

# WP-HDBASETX

## Wall Plate HDBaseT Transmitter with Built-in HD Scaler



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**Version: WP-HDBASETX\_2014V1.0**

### 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.

**NOTICE:** Please read this manual carefully before using this product. Pictures shown in this manual are for reference only; different model and specifications are subject to real product.

This manual is for operation instruction only, not for any maintenance usage. The functions described in this version are updated till August 2014. Any changes of functions and parameters since then will be informed separately. Please refer to the dealers for the latest details.

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**All product function is valid till 2014-08-14.**

### Contents

1. Introduction .....	1
1.1 Introduction to WP-HDBASETX.....	1
1.2 Features.....	1
1.3 Package List .....	1
2. Panel Description .....	2
2.1 Front Panel .....	2
2.2 Side Panel .....	3
2.3 Rear Panel.....	3
3. System Connection .....	4
3.1 Usage Precautions .....	4
3.2 System Diagram .....	<b>Error! Bookmark not defined.</b>
3.3 Connection Procedure .....	4
3.4 Energizing WP8 .....	6
3.5 PoC Solution .....	6
3.6 Application .....	6
4. Operations.....	6
4.1 Operations of front panel buttons .....	6
4.2 RS232 Control .....	7
4.2.1 Installation/uninstallation of RS232 Control Software.....	7
4.2.2 Basic Settings .....	7
4.2.3 RS232 Communication Commands .....	9
5. Specification.....	12
6. Panel Drawing.....	13
7. Troubleshooting & Maintenance .....	1
8. After-sales Service .....	2

## 1. Introduction

### 1.1 Introduction to WP-HDBASETX

The WP-HDBASETX is a Decora style transmitter that installs in a double-gang wall box to provide a convenient interface for HDMI / VGA input sources. It has 1 HDMI IN, 1 VGA IN and 1 HDBaseT OUT with PoC. It supports VGA with full HD scaler, and HDMI 1.4 with 4k& 3D, input signals support auto-switching and manual switching. The HDBaseT output supports 60m UHD video transmission with PoC enables bi-directional RS232 communication between the wall plate transmitter and remote device.

\* With its PoC solution, a far-end PoC receiver can power the Wall plate Tx.

### 1.2 Features

- Selectable HDMI/ VGA with audio input
- Support VGA output resolution up to 1920x1200
- High bandwidth: 10.2Gbps
- Built-in scaler function, support scaling HDMI/ VGA signals to match the native resolution of the display
- Transmit HDMI signals up to 4K UHD
- Compliant with HDMI 1.4, support 1080p & 3D
- HDCP compliance, equipped with HDCP auto-tracking solution
- Provides auto-switching capability
- Support multiple control methods including front panel buttons, and RS232, support bi-directional RS232 pass-through control.
- Supports firmware upgrading via USB.
- Power up WP-Control Wall Plates with a DC 12V power output
- Powered by local power pack or PoC connection up to 60m
- Aluminum design for cooling mechanism

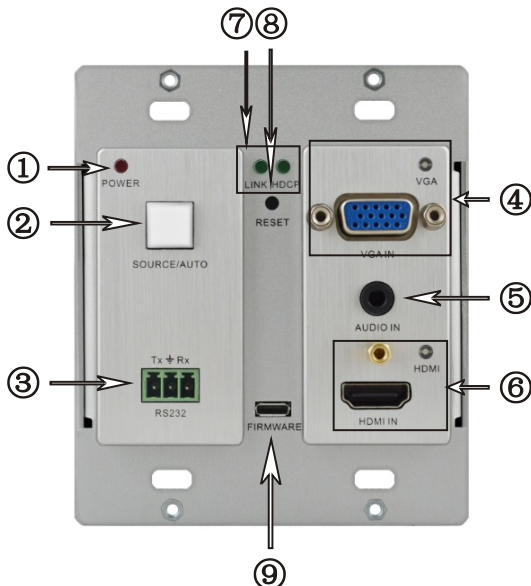
### 1.3 Package List

- 1 x WP-HDBASETX
- 4 x Screws (for Wall plate)
- 3 x Pluggable Terminal Blocks (1 2-pin block, 1 3-pin block, and 1 4-pin block)
- 1 x Face Plate (Selectable)
- 4 x Screws (for the face plate)
- 1 x Power Adapter (DC 12V 2A, selectable)
- 1 x User Manual

**Notes:** Please confirm if the product and the accessories are all included, if not, please contact your dealer.

## 2. Panel Description

### 2.1 Front Panel



No.	Name	Description
□	Power indicator	Illuminates red when power on
□	SOURCE/ AUTO	<ul style="list-style-type: none"> <li>✓ Used as video source selection button (with backlight off): Press to select one source, press again to select next source, switching circularly between HDMI and VGA. The indicator of the selected input source will illuminate green.</li> <li>✓ Used as switching mode selection button (with backlight on): Press and hold for 3 seconds or more to enter in Auto-switching mode, the indicator illuminates green when in auto-switching mode. Press and hold for 3 seconds or more again to enter in Manual-switching mode.</li> </ul>
□	RS232	Serial port, 3-pin pluggable terminal block connects with the control terminal to control the Wall plate Tx, supports bi-directional RS232 control (send control signal from local or receive control signal sent from far-end devices).
□	VGA IN	Connect with VGA source device.

		<p>The indicator:</p> <ul style="list-style-type: none"> <li>✓ Illuminates yellow when there is VGA signal input</li> <li>✓ Illuminates green when the signal source is chosen as input source</li> <li>✓ Turn off when there is no VGA input signal</li> </ul>
□	AUDIO IN	Connect with the audio output socket of VGA source device, deliver synchronous audio source with VGA signal source when choosing VGA as source signal.
□	HDMI IN	Connect with HDMI source device. The indicator will illuminate yellow when there is VGA signal input and illuminate green when the signal source is chosen as input source.
□	LINK & HDCP	<ul style="list-style-type: none"> <li>✓ LINK: Twisted Pair Link status indicator, illuminate green when successfully connected.</li> <li>✓ HDCP: HDCP compliance indicator, illuminate green when the source signals is with HDCP; turn off when not.</li> </ul>
⑧	RESET	Press the button to reboot Wall plate transmitter.
⑨	FIRMWARE	USB port, used for firmware update Plug a flash disk or other storage device with update file (MERGE.bin), and send command <b>50698%</b> to update firmware.

### 2.2 Side Panel



□ HDBaseT OUT: RJ45 port, connect with receiver via a CAT5e/6 cable to deliver Audio/ Video signals, support PoC.

Note: The Wall Plate supports unidirectional PoC, i.e. far-end receiver can energize it but it can't energize far-end receiver.

### 2.3 Rear Panel



No.	Name	Description
□	Power In	Power in port, 2-pin pluggable terminal block, connect with DC 12V power adapter
□	Power Out	Power out port, connect with WP-CONTROLS/B Wall plates to energize it with a 12V power output
□	RS232	Serial port connects with a far-end receiver, supports bi-directional RS232 control (send control signal from local or receive control signal sent from far-end devices).

**Note:** Pictures shown in 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 safe.
- 3) All devices should be connected before power on.

#### 3.2 Connection Procedure

**Step1.** Connect HDMI source device (e.g. Blue-ray DVD) to HDMI input ports of the Wall plate TX with HDMI cable. Connect a VGA source device (e.g. PC) to the VGA



input port of the Wall Plate Tx with a VGA cable.

- Step2.** Connect a receiver (HDBASE70POER) to the HDBaseT port on the rear panel with twisted pair.
- Step3.** Connect a HDMI display to the HDMI OUT port of Receiver.
- Step4.** Connect a control terminal to the RS232 port on the front panel of receiver.
- Step5.** Connect control device (e.g. PC) to RS232 port of the wall plate Tx or receiver (bi-directional RS232 control, either is available).
- Step6.** Connect DC **24V** power adaptor to the power port of receiver, the wall plate will be able to get power from receiver with PoE solution.

**Note:** This Wall Plate supports unidirectional PoE, i.e., the WP-HDBASETX can get power from far-end PoE devices with PoE function while it can't energize far-end PoE devices when the power supply is connected to the Wall Plate Tx.

### 3.3 Energizing WP-CONTROLS OR WP-CONTROLB

WP-HDBASETX has a 12V power output port on the rear panel. Connect the 12V power output port of WP-HDBASETX to the power port of Control panel wall plate (refer to the following figure), our device is capable of energizing these wall plate control panels.

### 3.4 PoE Solution

The Wall Plate has an HDBaseT OUTPUT port on the rear panel, which can extend HDMI/ VGA signals up to 60m. Meanwhile it also supports PoE, which allows several terminals share the same power supply and eliminates the need for extra power supply at the remote nodes.

Connect a DC 24V power adapter to the power port of HDBASE70POER, WP-HDBASETX can be energized synchronously with PoE solution, see the picture below:

### 3.5 Application

This Wall plate TX has a good application in various occasions, such as computer realm, monitoring, conference room, big screen displaying, television education, command & control center and smart home etc.

## 4. Operations

### 4.1 Operations of front panel buttons

The WP-HDBASETX has a channel-switching button on the front panel, through which users can switch input source signals.

It supports both manual switching and auto switching. (Default: Auto switching) Press and hold the switching button for 3 seconds or send command “**50770%** “ and “**50771%**” to switch between the two modes.

Switching modes:

➤ Auto switching mode

In this mode, the indicator will illuminates green, and WP-HDBASETX will recognize the last connected source device as input source automatically.

Disconnect the present source device; it will deliver the other source signal (if there is input signal on the other source).

➤ Manual switching mode

In this mode, the indicator will remain off. Press the switching button to select input source, it will switch circularly between HDMI and VGA. Or switch it by sending

RS232 commands.

The indicator of the selected input source will illuminate green.

### 4.2 RS232 Control

As RS232 can be transmitted bi-directionally between the wall plate and receiver (HDBASE70POER), so it is able to control a third party RS232 device from local or control the wall plate from remote. When controlling a third party RS232 device, the baud rate of this device should be 2400, 4800, 9600, 19200, 38400, 57600 or 115200.

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

- **Installation** Copy the control software file to the computer connected with WP-HDBASETX.
- **Uninstallation** Delete all the control software files in corresponding file path.

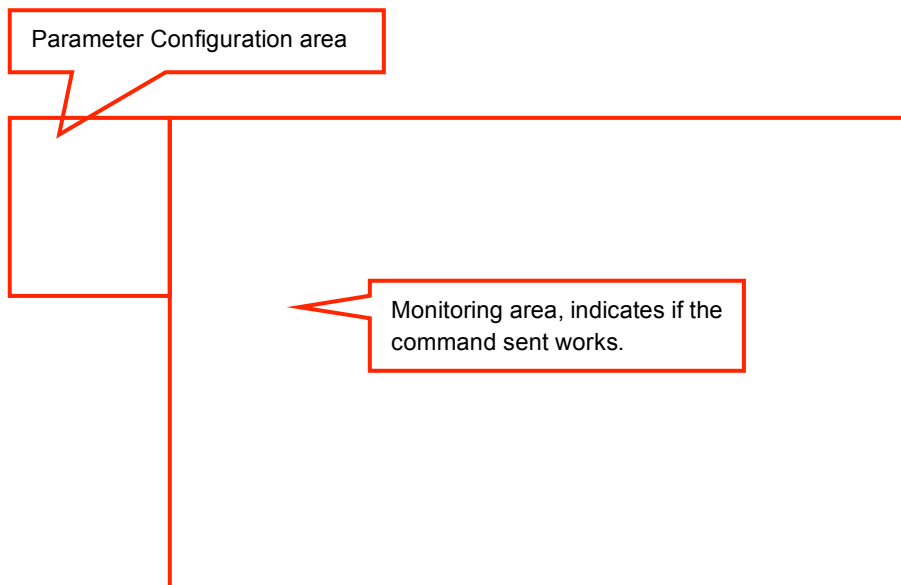
#### 4.2.2 Basic Settings

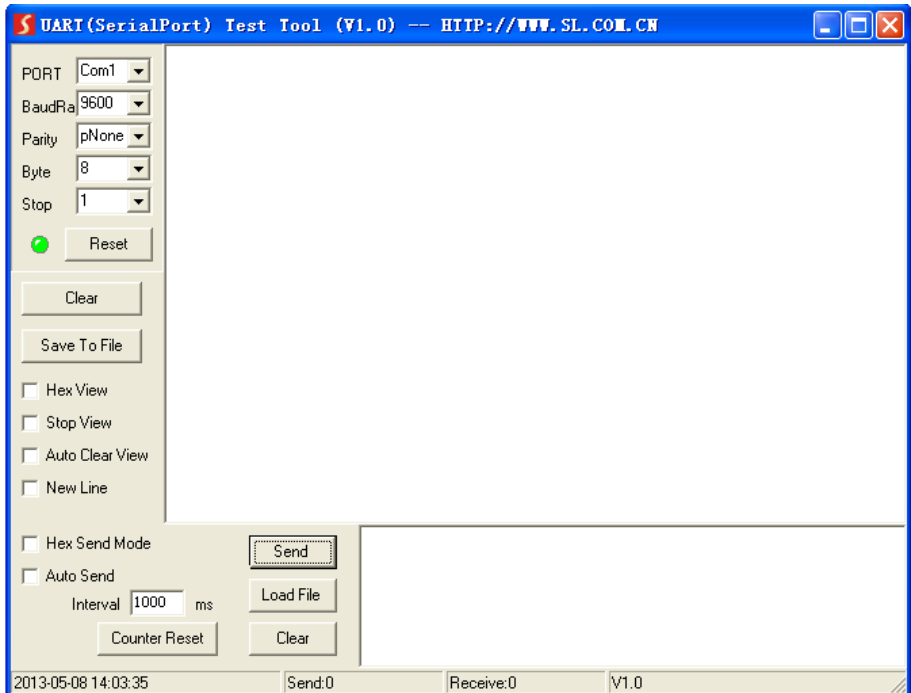
First, connect WP-HDBASETX with all input devices and output devices needed, then to connect it with a computer that is installed with RS232 control software. Double-click the software icon to run this software.

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



The interface of the control software is showed as below:





Please set the parameters of COM number, baud 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
<b>Switch Commands</b>		
<b>50701%</b>	Switch to HDMI input	Switch to HDMI
<b>50704%</b>	Switch to VGA input	Switch to VGA
<b>50770%</b>	Enable auto-switching	Auto Switching
<b>50771%</b>	Disable auto-switching	Manual Switching
<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>Setup Commands</b>		
<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>50699%</b>	Check the system version	Version Vx.x.x
<b>50779%</b>	Switch to RS232 mode 1, enable scaler 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 scaler	RS232 Mode 2:RS232 & Remote Control Scaler
<b>50790%</b>	Set the HDCP status of HDMI input socket to Active	HDCP Active
<b>50791%</b>	Set the HDCP status of HDMI input socket to On	HDCP On
<b>50792%</b>	Set the HDCP status of HDMI input socket to Off	HDCP Off
<b>50698%</b>	Software update	
<b>50617%</b>	Reset to factory default	
<b>Inquire Commands</b>		
<b>50632%</b>	Check the output resolution	Resolution: xx
<b>50633%</b>	Check the picture mode	Picture Mode: xx
<b>50793%</b>	Check HDCP status	HDCP Off

		HDCP On HDCP Active
<b>50635%</b>	Check the image aspect ratio	Aspect Ratio: xx
<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>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
<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>	Stretch left from left side (increase image width)	Output Width Adjust xx
<b>50675%</b>	Pull right from left side (decrease 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>50772%</b>	EDID pass-through	EDID: bypass mode
<b>50773%</b>	Set EDID data to 1080P PCM 2.0ch	EDID: 1080P&PCM 2ch
<b>50774%</b>	Set EDID data to 1080P Dolby 5.1	EDID: 1080P&5.1ch
<b>50775%</b>	Set EDID data to 1080P3D Dolby 5.1	EDID: 1080P3d&5.1ch
<b>50776%</b>	Set EDID data to 1080i PCM 2.0ch	EDID: 1080i&PCM 2ch
<b>50777%</b>	Set EDID data to 4K*2K PCM 2.0ch	EDID: 4K&PCM 2ch

<b>50778%</b>	Check EDID data	EDID: 1080P&PCM 2ch EDID: 1080P&5.1ch EDID: 1080P3D&5.1ch EDID: 4K&PCM 2ch
<b>50799%</b>	Program EDID file, send EDID data within 10s	Waiting for EDID within 10 seconds

**Note:**

1. Commands with grey background are for VGA sources only.
2. EDID commands are for HDMI sources only.

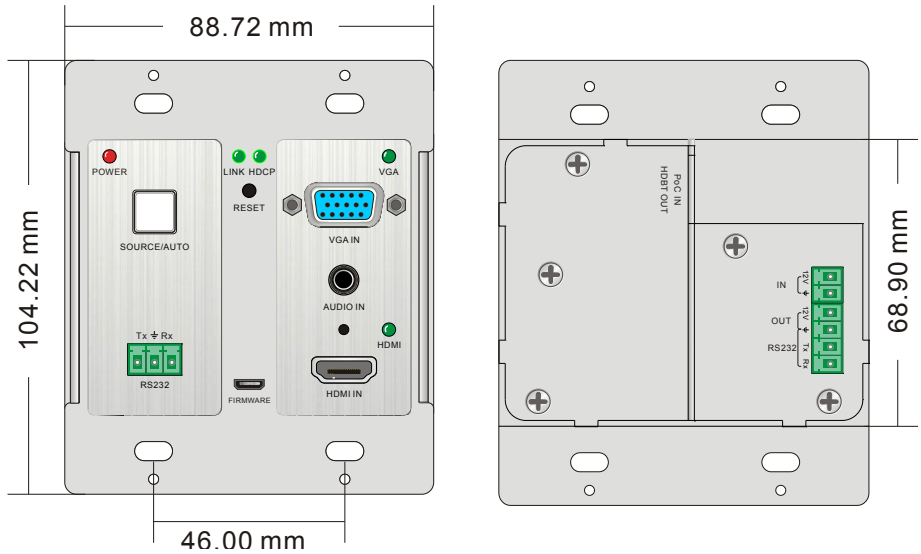
## 5. Specification

<b>Audio</b>	
Input	
Input Signal	1 HDMI, 1 VGA, 1 AUDIO, 1 RS232
Connector	1 19-pin Type A HDMI female; 1 15-pin VGA; 1 3.5mm stereo jack; 1 3-pin pluggable terminal block
Output	
Output Signal	1 HDBaseT
Connector	1 RJ45
Transmission Mode	HDBaseT
<b>Video</b>	
Frequency Response	20Hz~20KHz
Impedance	> 10Ω
SNR	>85db@20Hz~20KHz
<b>General</b>	
Resolution	VGA: 800 x600, 1024 x 768, 1280 x 800,1280 x 1024, 1440 x 900,1600 x 1200, 1920 x 1080, 1920 x 1200; HDMI: 4Kx2K, 1080p 3D, 1080P(HD)/1080i/720P/576P/576i/480P/480i
Transmission Distance	1080P≤60M (PoC) 4Kx2K≤40M (PoC)
Bandwidth	10.2Gbps
HDMI Standard	Support HDMI1.4 and HDCP
Power Supply	DC 12V 2A; 9.6W



Temperature	-10 ~ +40°C
Humidity	10% ~ 90%
Chassis Dimension	Decora style two gang
Dimension (W*H*D)	104.5 x 89 x 44 mm
Weight	0.29Kg

### 6. Panel Drawing



## 7. Troubleshooting & Maintenance

Problems	Causes	Solutions
Color losing or no video signal output in HDMI display	The connecting cables may not be connected correctly or it may be broken	Check whether the cables are connected correctly and in working condition.
No HDMI signal output in the device while local HDMI input is in normal working state		
Output image with snowflake		
<b>POWER</b> indicator doesn't work or no respond to any operation	Loose or failed power cord connection	Ensure the power cord connection is good
Cannot control the device by control device (e.g. a PC) through RS232 port	Wrong RS232 communication parameters	Make sure the RS232 communication parameters are correct.
Static becomes stronger when connecting the video connectors	Bad grounding	Check the grounding and make sure it is connected well.
Cannot be controlled through RS232 port or front panel buttons	The unit may have already been broken	Send it to authorized dealer for repairing.

\*\* If your problem persists after following the above troubleshooting steps, seek further help from authorized dealer or our technical support at 888-975-1368

## 8. After-sales Service

If there appear some problems when running TPHD405PT-WPB, 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:** PTN 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 that 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 by KanexPro
  - 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 or AV Dealer or Reps first.

## 9. Warranty

KanexPro TM warrants that (a) its products (the "Product") will perform greatly in agreement with the accompanying written materials for a period of 36 months from the date of receipt (3 years) and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years.

### B. CUSTOMER REMEDIES

KanexPro's entire liability and Customer's exclusive remedy shall be, at KanexPro option, either return of the price paid for the product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to KanexPro with a copy of customers' receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period of 3 years, whichever is longer.

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