



HDCP2.2

4K2K



PUV-44XPL-4K22-KIT

4 x 4 HDMI HDBaseT™ LITE Matrix with 2x Independent HDMI outputs & Audio De-embedding (4K, HDCP2.2, PoH, 60m) inc. 4x PUV-1210PL-RX Receivers

OPERATION MANUAL

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 DD/MM/YY	SUMMARY OF CHANGE
RDV1	05/08/16	First release

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1. INTRODUCTION

The PUV-44XPL-4K22 HDMI/HDBaseT Matrix supports the transmission of video (resolutions up to 4K2K@60Hz, HDCP 2.2, HDMI2.0) and multi-channel digital audio from 4 HDMI sources to 4 HDBaseT outputs and 2 independent HDMI2.0 outputs. HDBaseT outputs allow transmission via a single CAT5e/6/7 cable up to 70m, whilst the independent HDMI outputs support cable lengths of up to 10m.

The LPCM7.1 CH, Dolby TrueHD, Dolby Digital Plus, Dolby Atmos and DTS-HD Master Audio transmission are supported. Further, the L/R analogue audio for each HDBaseT zones (outputs A to D) are able to be breakout.

The Power over HDBaseT (PoH) function provides power to compatible receivers.

Control is via manual selection buttons, IR, RS-232, Telnet or WebGUI. CYP provide control drivers for all the major control systems. The PUV-44XPL-4K22 is designed to be used with PUV-1210PL-RX receivers that can utilize the PoH capabilities of the matrix.

2. APPLICATIONS

- Residential AV matrix installation
- Commercial AV matrix installation
- Security systems
- University lecture hall systems
- Retail installation systems

3. PACKAGE CONTENTS

- 1× 4x 6 Matrix system
- 1×24V DC Power Adaptor
- 4×IR Blaster
- 4×IR Extender
- 2×Racked Ear
- 1×Remote Control (CR-163)
- 1×UK Power Cord
- 1×Europe Power Cord
- 1×Operation Manual

4. SYSTEM REQUIREMENTS

- HDMI equipped source devices
- HDMI equipped displays
- Compatible HDBaseT receivers – PUV-1210PL-RX
- Industry standard CAT6/7 cables
- HDMI cables – 'Premium High Speed HDMI Cables' are commended with 6G HDMI sources.

5. FEATURES

- HDMI 2.0, HDCP1.4 and HDCP2.2 compliant
- Routes four HDMI sources to four displays using four HDBaseT outputs and two independent or mirrored HDMI outputs
- Supported HDBaseT resolutions: VGA~WUXGA, 480i~1080p, 4K UHD@24/25/30Hz (R:G:B 4:4: & Y:U:V 4:4:4 & Y:U:V 4:2:2), 4K UHD@60Hz (YUV 4:2:0), dependent upon the output display's EDID settings
- Supports resolutions up to 4K@60 (YUV 4:4:4) on HDMI output ports
- Supports automatic 4K@60 YUV 4:4:4 to YUV 4:2:0 conversion for HDBaseT outputs
- 4K/2K & 4K UHD signals can be transmitted up to 35m via CAT5e/6 and 70m via CAT6a/7
- The LPCM7.1 CH, Dolby TrueHD, Dolby Digital Plus, Dolby Atmos and DTS-HD Master Audio transmission are supported.
- Further, the L/R analogue audio for each HDBaseT zones (outputs A to D) are able to be breakout.
- Advanced internal and external EDID management with 4 sets of configurable EDID settings
- Bi-directional IR support over HDBaseT
- The Power over HDBaseT (PoH) function provides power to compatible receivers.
- Control is via RS-232, remote control, on-panel control and IP Control (Telnet & WebGUI)
- 1U rack mounted design

6. OPERATION CONTROLS AND FUNCTIONS

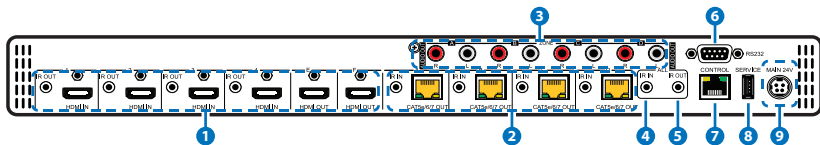
6.1 Front Panel



- 1 POWER:** Press this button to power on/ off device.
- 2 POWER LED:** The LED will illuminate in green when the power is on, and shown in red when power off this device.
The network function will remain active once press this power off button. This is for connected Receiver can get power when matrix unit be power off.
- 3 IR WINDOW:** Receiving remote control signal to control this device, please use the remote control unit supplied in the package.
- 4 OUTPUT A~F & INPUT 1~4:** Press "OUT" button to select the output source (A~F). Next, press output keys (A~F) to select output source; then press "IN" key to select input source (1~4). Finally, press "ENTER" to confirm selection.
For example, if outputs A~D need to be assign to input 1, following sequences of button presses need to be performed: OUT → A,B,C,D → IN → number key "1" →ENTER
If all output source would like to be assigned to single input, press "OUT" button and all input buttons "A~F" then press "IN" and enter the number key of input and enter to confirm the selection.
- 5 MENU & CANCEL:** Press "MENU" button to access the LCM menu. The menu tree please refers to section 17. Press "CANCEL" button to cancel the selection.
- 6 ENTER:** Press this button to confirm the selection.
- 7 PLUS (+)/IN:** Press Plus "+" button to navigate up button selection. Press "IN" button for input port sources selection.

- 8 **MINUS (-)/OUT:** Press Minus “-” button to navigate down button selection. Press “OUT” button for output port sources selection.
- 9 **LOCK:** Press this button for three second to lock all buttons on panel. The right top side will display “L” once front panel locked. Press for few seconds to unlock.
- 10 **PRESET:** Press this button to recall preset setting, allow maximum 8 sets preset setting to recall. The preset settings are able to be completed on WebGUI. Please refer to section 9.1.4 for advanced preset setting.
- 11 **LCM:** The LCM displays the setting and information.

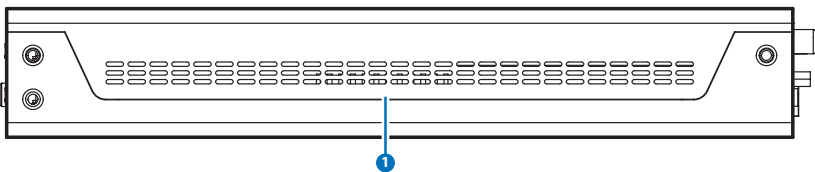
6.2 Rear Panel



- 1 **HDMI IN & IR Out 1 ~ 4:** Connect to source devices with HDMI interface and HDMI cable, the input source devices includes DVD players, Set-top Boxes and so on. The qualified HDMI cables are recommended. The DVI source is complaint; please use cable to converts DVI to HDMI. The IR In provides customer to transmit the IR signal to connected displays. Please use the remote control unit supplied in the package.
- 2 **CAT5e/6 OUT & IR IN A~D:** Connect from these Cat5e/6 outputs to input port of compatible Receivers with a single CAT5e/6/7 cable for HDMI Audio/Video and IR/RS-232 control signal transmission. The IR Out provides customer to transmit the IR signal to matrix unit from display installation sites. Please use the remote control unit supplied in the package.
- 3 **ZONE AUDIO OUT:** Four sets of audio output from HDBaseT output. The amplifiers are able to be connected for audio source broadcasting.

- 4 **IR IN (ALL):** Connect an IR extender for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR extender. IR signals received will transmitted by all IR blasters connected to the matrix or Receivers.
- 5 **IR OUT (ALL):** Connect an IR Blaster for IR signal transmission to the source/input location. Place the IR Blaster in direct line-of-sight of the equipment to be controlled. It will transmit all IR signals Received by any IR extenders connected to the matrix or Receivers.
- 6 **RS232:** Connect to a PC or control system with D-Sub 9-pin cable to control the matrix with RS-232 commands (refer to Sections 7)
- 7 **CONTROL:** Connects matrix unit with PC or laptop via RJ-45 cable for Telnet or WebGUI control(the details of Telnet and WebGUI, please refers to Sections 9 and 10).
- 8 **SERVICE:** Please plug in USB thumb drive to update Firmware in field. The USB thumb drive shall plug in and select update "YES" on front panel and firmware in USB thumb drive to complete firmware update.
- 9 **MAIN 24V:** Plug the 24 V main power supply in the package for power on the matrix unit. If connect with POH Receiver, please plug 24V power supply to POH outlet for supplying power over cable to compatible Receiver with POH function.

6.3 Side Panel



- 1 **FAN VENTILATOR:** These are air ventilation areas, DO NOT block these areas or cover it with any object. Please allow adequate space around the unit for air circulation.

6.4 Remote Control

- 1 Power:** Press this button to power the matrix unit.

LOCK: Press this button to lock front panel of matrix unit.

MUTE: Mutes Zone Audio outputs. HDBaseT audio can only be muted when an independent non HDMI audio has been routed to these outputs.

- 2 INPUT 1~10 & OUTPUT A~J & Pattern:** For HDBaseT zone operation the user only needs to select the desired input 1- 4. For Front panel operation please refer to front panel instructions.

NOTE: PUV-44XPL-4K22's remote sends commands based upon how the matrix has been configured for the Zone AV Pairing mode which is setup via the webGUI, please refer to section 6.10.8

This remote control is for family series, the pattern and mute function on PUV-44XPL-4K22 is excluded.

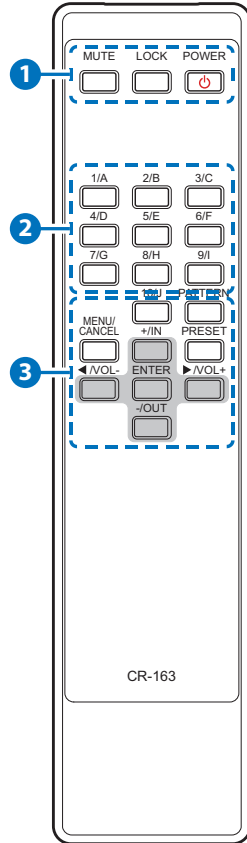
- 3 PRESET:** Recall preset setting back. The preset settings are able to be configured on WebGUI.

MENU/CANCEL: Press "Menu" button to access to menu selection on LCM display. Press "Cancel" button to cancel selection.

PLUS (+)/IN: Press "+" to navigate up on menu selection. Press "In" for input port number selection:

MINUS (-)/OUT: Press "-" to navigate down on menu selection of LCM display. Press "OUT" for output ports selection.

VOL UP/DOWN (+/-): This remote control is for family series, the volume adjustment function on PUV-44XPL-4K22 is excluded, and the volume could be adjusted on connected amplifier.

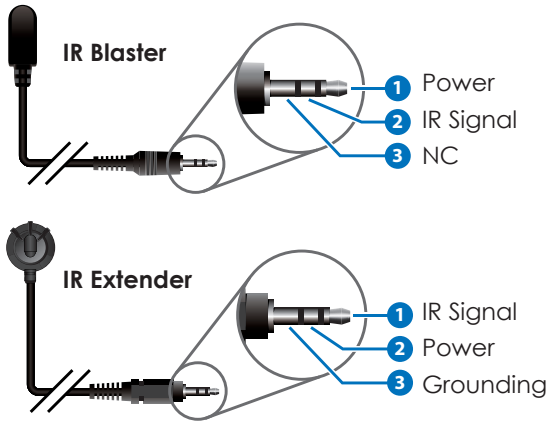


6.5 OLED Menu

1 ST LEVEL	2 ND LEVEL	3 RD LEVEL
EDID	EDID Mode	All/Independent
	EDID Select	All/1~6/7~12/13~16 (1~6=Default EDID settings, 7~12=Sink's EDID settings, 13~16=User's EDID settings)
Network	Link Status (Idle)	
	IP Address	
	Subnet Mask	
	Gateway Address	
	MAC Address	
	DHCP mode	On/Off
HDMI Mirroring	Output E/F	
Factory Default	Yes/No	
Firmware	Version	
	Update	Yes/No

Note: The model name and IP address will be displayed when power on the matrix unit. The mask and Gateway information will be displayed once press "+" button on front panel or remote control unit.

6.6 IR Cable Pin Assignment



6.7 RS-232 Protocol

MATRIX	
Pin	Assignment
1	NC
2	TX
3	RX
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC



MATRIX	
Pin	Assignment
1	NC
2	RX
3	TX
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

Baud Rate: 115200bps
 Data bit: 8 bits
 Parity: None
 Flow Control: None
 Stop Bit: 1

6.8 RS-232 and Telnet Commands

Command	DESCRIPTION
HDMI_Out M VideoSrc=XXX	Video source of HDMI Tx out E~F. M=E~F(Support multiple selection). Available XXX: HDMI_In n, n=1~4
HDMI_Out M VideoSrc=Default	Reset Video source of HDMI Tx out to factory default. M=E~F(Support multiple selection).
HDMI_Out M Mirroring=XXX	Audio/Video following source of HDMI Tx out E~F. M=E~F(Support multiple selection). Available XXX: HDBT_Out n, n=A~D
HDMI_Out M Status	Display HDMI E~F status & properties including Aud/Vid matrix. M=E~F(Support multiple selection).
HDMI_Out M Name="NameString"	Setup HDMI E~F verbose name. M=E~F(Only support single selection).
HDBT_Out M VideoSrc=XXX	Video source of HDBaseT Tx out A~D. M=A~D(Support multiple selection). Available XXX: HDMI_In n, n=1~4
HDBT_Out M VideoSrc=Default	Reset Video source of HDBT Tx out A~D to factory default. M=A~H(Support multiple selection).
HDBT_Out M Status	Display HDBT A~D status & properties including Aud/Vid matrix. M=A~D(Support multiple selection).

Command	DESCRIPTION
HDBT_Out M Name="NameString"	Setup HDBT A~D verbose name. M=A~D(Only support single selection).
HDMI_In M Status	Display HDMI In 1~4 status. M=1~4(Support multiple selection).
HDMI_In M Name="NameString"	Setup HDMI In 1~4 verbose name. M=1~4(Only support single selection).
SETIP <IP> <SubNet> <GW>	Setting IP.SubNet.GateWay(Static IP)
RSTIP	IP Configuration Was Reset To Factory Defaults(DHCP)
IPCONFIG	Display the current IP config
P0	Power Off (Remain power supply to Receiver and network)
P1	Power ON
P2	Power Off all
P?	Report power status
PRESET Save M	Save current A/V routing. M=1~8.
PRESET Load M	Recall current A/V routing. M=1~8.
PRESET Show [M]	List current stored A/V preset. M=1~8. If M is omitted, list all A/V preset.
PRESET name M="NameString"	Set verbose name of specified preset slot M.
EDID All=EdidSetNumber	Set EDID of all input port =Specified EDID set number. If EdidSetNumer="Off", it becomes independent mode.
EDID HDMI_In M=EdidSetNumber	Set specified HDMI input port M=Specified EDID set number.
EDID M Name="NameString"	Set verbose name of specified EDID slot M.

Command	DESCRIPTION
?	Display all available commands
Help	Display all available commands(Except hidden commands)
Ver	Show firmware version
ZoneAvPair HDBT_Out M Slot N VideoSrc=XXX	Setup HDBT_Out zone side audio/video pairing storage slot N video source. M=A~D(Only support single selection). N=1~4 (Support multiple selection). Available XXX: HDMI_In n, n=1~4
ZoneAvPair HDBT_Out M Slot N Load	Load slot N of HDBT_Out zone side audio/video pairing storage. M=A~D(Only support single selection). N=1~4 (Support multiple selection).
ZoneAvPair HDMI_Out M Slot N VideoSrc=XXX	Setup HDMI_Out zone side audio/video pairing storage slot N video source. M=E~F(Only support single selection). N=1~4 (Support multiple selection). Available XXX: HDMI_In n, n=1~4
ZoneAvPair HDMI_Out M Slot N Load	Load slot N of HDMI_Out zone side audio/video pairing storage. M=E~F(Only support single selection). N=1~4 (Support multiple selection).

Command	DESCRIPTION
IR_Route HDBT_Out M0 M1 M2	Setup IR source of HDBT Rx end IR out jack. M0=Output port index. M0=A~D (Support multiple selection) M1=Route operation. Available M1: Add: Add M2 input source to HDBT_Out. Del: Delete M2 input source from HDBT_Out. M2=Input source. Available M2: IR_InAll: IR In all input jack. Generator: Internal IR encoder.
IR_Route HDBT_Out M0 Show	Print current IR source of HDBT Rx end IR out jack. M0=Output port index. M0=A~D (Support multiple selection)\
IR_Route IR_Out_Out M0 M1 M2	Setup IR source of IR_Out jack aside of each HDMI In connector. M0=Output port index. M0=1~4 (Support multiple selection) M1=Route operation. Available M1: Add: Add M2 input source to IR_Out. Del: Delete M2 input source from IR_Out. M2=Input source. Available M2: IR_InAll: IR In all input jack. Generator: Internal IR encoder.
IR_Route IR_Out M0 Show	Print current IR source of IR_Out jack aside of each HDMI In connector. M0=Output port index. M0=1~4 (Support multiple selection)
HdcpOut Show	Display HDCP mode setting when video out
? <any Command>	Display instruction of that command

Note: All commands are case-insensitive.

6.9 Telnet Control

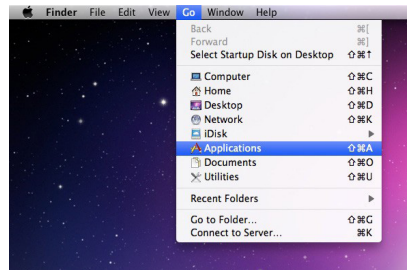
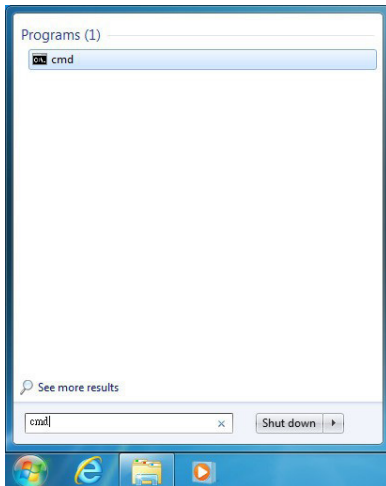
Before attempting to use the Telnet control, please ensure that both the Matrix (via the 'LAN /CONTROL' port) and the PC/Laptop are connected to the same active networks.

To access the Telnet control in Windows 7, click on the 'Start' menu and type "cmd" in the Search field then press enter.

Under Windows XP go to the 'Start' menu and click on "Run", type "cmd" with then press enter.

Under Mac OS X, go to Go→Applications→Utilities→Terminal

See below for reference.

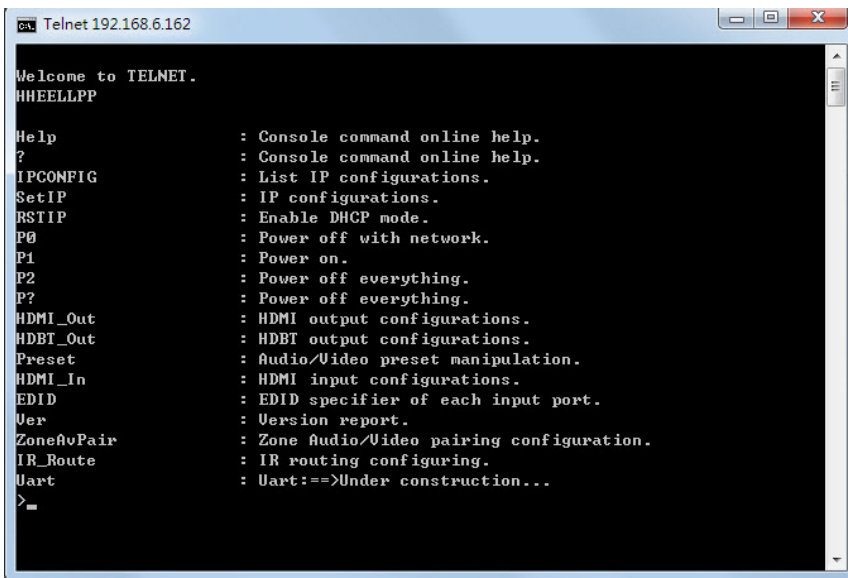


Once in the command line interface (CLI) type "telnet", then the IP address of the unit and "23", then hit enter.

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>telnet 192.168.5.80 23
```

This will bring us into the unit which we wish to control. Type "help" to list the available commands.



```

Telnet 192.168.6.162

Welcome to TELNET.
HHEELLPP

Help          : Console command online help.
?            : Console command online help.
IPCONFIG     : List IP configurations.
SetIP        : IP configurations.
RSTIP        : Enable DHCP mode.
P0           : Power off with network.
P1           : Power on.
P2           : Power off everything.
P?           : Power off everything.
HDMI_Out     : HDMI output configurations.
HDBT_Out     : HDBT output configurations.
Preset       : Audio/Video preset manipulation.
HDMI_In      : HDMI input configurations.
EDID         : EDID specifier of each input port.
Ver          : Version report.
ZoneAvPair   : Zone Audio/Video pairing configuration.
IR_Route     : IR routing configuring.
Uart         : Uart:==>Under construction...
>_
```

Note: 1. Commands will not be executed unless followed by a carriage return. Commands are case-sensitive. If the IP is changed then the IP Address required for Telnet access will also change accordingly.

2.The P2 command not support when operate Telnet due to need to reserve power for network active

6.10 WebGUI Control

- **Install the IP Discovery Tool:**

- (1) Connect the Matrix to a PC with a Ethernet connection (via the 'LAN/CONTROL' port). Please ensure your PC is on the same active network as the Matrix before running the application.
- (2) Please download the ZIP file from our website and save it in a directory where you can easily find it again. Once de-compressed, the application is a direct executable file.
- (3) Click twice on the application to open it. Click the "Find Devices on Network" button to scan the connected network. This will locate the compatible devices on that network.

Find Devices on Network			
Product Name	Description	IP Address	MAC Address

- (4) The devices will then be listed and displayed on the window. For further features, click the device name to bring up a second window where you can change the IP settings and launch the WebGUI control.

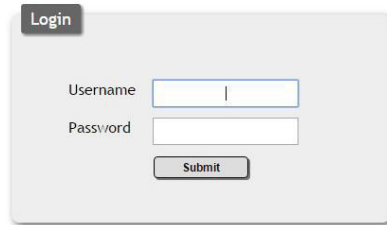
Product ID	
Product Name	
MAC Address	00:00:00:00:00:00
IP Address	<input type="text"/>
Subnet Mask	<input type="text"/>
Gateway IP	<input type="text"/>
DNS	<input type="text"/>
IP Mode	Static <input type="button" value="v"/>
Web GUI Port	<input type="text" value="0"/>
Telnet Port	<input type="text" value="0"/>
S / N	
Firmware Version	
Hardware Version	
Description	
Web GUI	Web GUI
<input type="button" value="Save"/>	<input type="button" value="Reboot"/>

Note: The default IP address of the Matrix is '192.168.1.50'.

- (5) Once changed, click the 'Save' and then 'Reboot' buttons to update the IP settings of the Matrix.

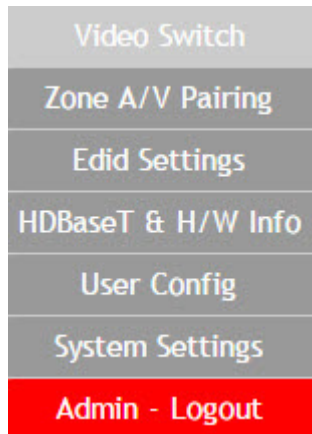
- **Login the WebGUI:**

(1) Please enter "admin" at both of Username and Password column to log in the WebGUI tool.



A login form with a title bar labeled "Login". It contains two input fields: "Username" and "Password". The "Username" field has a cursor in it. Below the fields is a "Submit" button.

(2) Following functions tab will show at left side on first pages.



6.10.1 Video Switch

The page offers video routing setting.


- **Output and Input Routing:**

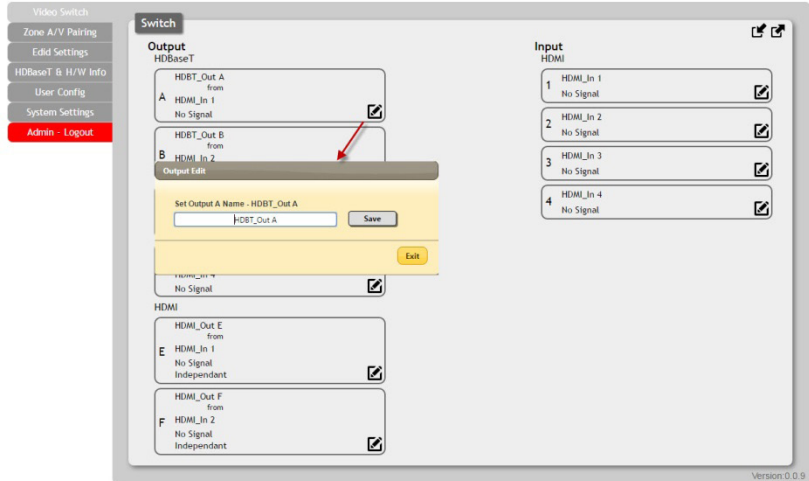
Please click the tab for the HDBaseT output port for example “HDB_Out A” and click HDMI input port “HDMI_In 1” for basic routing setting. When clicking the output ports and input ports, the icons will show in orange. The setting will immediately active and change the routing port information on icon accordingly.

For selecting multiple outputs to a single input simply select all the required output tabs first and then make your input selection to complete the selection.


The screenshot displays the 'Video Switch' configuration page. On the left is a navigation menu with options: 'Zone A/V Pairing', 'Edit Settings', 'HDBaseT B. H/W Info', 'User Config', 'System Settings', and 'Admin Logout' (highlighted in red). The main content area is titled 'Switch' and is divided into two columns: 'Output' and 'Input'. The 'Output' column is further divided into 'HDBaseT' and 'HDMI' sections. Under 'HDBaseT', there are four rows labeled A, B, C, and D. Each row shows an output port (e.g., 'HDBT_Out A') and an input port (e.g., 'HDMI_In 1') with a 'No Signal' status and a checkmark icon. Under 'HDMI', there are two rows labeled E and F, showing output ports ('HDMI_Out E' and 'HDMI_Out F') and input ports ('HDMI_In 1' and 'HDMI_In 2') with 'No Signal' and 'Independent' statuses and checkmark icons. The 'Input' column on the right is titled 'HDMI' and contains four rows labeled 1, 2, 3, and 4, each showing an input port ('HDMI_In 1' through 'HDMI_In 4') with a 'No Signal' status and a checkmark icon. A 'Version: 0.0.9' label is visible in the bottom right corner of the interface.

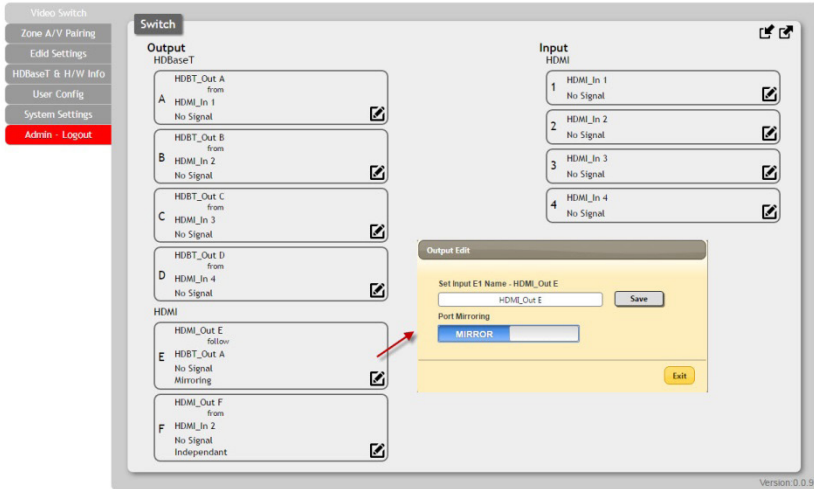
- **Output and Input Naming:**

All inputs and outputs can be named to correspond to the actual devices or rooms as required. Please click the icon  to edit the input and output ports name. Please click "save" icon to confirm the change.






- **HDMI Output Setting:**

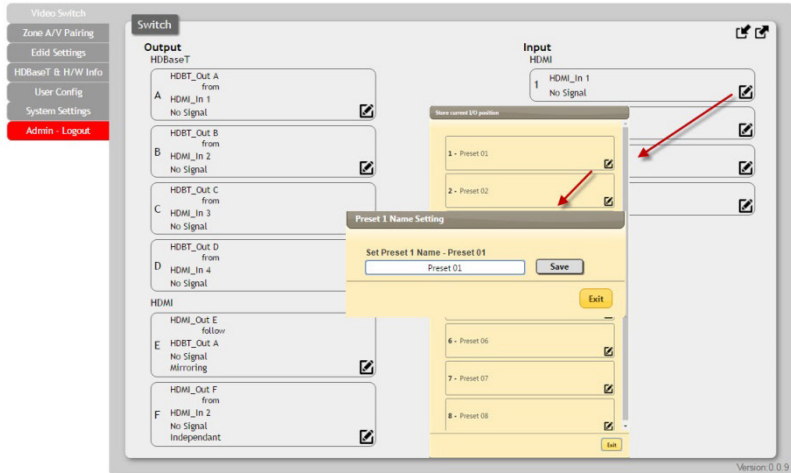
Two HDMI outputs (port I & port J) allows a maximum timing of 6G (4096x2160p@50/60Hz), these can be used as general routing (named as independent on the WebGUI) and mirrored routing (named as Mirror on the WebGUI) for real time zone mirroring e.g. HDBaseT output connects to a TV (via RX) and the mirrored HDMI output directly to an AVR. Please click the edit icon  to invoke the HDMI output setting page and select the routing type required either "independent" or "mirror"




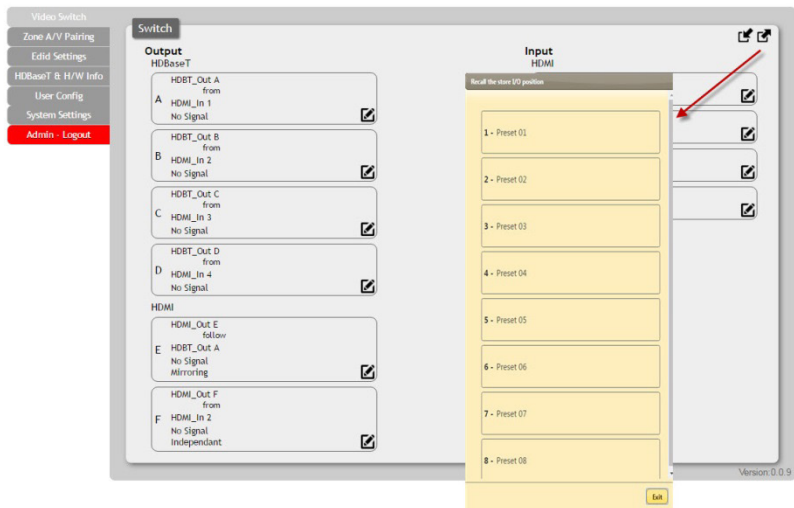
- **Preset Setting:**

Eight video and audio routing presets are available to “store”. Click the icon  as shown to invoke the Preset page, click the tab  to “recall” a previous preset. The end user can utilize presets to recall different routing selections as required.

(1) Store: Please select the routing status first. And click the icon  to save it. The preset name is also able to be edited.



(2) Recall: Click icon  to recall preset setting back.




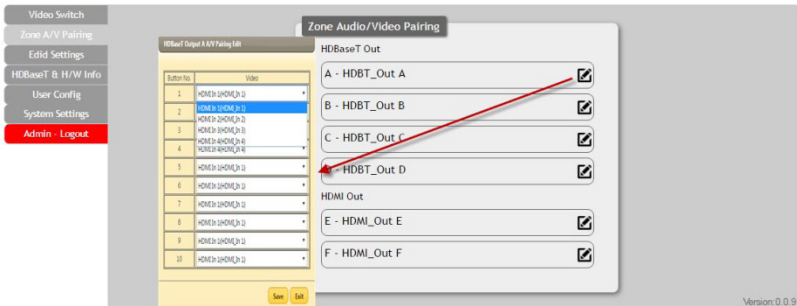
6.10.2 Zone A/V Pairing

The easiest way to use the PUV-44XPL-4K22 for simple HDMI switching whilst still allowing for individually tailored zone audio is to use the Zone AV Pairing settings configured on this section of the webGUI.

As the IR remote supplied with the PUV-44XPL-4K22 sends AV pairing commands, if you wish to use this remote it is necessary to configure this page when any non-HDMI audio is required to be routed along with the corresponding video. The video and audio routing selections for eight ports of HDBaseT output and two ports of HDMI output need to be set on this page in advance. After setting, the end customer can simply press the input number key on the remote control unit to change the input source from that zones location.

(1) Quick Button Setting:


Please click the HDBaseT output port first and click the edit icon  to invoke the window for further setting. The numbers 1 to 10 are correspondence with number keys on remote control unit

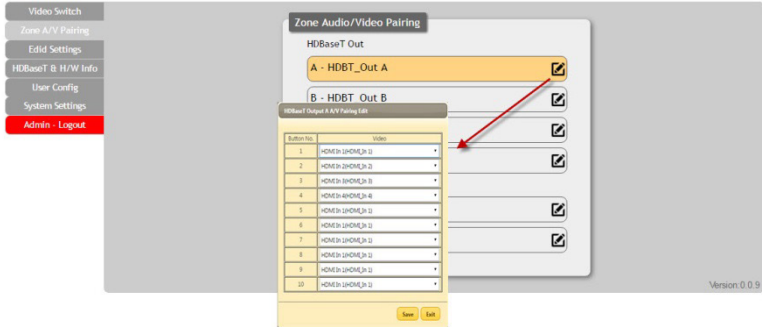


Button No.	Video
1	HDMI_1(HDMI_1)
2	HDMI_2(HDMI_2)
3	HDMI_3(HDMI_3)
4	HDMI_4(HDMI_4)
5	HDMI_5(HDMI_5)
6	HDMI_6(HDMI_6)
7	HDMI_7(HDMI_7)
8	HDMI_8(HDMI_8)
9	HDMI_9(HDMI_9)
10	HDMI_10(HDMI_10)

HDBaseT Out
A - HDBT_Out A <input checked="" type="checkbox"/>
B - HDBT_Out B <input checked="" type="checkbox"/>
C - HDBT_Out C <input checked="" type="checkbox"/>
D - HDBT_Out D <input checked="" type="checkbox"/>
HDMI Out
E - HDMI_Out E <input checked="" type="checkbox"/>
F - HDMI_Out F <input checked="" type="checkbox"/>

(2) Video and Audio Setting:

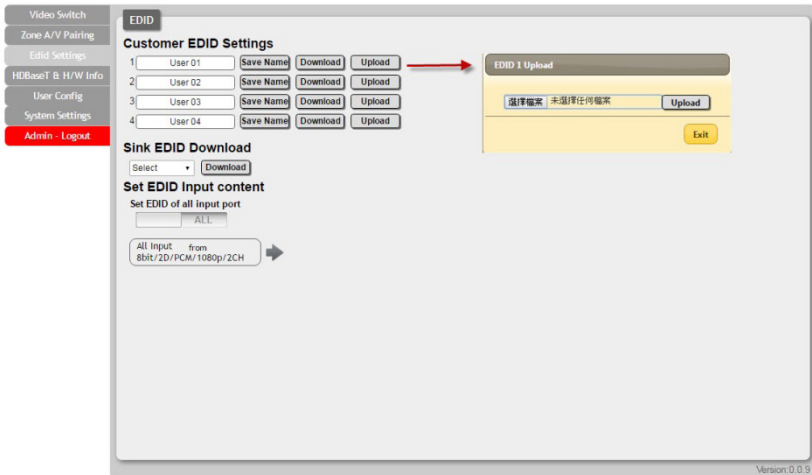
Please click the icon  to edit the zone video routing setting, please save the setting once complete selection.



6.10.3 EDID Settings

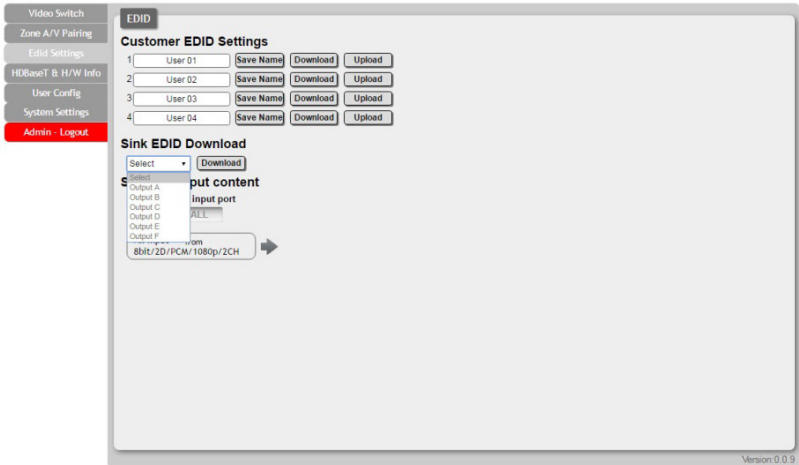
- **Customer EDID Settings:**

Click the "Upload" tab to import a custom saved EDID file.



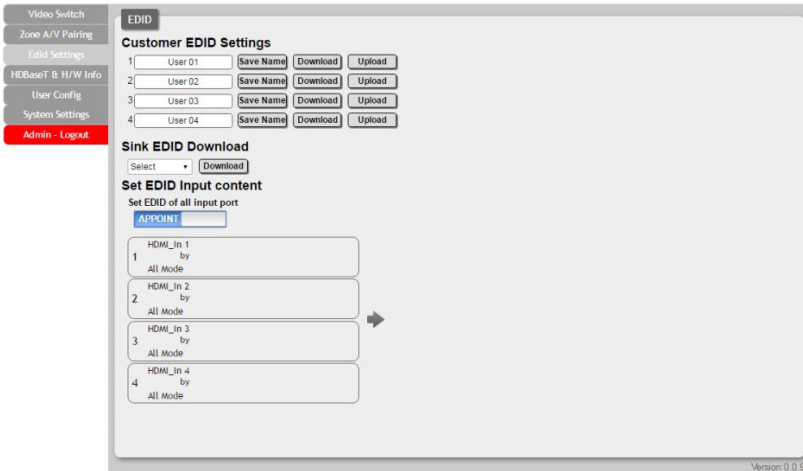
- **Sink EDID Download:**

Ten sets of sink EDID's and four sets of customer EDID are available for EDID management. Four sets of customer EDID files allow the customer to edit the names and customized the EDID data.



- **Set EDID Input Content:**

The EDID management can be set in two ways. Each input can be set individually using the "Appoint" mode or all input can be set to one EDID file using the "All" mode. Use the slider to set to your required EDID mode.



Note:

The matrix unit comes with 6 sets of default EDID setting. The settings are as following.

1. FHD / 2CH:1080p/60Hz(148M),2.0LPCM, 8-bit color.
2. FHD / MCH:1080p/60Hz(148M),7.1LPCM and bit-stream, 8-bit color.
3. 4K UHD / 2CH : 3840*2160p/30Hz (297M), 2.0LPCM, Deep color (8/10/12-bit)
4. 4K UHD / MCH : 3840*2160p/30Hz (297M), 7.1LPCM and bit-stream, Deep color (8/10/12-bit)
5. 4K UHD+ / 2Ch : 3840*2160p/60Hz (594M), 2.0LPCM, Deep color (8/10/12-bit)
6. 4K UHD+ / MCH : 3840*2160p/60Hz (594M), 7.1LPCM and bit-stream, Deep color (8/10/12-bit)

The Pioneer Blu-ray player, model: BDP-430 may cause DVI output not optimal. Please update the blue ray firmware. If DVI output remains unstable, please change EDID to compatible UHD EDID

6.10.4 HDBaseT & H/W Info

This page provides information including hardware monitor (Area 1/2) and HDBaseT FW version. The hardware monitor provides reference temperature; Area 1 is for left side of output ports (faced to front panel), Area 2 temperature is for right side of output ports (faced to front panel).

The screenshot shows a web interface with a sidebar menu on the left containing: Video Switch, Zone A/V Pairing, Edid Settings, HDBaseT & H/W Info (selected), User Config, System Settings, and Admin - Logout. The main content area is titled "HDBaseT & Hardware Information" and contains the following text:

Hardware monitor
Area 1 : 29 °C
Area 2 : 29 °C

HDBaseT Information

Port	Local FwID	Remote FwID
A	-	-
B	-	-
C	-	-
D	-	-

Version: 0.0.9

6.10.11 User Config

The Web and Telnet login user name and password allows to setting on this page. Two levels management are available, one is “administrator” and the other one is “general user”

Web & Telnet Login Configuration

Administrator

Old Username:

Old Password:

New Username:

New Password:

Confirm New Password:

General User

New Username:

New Password:

Confirm New Password:

Version:0.0.9

6.10.12 System Settings

The system configuration includes power on/off, network setting, download & reset system configuration and reset to default allows to setting on this page.

System

Power

Network

IP Mode:

IP:

Netmask:

Gateway:

HTTP Port: 80

Telnet Port: 23

Download Current Configuration

Restore Configuration

選擇檔案, 未選擇任何檔案

Reset to Default

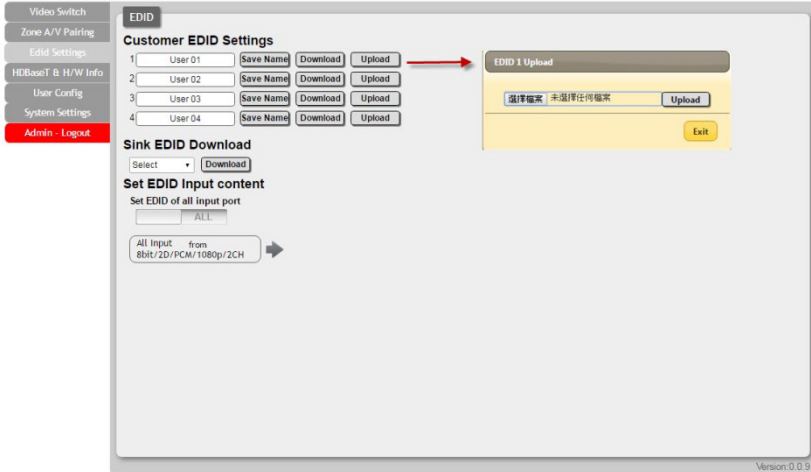
Firmware Upgrade

選擇檔案, 未選擇任何檔案

Version:0.0.9

6.10.13 EDID Setting

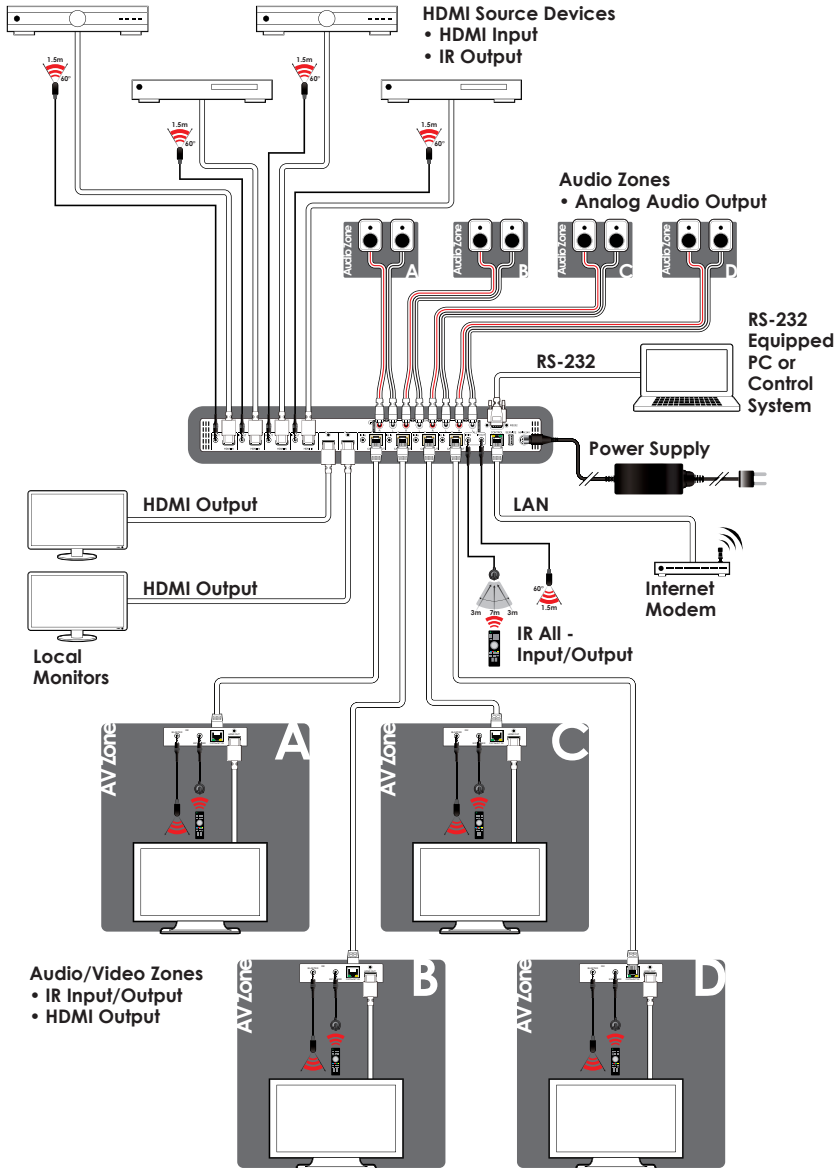
Click the “Download” tab to download current system configuration. The current system configuration will be stored as XML file. The system configuration is able to be restore once selected the XML file and restore.



6.10.13 Logout

Click the logout tab at left side, it will automatic to logout the WebGUI and return to login page. The log in identity will be shown on tab, either “admin” (administrator) or “user” (generaluser)

7. CONNECTION DIAGRAM



8. SPECIFICATIONS

8.1 Technical Specifications

Video Bandwidth	HDMI: 600MHz/18Gbps HDBaseT: 340MHz/10.2Gbps
Input Ports	4×HDMI, 4×Stereo Audio (2×RCA)
Output Ports	2×HDMI, 4×CAT5e/6
Control Ports	4×IR Extender, 4×IR Blaster, 1×RS-232 (9-pin D-sub), 1×Control
Service Port	1×USB 2.0
HDMI Resolutions	480i~4K2K@50/60Hz
EDID Management	Internal and external EDID management, 4 set EDID for configurable by user
IR Frequency	38kHz
Baud Rate	115200bps
Power Supply	24V / 6.25A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human body model: ±12 kV (air-gap discharge) ±8 kV (contact discharge)
Dimensions	482mm (W)×274mm (D)×49mm (H)/ Jack Included
Weight	3642g
Chassis Material	Metal
Color	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	90W

8.2 Supported Timing Table & Maximum HDMI Cable Length

Supported timing table

HDMI	Input	Output
480i@60	✓	✓
480p@60	✓	✓
576i@60	✓	✓
576p@60	✓	✓
640 x 480@60	✓	✓
800 x 600@60	✓	✓
720p@50/60	✓	✓
1080i@50/60	✓	✓
1080p@24/50/60	✓	✓
1024 x 768@60	✓	✓
1280 x 1024@60	✓	✓
1360 x 768@60	✓	✓
1600 x 1200@60	✓	✓
1920 x 1200@60	✓	✓
2560 x 1440@60	✓	✓
3840 x 2160@24/25/30/50/59.94/60	✓	✓
4096 x 2160@24/50/59.94/60	✓	✓

Maximum HDMI Cable Length

Timing	Input	Output
8 bit 1080p	10M	10M
12 bit 1080p	10M	10M
3840 x 2160p YUV420	5M	5M
3840 x 2160p YUV444 (Certified HDMI2.0 premium cable)	3M	3M

Note: The 6G YUV444 of HDMI inputs converts to 3G YUV420 for four output ports of HDBaseT. Some TV not support YUV420 will cause error of color space changed. Please note that TV which not supports YUV420 is incompatible.

8.3 Supported Audio Formats

Linear PCM	
LPCM 2CH@44.1 kHz	LPCM 7.1CH@44.1 kHz
LPCM 2CH@88.2kHz	LPCM 7.1CH@88.2kHz
LPCM 2CH@176.4kHz	LPCM 7.1CH@176.4kHz
LPCM 2CH@32kHz	LPCM 7.1CH@32kHz
LPCM 2CH@48kHz	LPCM 7.1CH@48kHz
LPCM 2CH@96kHz	LPCM 7.1CH@96kHz
LPCM 2CH@192kHz	LPCM 7.1CH@192kHz
LPCM 5.1CH@44.1 kHz	
LPCM 5.1CH@88.2kHz	
LPCM 5.1CH@176.4kHz	
LPCM 5.1CH@32kHz	
LPCM 5.1CH@48kHz	
LPCM 5.1CH@96kHz	
LPCM 5.1CH@192kHz	

Dolby Digital	DTS
Dolby Digital 5.1CH	DTS 5.1CH
Dolby Digital Plus	DTS-HD High Resolution Audio
Dolby TrueHD	DTS-HD Master Audio
Dolby Atmos	

Note:

1. The optical & coaxial supports PCM2ch, Dolby 5.1, DTS 5.1.
2. When input not LPCM 2ch, the extended audio of L/R out will be mute.

8.4 HDBaseT Features

HDBaseT Feature	Support
HD Video & Audio	√
IR	√

HDBaseT Feature	Support
RS-232	√
Send power to Receiver	√
LAN	X

8.5 CAT5e/6/7 Cable Specifications

Cable Type	Range	Pixel Clock Rate	Video Data Rate	Supported Video Formats
CAT5e/6/7	60M CAT5e/6 70M CAT6/7	≤225MHz	≤5.3Gbps (HD Video)	Up to 1080p@60Hz, 36-bit, 3D (data rates lower than 5.3Gbps or below 225 MHzTMDS clock).
	35M CAT5e/6 40M CAT7	>225MHz	>5.3Gbps (Ultra HD Video)	4K2K@30 Hz video formats

9. ACRONYM

ACRONYM	COMPLETE TERM
CAT5e	Category 5 Cable
CAT6	Category 6 Cable
CAT7	Category 7 Cable
CEC	Consumer Electronics Control
CLI	Command Line Interface
COAX	Coaxial
DTS	Digital Theater System
DVI	Digital Visual Interface
EDID	Extended Display Identification Data
GUI	Graphical User Interface
HDCP	High-bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
HDTV	High-Definition Television
IP	Internet Protocol
IR	Infrared
LAN	Local Area Network
OLED	Organic Light-Emitting Diode
OPT	Optical
LCM	Liquid Crystal Module
PoH	Power over HDBaseT
USB	Universal Serial Bus
VGA	Video Graphics Array
WUXGA (RB)	Widescreen Ultra Extended Graphics Array (Reduce Blanking)



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