to RS232 port of Receiver, the connection diagram as shown as below. The remote projector can be controlled by sending commands via PC. For specific commands,

## HDBaseT Extender Set

please refer to the projector's user manual.

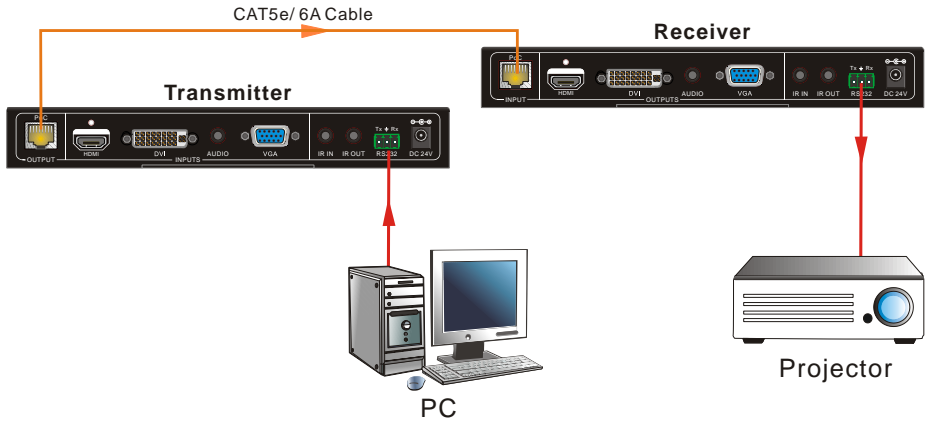


Figure 4-1 RS232 Pass-through Diagram



1. Before using RS232 passthrough feature, 50779% and 80701% should be sent to make Transmitter and Receiver into **RS232 mode 1** and **RS232 mode 2**.
2. When using RS232 passthrough feature, the baud rate supports 2400、4800、9600、19200、38400、57600、115200; Data bit: 8; Stop bit: 1; Parity bit: none.

## 5. Specification

Model Spec	Transmitter	Receiver
<b>Input Ports</b>		
Input Signal	1xHDMI; 1xDVI; 1xVGA; 1xAUDIO;	1xHDBT INPUT
Input Connector	Female HDMI (Type-A); Female DVI-I; Female VGA (DB-15,blue); 3.5mm stereo jack;	RJ-45
<b>Output Ports</b>		
Output	1xHDBT OUTPUT	1xHDMI; 1xDVI; 1xVGA; 1xAUDIO;
Output Connector	RJ-45	Female HDMI (Type-A); Female DVI-I; Female VGA (DB-15,blue); 3.5mm stereo jack
<b>Control Ports</b>		
Control Ports	1xIR IN; 1xIR OUT; 1xRS232	1xIR IN; 1xIR OUT; 1xRS232
Control Connector	3.5mm mini jack; 3.5mm mini jack; 3-pin RS232 socket	3.5mm mini jack; 3.5mm mini jack; 3-pin RS232 socket
<b>General</b>		
Transmission Mode	HDBase T	

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Transmission Distance	1080P≤70M (PoC)	
Resolution	16:9	1920x1080、1600x900、1366x768、1280x720、1024x576
	16:10	1920x1200、1680x1050、1440x900、1360x768,1280x800
	4:3	1600x1200、1400x1050、1280x1204、1024x768、800x600、640x480
Upscaling Resolution	1920x1200、1920x1080、1600x1200、1360x768、1280x800、1280x720、1024x768.	
Audio Format	<b>HDMI embedded audio:</b> PCM, PCM 2Ch <b>Analog audio:</b> PCM, PCM 2Ch	
VGA Signal Type	Input: support VGA、CVBS、YPbPr Output : support VGA、YPbPr	
Bandwidth	10.2Gbps	
Standard	HDMI1.4, HDCP1.2	
Impedance	75Ω	
Operating Temperature	0 ~ 50°C	
Storage Temperature	-20 ~ 70°C	
Humidity	10% ~ 90%	
Power Supply	Input: 100VAC~240VAC, 50/60Hz    Output: DC 24V,1.25A	
Power Consumption	≤7W	≤13W
Dimension(mm)	W220xH30x D100	W220xH30x D100
Weight	426g	455g

**NOTE:** All nominal levels are at ±10%.

## 6. Panel Drawing

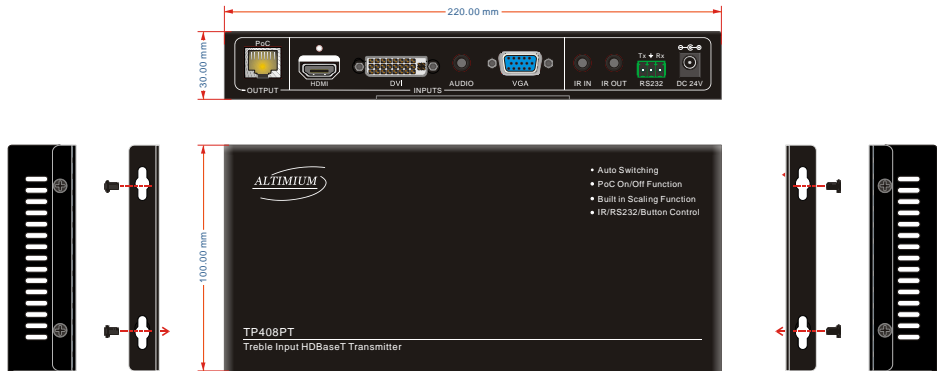


Figure 6-1 Transmitter



Figure 6-2 Receiver



## 7. Troubleshooting & Maintenance

Problems	Causes	Solutions
No reaction to any operation, power indicator is off	Haven't been powered on.	Insert power adapter to the receiver.
	The poor quality of network cable.	Should the replacement CAT5e/CAT6a cable of high quality.
<b>POWER</b> indicator doesn't not	Loose or failed power cord connection	Ensure the power cord connection is good
<b>LINK</b> indicator does not lit	Loose or failed connection	Ensure the power cord connection is good
	The PoC switcher is closure.	Enable PoC function
Color lose or poor picture quality	Signal loss caused by long transmission distance beyond effective value.	Make sure the connecting cable is within 70m and of good quality.
	Bad quality of the HDMI cable.	Ensure the HDMI cables used at source, transmitter, receiver and display are properly connected and are of good quality.
	HDMI cables are too long to transmit high-resolution HDMI signal successfully.	Shorten the length of HDMI cables.
No video output	Communication cables has no connection or bad connection.	Recheck all cables and ports.
	The display that you use is incompatible with this device.	It is recommended that you use mainstream display.
No audio output	Input source and output device are connected to the wrong ports.	Check again and make sure input source and output device are connected correctly.
	Audio output device don't support the audio format.	Change for other output devices that support the audio formats listed in <i>Specifications</i> .

## HDBaseT Extender Set

Static becomes stronger when connecting the video connectors	bad grounding	Check the grounding and make sure it is connected well.
Cannot control the projector by control device (e.g. a PC) through RS232 port	Wrong RS232 communication parameters	Make sure the RS232 communication parameters are correct.
Cannot use the device	the device is broken	Send it to authorized dealer for repairing.

## 8. After-sales Service

If there appear some problems when running the device, please check and deal with the problems reference to this user manual. Any transport costs are borne by the users during the warranty.

- 1) Product Limited Warranty:** We warrants that its products will be free from defects in materials and workmanship for **three years**, which starts from the first day you buy this product (The purchase invoice shall prevail).

Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the Warranty period must be presented to obtain warranty service.

**2) What the warranty does not cover:**

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
  - Normal wear and tear
  - Use of supplies or parts not meeting our specifications
  - No certificate or invoice as the proof of warranty.
  - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
  - Damage caused by force majeure.
  - Servicing not authorized.
  - Any other causes which does not relate to a product defect.
- Delivery, installation or labor charges for installation or setup of the product.

- 3) Technical Support:** Email to our after-sales department or make a call, please inform us the following information about your cases.

- Product version and name.
- Detailed failure situations.
- The formation of the cases.

**Remarks:** For any questions or problems, please try to get help from your local distributor.



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