User Manual
PT-PK100

PureTools

User Manual

Multi-function AV Distribution System

Model PT-PK100

Designed in Germany

 V1.2

User Manual
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Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different model layouts and specifications are subject to the physical product.

This manual is for operation instructions only, not for any maintenance usage.

In the constant effort to improve our product, we reserve the right to make changes in functions or parameters without prior notice or obligation.

Trademarks

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.

FC

REACH | 1907/2006/EU

ROHS | 2011/65/EU

PureLink hereby declares that this product **PureTools PT-PK100** complies with Directives 1907/2006/EU und 2011/65/EU.

EMC / LVD (Electro Magnetic Compatibility / Low Voltage Directive)

PureLink GmbH hereby declares that this product **PureTools PT-PK100** complies with Directives 2014/30/EU and 2014/35/EU. The full text of the EU Declaration of Conformity is available at the following Internet address:

http://www.purelink.de/ce/4251364709962_CE.pdf

CE

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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PureTools

Contents

1. Introduction

1.1 Introduction to PT-PK100

The PT-PK100 is a multi-function AV distribution system designed to provide HDMI video switching, system control, video extension and analog audio amplification in a convenient kit. The system consists of PT-PK100-TXWP Scaler Wall Plate HDBaseT Transmitter, PT-PK100-RX HDBaseT Receiver and K12-PAD1-EU Control Panel.

Utilizing the Valens Colligo series chips, power, control, video up to 1080p, and audio are transported over a single 30m (98 ft) solid core Category cable between the wall plate transmitter and the receiver. The wall plate control module connects to the wall plate transmitter with a second solid core Category cable. All the power needed for the system is provided by the receiver. Additionally, the receiver features a built-in web GUI for control and analog audio de-embedding to a built-in 2x20 watt stereo amplifier.

1.2 Feature

- Supports HDMI or VGA signal input.
- Output resolution can be selected as 1024x768, 1280x720, 1280x800, 1360x768, 1600x1200, 1920x1080, or 1920x1200.
- Supports RS232 control.
- USB for connection to smart board.
- Supports HDCP 1.4.
- Supports MIC input.
- 2x20Watt@4Ohm amplifier output.
- Customizable control panel, support IR Learning.
- Read and write the data of IR Learning.
- Supports GUI control.
- Micro USB for firmware update.
- Supports UPNP.

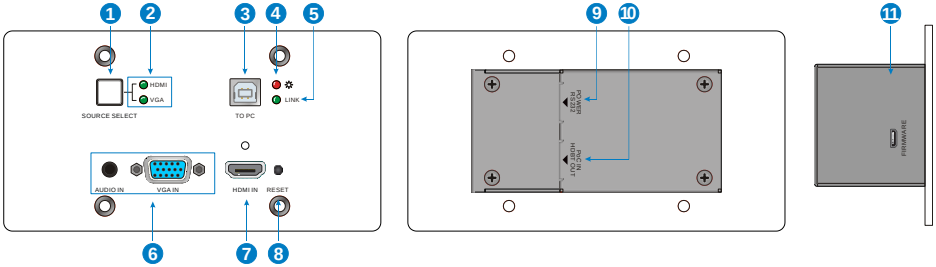
1.3 Package List

Transmitter	• 1 x PT-PK100-TXWP Scaler Wall Plate HDBaseT Transmitter • 1 x White Face Plate
Receiver	• 1 x PT-PK100-RX HDBaseT Receiver • 2 x Mounting Ears with 4 Screws • 4 x Rubber Feet • 1 x 4-pin Pluggable Terminal Block • 3 x 3-pin Pluggable Terminal Blocks • 1 x 2-pin Pluggable Terminal Block • 1 x IR Emitter • 1 x USB Control Cable (USB-A to USB-B) • 1 x Power Adapter (DC 24V 2.71A)
Control Panel	• 1 x PT-PK100-BCWP Control Panel
	• 1 x User Manual

Note: *Please contact your distributor immediately if you found any damage or defect in the components.*

2. Panel Description

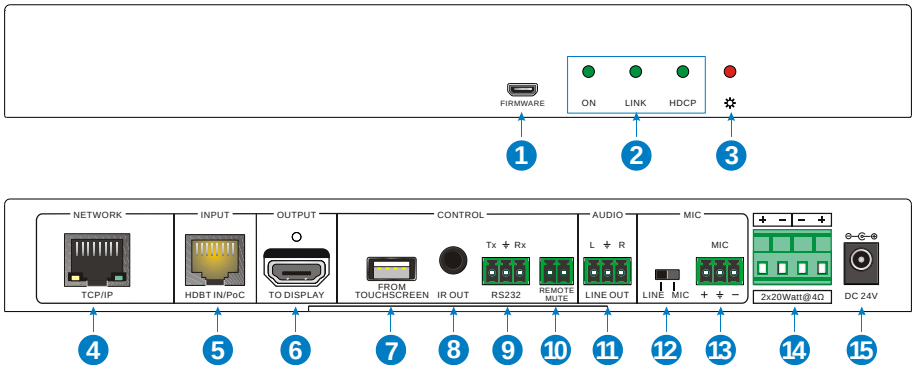
2.1 PT-PK100-TXWP HDBaseT Transmitter



No.	Name	Description
①	SOURCE SELECT	Blue-backlight button. Press it to select one source, press again to select next source, switching circularly between VGA and HDMI input. ***Note:*** *Without any action for this button, the second HDMI source connected to transmitter will be recognized as input signal.*
②	Signal indicators	• HDMI-- OFF: No HDMI signal traffic/ YELLOW: HDMI signal traffic/ GREEN: HDMI signal is chosen as input source. • VGA-- OFF: No VGA signal traffic/ YELLOW: VGA signal traffic/ GREEN: VGA signal is chosen as input source.
③	To PC	Connect PC to transmit USB control signal.
④	Power indicator	OFF: No power/ RED: DC power present.
⑤	HDBT Link status indicator	OFF: No Link/ GREEN: Link successful.
⑥	VGA & AUDIO IN	VGA video and its external audio input ports, connect with VGA source.

No.	Name	Description
⑦	HDMI IN	Connect with HDMI source.
⑧	RESET	Press this button to reboot PT-PK100-TXWP.
⑨	POWER/ RS232	RJ45 connector. Connect to the POWER/RS232 port on the PT-PK100-BCWP Control Panel via CAT5e/ CAT6a cable to transmit RS232 control signal and power PT-PK100-BCWP.
⑩	PoC IN/ HDBT OUT	Connect to the HDBT IN/PoC port on the PT-PK100-RX HDBaseT Receiver via CAT5e/ CAT6a cable to transmit AV and control signal. With PoC solution, PT-PK100-TXWP can be powered by this port once PT-PK100-RX has been powered up.
⑪	FIRMWARE	Micro USB port, used for firmware update. Firmware updated need auxiliary equipment, please contact with our customer service department for more details.

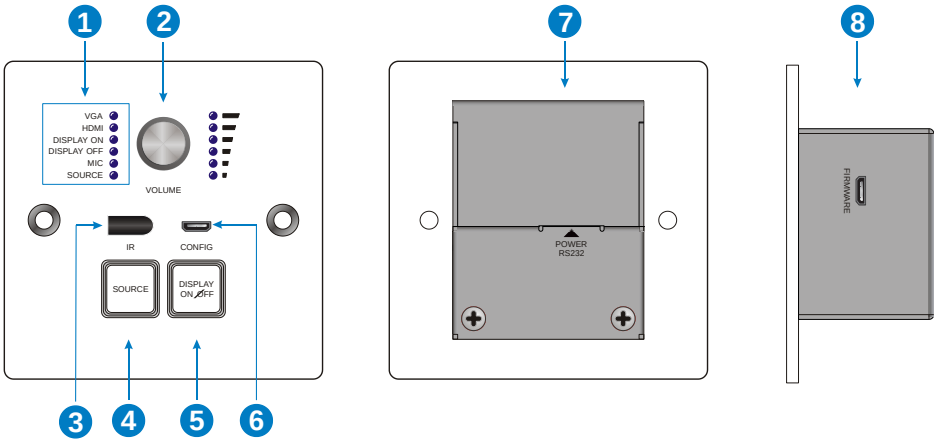
2.2 PT-PK100-RX HDBaseT Receiver



No.	Name	Description
①	FIRMWARE	Micro USB port, used for firmware update. Firmware updated need auxiliary equipment, please contact with our customer service department for more details.
②	LED indicator	• ON: working status indicator-- OFF: Not at work/ Blinking GREEN: Work normal. • LINK: HDBT Link status indicator-- OFF: No Link/ GREEN: Link successful/ Blinking GREEN: Link abnormal. • HDCP: HDCP compliance indicator-- OFF: No HDMI traffic (no picture)/ GREEN: Traffic with HDCP/ Blinking GREEN: Traffic without HDCP.
③	Power indicator	OFF: No power/ RED: DC power present.
④	TCP/IP	Connect to a PC to control the following items by GUI: • Input signal switching. • Volume adjusting. • Turn on or off the display. • Put the system into standby or start it.
⑤	HDBT IN/PoC	Connect to the PoC IN/HDBT OUT port of PT-PK100-TXWP with a CAT5e cable.
⑥	TO DISPLAY	Connect with a display.
⑦	FROM TOUCH SCREEN	USB-A connector. • Connect to a Smart Board with embedded touch screen, and send USB signal back to signal source. • Connect to an interactive display to achieve on-line handwriting annotation, but it can't be synchronized to PC.
⑧	IR OUT	Connect with IR Emitter, IR signals emitted from the IR emitter are received by the in-built IR receiver of PAD1V-EU Control Panel.

No.	Name	Description
⑨	RS232	Additional serial interface. Connect to a display and send RS232 commands to control it.
⑩	REMOTE MUTE	Connect to fire alarm system. When the fire alarm signal input, the audio output will be set to mute.
⑪	LINE OUT	Connect to audio broadcast device to play the HDMI embedded audio and MIC audio in mixed mode. In additional, you can connect this port to sound recorder for sound recording.
⑫	MIC LINE	Input mode switch. • When the switch turns to "MIC", the microphone input is used for connecting with dynamic microphone. There are two different connections: 1) Unbalanced connection: "⏚" connects to ground, and "-" connects to signal. 2) Balanced connection: "+" connects to positive, "-" connects to negative and "⏚" connects to ground. • When the switch turns to "LINE", the microphone input is used for connecting with normal audio or wireless microphone output. There are two different connections: 1) Unbalanced connection: "⏚" connects to ground, and "-" connects to signal. 2) Balanced connection: "+" connects to positive, "-" connects to negative and "⏚" connects to ground.
⑬	MIC	Connect with microphone. Both Mic and Line are compatible. When connect with PC or other audio input devices besides microphone, only "-"and "⏚" pins need to be used.
⑭	2x20Watt@4Ω	Connect to speaker to play the HDMI embedded audio and MIC audio in mixed mode.
⑮	DC24V	Connect with DC 24V 2.71A power adapter.

2.3 PT-PK100-BCWP Control Panel



No.	Name	Description
①	LED indicator	• VGA: BLUE when VGA input is selected. • HDMI: BLUE when HDMI input is selected. • DISPLAY ON: BLUE when press the "**DISPLAY ON/OFF**" button to select DISPLAY ON function. • DISPLAY OFF: BLUE when press the "**DISPLAY ON/OFF**" button to select DISPLAY OFF function. • MIC: BLUE when the MIC audio is selected to adjust its volume. • SOURCE: BLUE when the source audio is selected to adjust its volume.
②	VOLUME Knob	• Press this button to mute or unmute. • Long-press this button for three seconds to choose MIC or SOURCE input audio need to be adjusted. • Clockwise/ Anti-clockwise adjustment to increase/ decrease the volume.

No.	Name	Description
③	IR	Built-in IR sensor, receive IR signal from IR remote.
④	SOURCE	Press this to select HDMI and VGA source.
⑤	DISPLAY ON/OFF	Customize button. Press this to select DISPLAY ON/OFF function, the corresponding LED will turn blue.
⑥	CONFIG	Micro USB connector for configuration data importing or exporting.
⑦	POWER/RS232	RJ45 connector. Connect to the POWER/RS232 port on PT-PK100-TXWP via CAT5e/ CAT6a cable to transmit RS232 control signal. The PT-PK100-BCWP can be powered by PT-PK100-TXWP via this port.
⑧	FIRMWARE	Micro USB port, used for firmware update. Firmware update need auxiliary equipment, please contact with our customer service department for more details.

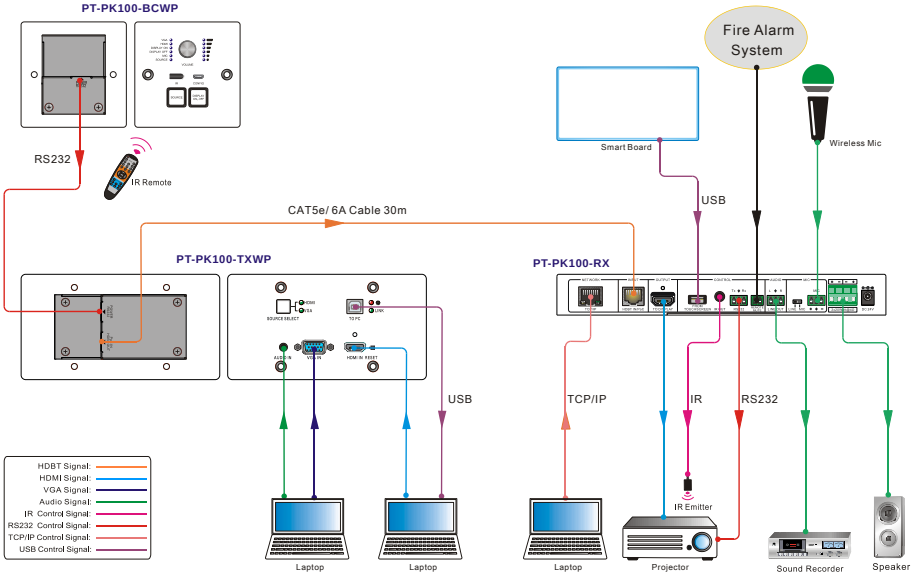
Note: *Pictures shown in this manual are for reference only.*

3. System Connection

3.1 Usage Precaution

- System should be installed in a clean environment, preferably at ambient temperature or within given working temperature range (see page 29, 30 &31 for limits).
- All of the power switches, plugs, sockets and power cords should be insulated.
- All devices should be connected before power on.

3.2 System Diagram



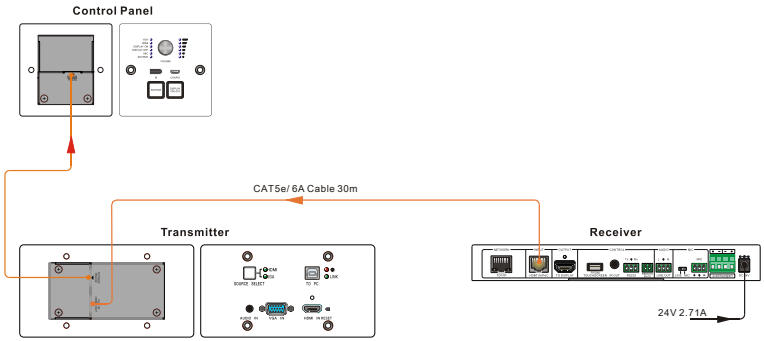
Note:

- *System Diagram shown in this manual are for reference only, more specific schemes depend on real devices.*
- *Connect HDBT ports via straight-thru CAT5e/6 cable with TIA/EIAT568B standard terminations at both ends.*
- *The distance is less than 30m (98ft) between HDBaseT Transmitter and HDBaseT Receiver.*

3.3 PoC Connection

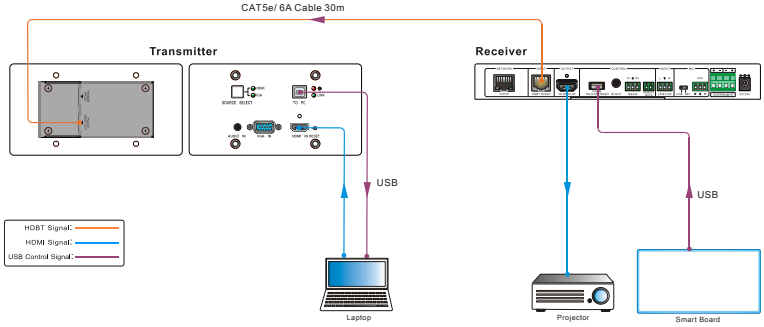
The system supports PoC, which allows several terminals share the same power supply and eliminates the need for extra power supply at the remote nodes.

Connect a DC24V 2.71A power adapter to the power port of HDBaseT Receiver, HDBaseT Transmitter and Control Panel can be energized synchronously with PoC solution, see the picture below:



3.4 USB Connection

HDBaseT Receiver has a USB port (**FROM TOUCH SCREEN)** to connect with Smart Board. When user make notes on smart board, HDBaseT Receiver will receive the signal from Smart Board via USB cable and send it back to HDMI signal source (PC), and then it will be transmitted to display. Please refer to the return path of USB signal as shown as below.

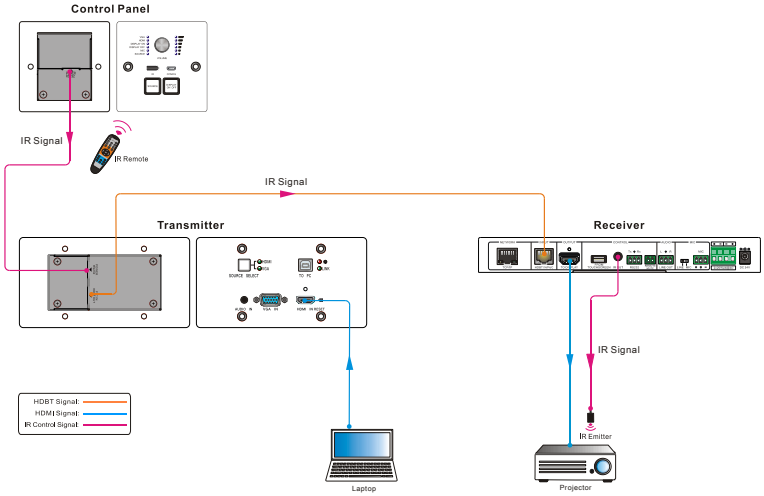


The special USB control cable is required if the connection distance is more than 4m/13ft between HDBaseT Receiver and Smart Board.

3.5 IR Connection

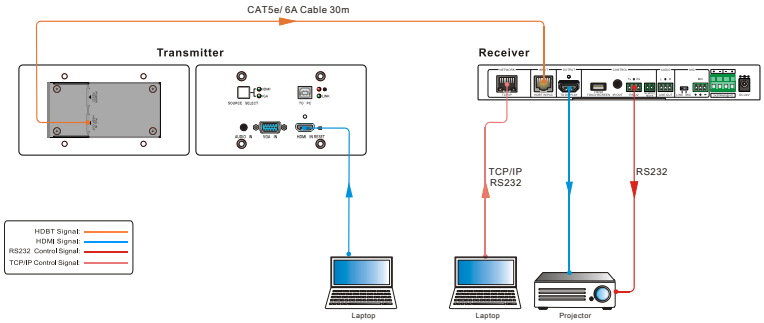
Control Panel provides in-built IR sensor and HDBaseT Receiver provides an **IR OUT** port for IR Emitter to control far-end device from local.

In this educational system, put the IR remote of display close to in-built IR sensor of Control Panel, and put IR Emitter close to the far-end display, then the display can be controlled by IR remote based on IR pass-through function.



3.6 RS232 Connection

HDBaseT Receiver provides an additional RS232 interface to connect with a display, and then control it by sending RS232 commands via GUI. Please refer to ***4.3.3 Command Tab***.



4. System Operation

4.1 IR Learning

IR learning function allows user to use the buttons of PT-PK100-BCWP Control Panel to displace some keys of IR remote which can control display or other devices. PT-PK100-BCWP Control Panel has two buttons: "**SOURCE**" and "**DISPLAY ON/OFF**"; On the other hand, the "**SOURCE**" button does not support IR learning function due to for switching input sources only.

- **Enter IR Learning Mode**

Press "**SOURCE**" and "**DISPLAY ON/OFF**" buttons at the same time to enter IR learning mode. These two buttons will light up, and the **DISPLAY ON** and **DISPLAY OFF** LEDs will start to flash.

- **Programming the DISPLAY ON and DISPLAY OFF Functions**

  ① Press the "**DISPLAY ON/OFF**" button to choose **DISPLAY ON** or **DISPLAY OFF** button function, and its LED will lights blue.

  For example, press "**DISPLAY ON/OFF**" button to choose **DISPLAY ON** button function, and its LED lights blue.

  ② Press the corresponding key (such as power on key) on IR remote; meanwhile, put IR remote close to the IR sensor of Control Panel.

  ③ Once user successfully set up, the **DISPLAY ON** LED will flash 3 times.

  ④ Repeat the above all three steps to set another button function.

- **Exit IR Learning Mode**

Press the "**SOURCE**" button to exit programming mode, and this button backlight will goes out.

- **Apply IR learning function**

Press the "**DISPLAY ON/OFF**" button on control panel to turn on display, and then press this button again to turn off display.

Note:

- *When the system in IR leaning mode, press the "**SOURCE**" button can exit.*
- *If there is no operation for 60 seconds, the system will exit automatically.*
- *The blue backlight of all buttons will go out while the system exits successfully.*

4.2 Button Control

- **Select Input Source**

  Press the "**SOURCE**" button on the Control Panel to select the appropriate source device.

  Press the "**SOURCE SELECT**" button on the HDBaseT Transmitter switch input signal between HDMI and VGA signal sources.

- **Power On and Off the Display**

  When power on the display, press the "**DISPLAY ON/OFF**" button on the Control Panel.

  When power off the display, press the "**DISPLAY ON/OFF**" button on the Control Panel.

- **Power On and Off the System**

  There are two modes for controlling display and system: synchronous and asynchronous control mode, which can be selected via GUI. For more details, please refer to the ***4.3.2 Setting Tab***.

1) **Synchronous mode:**

   Press the "**DISPLAY ON/OFF**" button on Control Panel to turn on/off the display and system concurrently.

2) **Asynchronous mode:**

   Press the "**DISPLAY ON/OFF**" button on Control Panel to turn on/off the display.

   Long-press the "DISPLAY ON/OFF" button to power on/off system.

- **Volume Control Functions**

  Turning the Volume knob clockwise will raise the volume; turning the Volume knob counterclockwise will lower the volume.

  Pressing the Volume knob will mute or unmute the current audio source.

  Pressing and holding the Volume knob for three seconds will switch to the other audio source. If the audio source is muted, this action will unmute the source.

4.3 GUI Control

The web browser control interface is an alternative method to control the system without having to interact with the Control Panel.

The default IP address of the PT-PK100 is 192.168.0.178. This can be changed in the Network settings by an administrator.

Type **192.168.0.178** in your browser, it will enter the log-in interface shown as below:

To change the settings of the web browser interface or program RS232 commands for the display, it requires log into the PT-PK100 as an administrator. The User Name is admin and the default Password is admin.

4.3.1 Device Control Screen

HDMI&VGA

Switch between HDMI and VGA.

Display

Turn the display on or off.

System

Turn the system on or off.

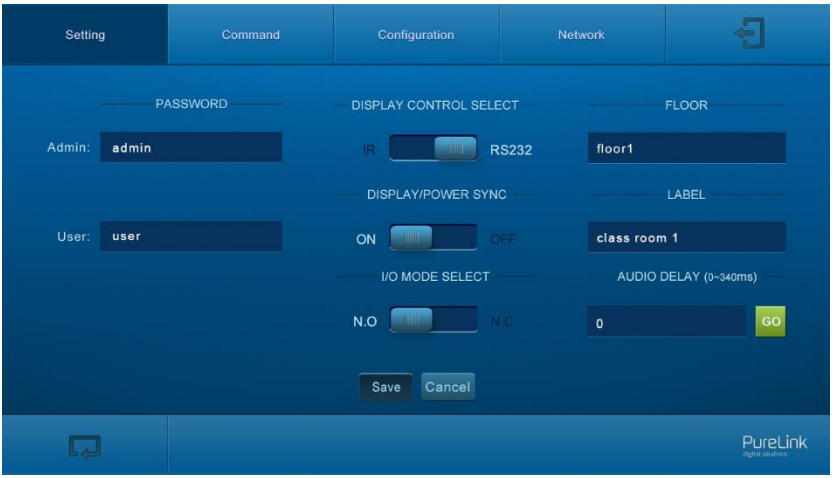
Volume

Mute and unmute audio sources. Volume may be changed by pressing the "+" or "-" buttons or by dragging the volume slider.

***Note:** When you use IPad to click the "+" or "-", it is a normal phenomenon that the Mute button will shake.*

To enter the configuration settings, click on the gear icon on the lower left corner of the Control interface.

4.3.2 Setting Tab



Password

Change the password for the admin and user login screen.

Display Control Select

Select whether the display will be controlled via IR or RS232.

Display/Power Sync

Select whether the display and system will be powered on and off simultaneously. This option is only active if the display is controlled via RS232.

- When the mode is **ON**, press the "**DISPLAY ON/OFF**" button on Control Panel to turn on/off the display and system concurrently.

- When the mode is **OFF**, press the "**DISPLAY ON/OFF**" button on Control Panel to turn on/off the display, or long-press it to power on/off system.

I/O Mode Select

Enable (N.O.)/ disable (N.C.) fire alarm signal input.

Floor

Rename the label at the control system.

Label

Rename the label at the top of the control screen.

Audio Delay

Sets up the audio delay to sync the audio with the video on the display. The delay time is 0 to 340 ms. Click the **GO** button to activate the new value.

Save/Cancel

Saves or cancels setting.

4.3.3 Command Tab (RS232 Display Control)

This tab defines the RS232 display control commands. If a display requires Hex commands, make sure the *Hex* box is checked.

Display On

Enter the RS232 command to turn on the display.

Display Off

Enter the RS232 command to turn off the display.

Input Select

Enter the RS232 command to switch to the input which is connected to the Receiver.

Input Select Delay

Enter the delay time in seconds between the Power On and Input Select commands.

This delay may be between 1 and 100 seconds.

Baud Rate

Select the baud rate necessary to communicate with the display. Available baud rates are: 2400, 4800, 9600, 14400, 19200, 38400, 56000, 57600, and 115200 baud.

Parity

Select parity for RS232 communication.

Command Ending

Select the command ending after each RS232 command. Available command endings are: null, carriage return, line feed, carriage return and line feed.

No Activity Timeout

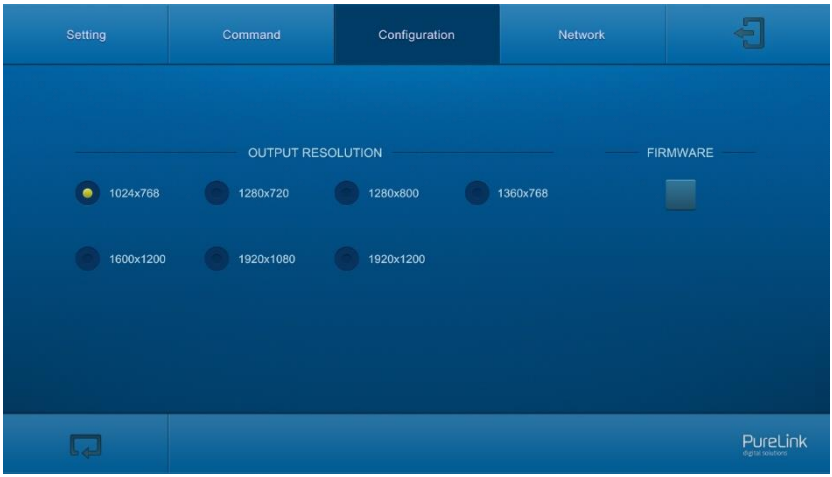
The system will enter standby, and the display will automatic shutdown when no signal input within the setup time.

Save/Cancel

Saves or cancels setting.

Note: *Please refer to the display's user manual for more command details.*

4.3.4 Configuration Tab



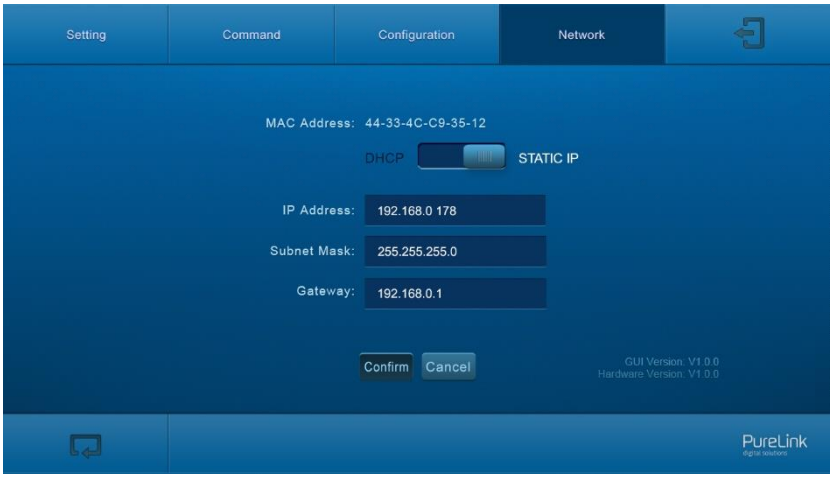
Output Resolution

Supports 1024x768, 1280x720, 1280x800, 1360x768, 1600x1200, 1920x1080 or 1920x1200.

FIRMWARE

Copy update data to one U-disk, and then insert the U-disk into the FIRMWARE port on HDBaseT Transmitter, finally click "**FIRMWARE**" to start update procedure.

4.3.5 Network Tab



DHCP/Static IP

Select whether the system will use a static IP or will be provided an IP via DHCP.

IP Address

Enter the IP address for the system.

Subnet Mask

Enter the subnet mask for the system.

Gateway

Enter the gateway address for the system.

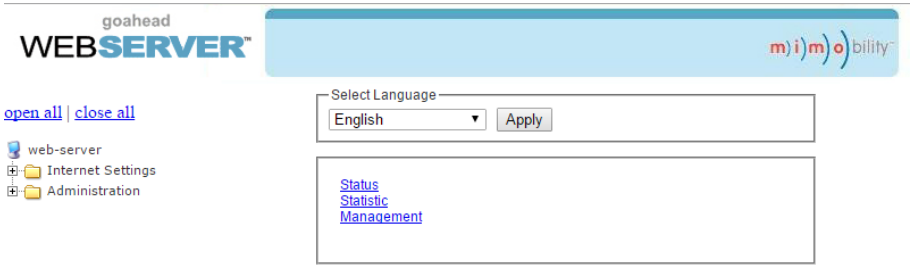
Confirm/Cancel

Saves or cancels setting.

4.3.6 GUI Update

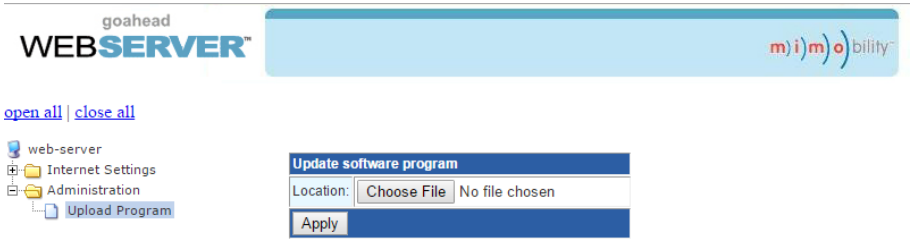
Open a web browser and enter the IP address of the Receiver directed at port 100. If the IP address is at 192.168.0.178, enter *192.168.0.178:100* into the web browser.

When prompted, enter the admin username and password (admin and admin by default). Once logged in, the following screen will be available.



Click the plus symbol next to *Administration*, then click on *Upload Program* to upload the new firmware.

Click the *Choose File* button and navigate to the web GUI update file. The web GUI update file will have *Ralink* in the file name. After the file is selected, click on *Apply*.



A confirmation dialog window will open to verify the new software will be uploaded to the device. The web page will appear to load for about 30 seconds while the web GUI software is being uploaded into the receiver. Once complete, the receiver will reboot.

4.4 Copy and Load Control Setting

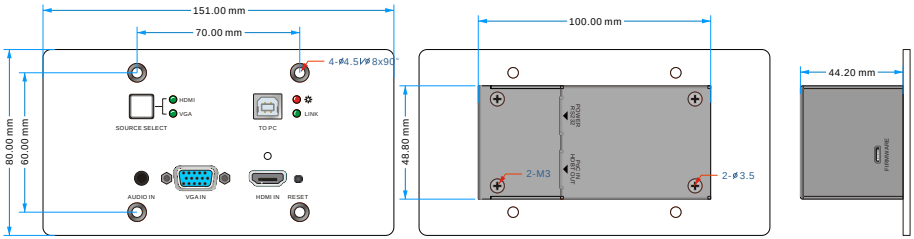
The system IR or RS232 configuration can be copied to a USB thumb drive and loaded into additional systems or be saved as a backup.

- **Copy Control Setting**
  - ① Insert a 4GB or smaller FAT32 formatted thumb drive into the CONFIG port on the front of the Control Panel.
  - ② Long-press "**SOURCE**" on Control Panel for five seconds until all buttons start to flash.
  - ③ Press "**DISPLAY ON/OFF**" on Control Panel, the button will light up while the copy is progress.
  - ④ Remove the thumb drive from the CONFIG port once all buttons go dark.

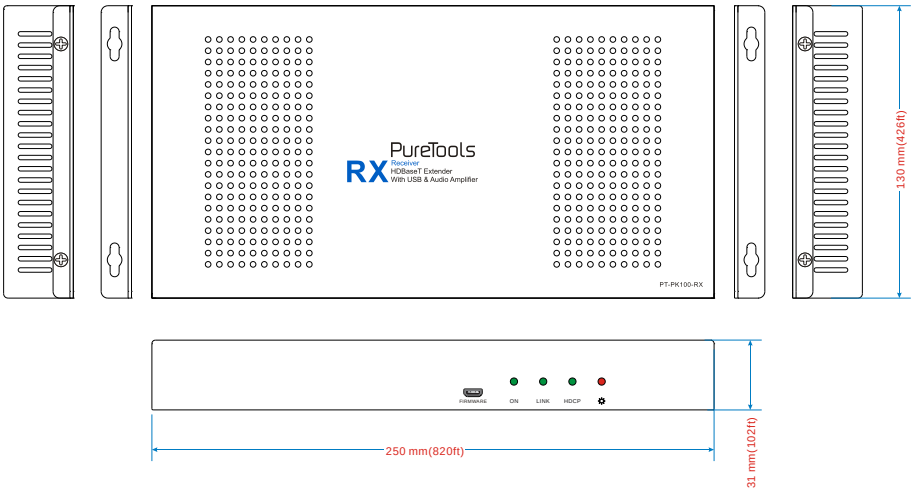
- **Load Control Setting**
  - ① Insert a 4GB or smaller FAT32 formatted thumb drive with saved configuration settings into the CONFIG port on the front of the Control Panel.
  - ② Long-press "**SOURCE**" on Control Panel for five seconds until all buttons start to flash.
  - ③ Press "**SOURCE**" on Control Panel, the button will light up while the upload is progress.
  - ④ Remove the thumb drive from the CONFIG port once all buttons go dark.

5. Panel Drawing

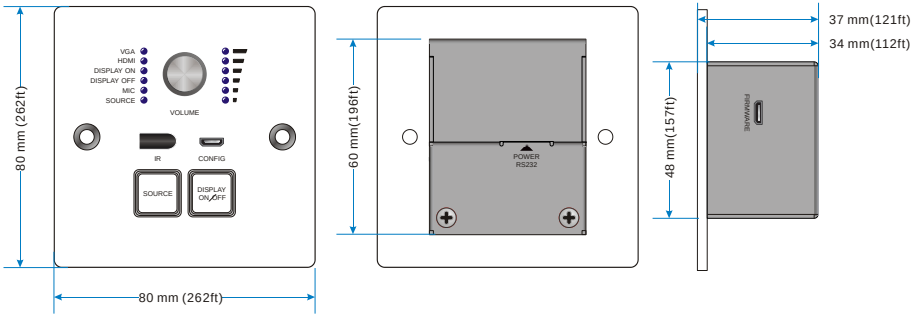
5.1 PT-PK100-TXWP HDBaseT Transmitter



5.2 PT-PK100-RX HDBaseT Receiver



5.3 PT-PK100-BCWP Control Panel



6. Specification

6.1 PT-PK100-TXWP HDBaseT Transmitter

Video & Audio	
Input Port	(1) HDMI; (1) VGA; (1) AUDIO IN
Input Connector	(1) 19-pin Type A HDMI female; (1) DB15 VGA female; (1) 3.5mm mini jack
Output Port	(1) PoC IN/HDBT OUT; (1) POWER/RS232
Output Connector	(2) RJ45
Transmission Mode	HDBaseT
Control	
Control Port	(1) To PC; (1) FIRMWARE
Control Connector	(1) USB-B; (1) Micro USB
General	
Input Resolution	Up to 1080p @ 60Hz
Output Resolution	1024x768, 1280x720, 1280x800, 1360x768, 1600x1200, 1920x1080, or 1920x1200 can be selected.
Deep Color	24-Bit at 1920x1080 (24/25/30/50/60Hz) 4:4:4; 48-Bit at 1920x1080 (50/60Hz) 4:4:4
Signal Extension	Up to 30 meters @ 1080p/60 via Cat5e/6a cable
Bandwidth	10.2Gbps
HDMI Standard	HDMI 1.3 & HDCP 1.4
Operation Temperature	0 ~ +40℃ (+32℉~ +104℉)
Storage Temperature	-10 ~ +55℃ (+14℉~ +131℉)
Relative Humidity	10% ~ 90%
Dimension (W*H*D)	151mm x 80mm x 47mm (495ft x 262ft x 154ft)
Net Weight	268g

6.2 PT-PK100-RX HDBaseT Receiver

Video	
Input Port	(1) HDBT+ Power
Input Connector	(1) RJ45
Output Port	(1) HDMI
Output Connector	(1) 19-pin Type A HDMI female
Audio	
Input	(1) MIC
Input Connector	(1) 3-pin pluggable terminal block
Output	(1) amplifier (2x20Watt@4Ω); (1) analog audio (LINE OUT)
Output Connector	(1) 4-pin pluggable terminal block; (1) 3-pin pluggable terminal block
Control	
Control Port	(1) FROM TOUCH SCREEN; (1) IR OUT; (1) RS232; (1) TCP/IP; (1) REMOTE MUTE
Control Connector	(1) USB-A; (1) 3.5mm mini jack; (1) 3-pin pluggable terminal block; (1) RJ45; (1) 2-pin pluggable terminal block
General	
Resolution	Up to 1080p @ 60Hz
Deep Color	24-Bit at 1920x1080 (24/25/30/50/60Hz) 4:4:4; 48-Bit at 1920x1080 (50/60Hz) 4:4:4
Signal Extension	Up to 30 meters @1080p/60 via Cat5e/6a cable.
Bandwidth	10.2Gbps
HDMI Standard	HDMI 1.3 & HDCP 1.4
Power Supply	Input:100V~240V AC; Output: DC24V 2.71A

General	
Power consumption	55w (Max)
Operation Temperature	0 ~ +40℃ (+32℉~ +104℉)
Storage Temperature	-10 ~ +55℃ (+14℉~ +131℉)
Relative Humidity	10% ~ 90%
Dimension (W*H*D)	250mm x 31mm x 130mm (820ft x 102ft x 426ft)
Net Weight	682g

6.3 PT-PK100-BCWP Control Panel

Port	
Program Port	(1) Micro USB
Output Port	(1) RS232+Power
Others	(1) Knob; (1) buttons(ON,OFF,HDMI,VGA); (1) IR in-built sensor
General	
Operation Temperature	0 ~ +40℃ (+32℉~ +104℉)
Storage Temperature	-10 ~ +55℃ (+14℉~ +131℉)
Relative Humidity	10% ~ 90%
Dimension (W*H*D)	80mm x80mm x 37mm (262ft x 262ft x 121ft)
Net Weight	124g

7. Troubleshooting & Maintenance

Problems	Potential 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.	CAT5e/6a or better cable recommended.
POWER indicator doesn't work or no respond to any operation	Loose or failed power cord connection	Ensure the power cord connection is good.
Color lose or poor picture quality	Signal loss caused by long transmission distance beyond effective value.	Make sure the connecting cable is within 30m (98ft) 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.	Mainstream display recommended.
No audio output	Input source and output device are connected to the wrong ports.	Ensure input source and output device are connected correctly.
	Audio output device doesn't support the audio format.	Change for other output devices that support the audio formats listed in *Specifications*.
Unable to login to GUI	The PC's network segment has not been modified.	The PC's network segment need to be set as the same as the system's.

If your problem persists after following the above troubleshooting steps, seek further help from authorized dealer or our technical support.

8. After-Sales Service

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

① **Product Limited Warranty:** The product will be free from defects in materials and workmanship for **two years** (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 (servicing available for a fee):**

- 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 distributor.
  - 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:** For any questions or problems, contact your distributor or reseller and tell them the respective product name and version, the detailed failure situation as well as the formation of the cases.

User Manual
PT-PK100

PureTools

Asking for Assistance

Technical Support:
Phone: +49 5971 800299 - 0
Fax: +49 5971 800299 – 99

Technical Support Hours:
8:30 AM to 5:00 PM Monday thru Thursday
8:30 AM to 4:00 PM Friday

Write to:
PureLink GmbH
Von-Liebig-Straße 10
D - 48432 Rheine
www.purelink.de
info@purelink.de