HDMI v1.4 4x4 Matrix 4k2k

ID# 15154

Operation Manual

Introduction

The 4 by 4 HDMI Matrix with 4K×2K Support is capable of switching and routing an HDMI signal from any of its four sources to either of four connected HDMI displays allowing any source to be be shown independently on either display. It supports 3D, 'Deep Color' and High Definition lossless audio formats. Control of inputs and outputs can be easily operated through the on-panel buttons, IR remote control, RS-232 or Web GUI controls

Features

- Supports Standard and High Definition resolutions up to 4K×2K (UHD)
- Supports up to 7.1 channels of High Definition audio (LPCM, Dolby TrueHD, and DTS-HD Master Audio)
- Supports 'Deep Color' up to 1080p/36-bit
- Supports Internal/External EDID settings
- Supports control through On-panel Buttons, IR, RS-232, and Web GUI

Note:

1. This unit does not support HDMI to DVI conversion.
2. For playback of 4K×2K HDMI source signals, a 4K×2K capable display and High Speed HDMI cables are required.

Applications

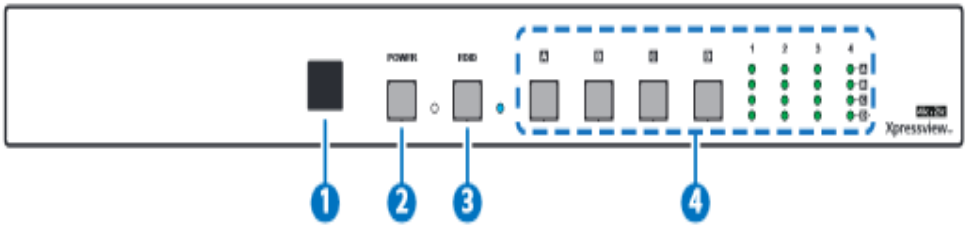
- Showroom display control
- Educational demo
- Installation usage
- Advertising display

System Requirements

HDMI source devices such as Blu-ray/DVD player, games consoles or set-top boxes and HDMI equipped output display (HDTV/monitor) and HDMI High Speed cables.

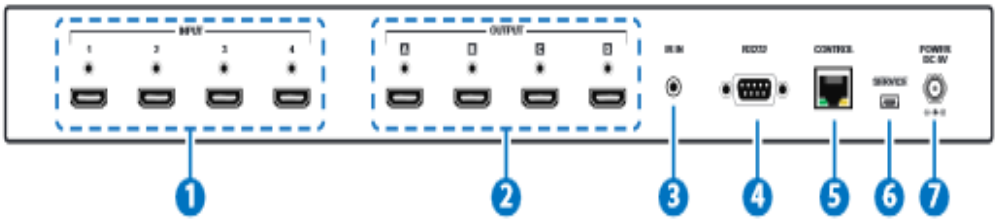
Operation Controls and Functions

Front Panel



1. IR Window:
Accepts the remote control signal of this Matrix only.
2. POWER Button and LED:
Press this button to power the Matrix ON/OFF. The LED will light up when the power is ON.
3. EDID Button and LED:
When in 'TV' mode, the unit will detect the EDID settings of the display connected to Output A. If it detects a 4K×2K capable EDID setting it will transmit the signal in that format to the output ports. If no 4K×2K capable EDID is detected then the unit will detect the EDID settings and output the best resolution that all displays can support.
When in 'STD' mode, the unit will use it's own built-in EDID . In this mode, the video output will be set to 1080p@60Hz and the audio at LPCM 2CH Stereo. Use this mode if there are display problems in TV Mode.
Note: The LED will light when in STD mode.
4. OUTPUT A/B/C/D Buttons and LEDs:
Press the 'A', 'B', 'C' or 'D' buttons to select the source (1~4) for that output, the corresponding LED will light to indicate the selected source.

Back Panel



1. INPUT 1/2/3/4:
Connect to HDMI equipped source devices such as DVD/Blu-ray players, set-top boxes or games consoles.
2. OUTPUT A/B/C/D:

Connect to an HDMI TVs/displays or monitors for display of the selected source signal.

3. IR IN:

Connect the supplied IR Extender for IR signal reception from the remote control included in the package. Ensure that the remote is within the direct line-of-sight of the IR Extender

4. RS-232:

Connect to a PC/laptop or RS-232 control system with a D-sub 9-pin male cable to control the unit with RS-232 commands (see RS232 Commands Section Below).

5. CONTROL:

Connect to an active Ethernet link with an RJ45 terminated cable to control the unit with Web GUI (see Web GUI Control Section Below).

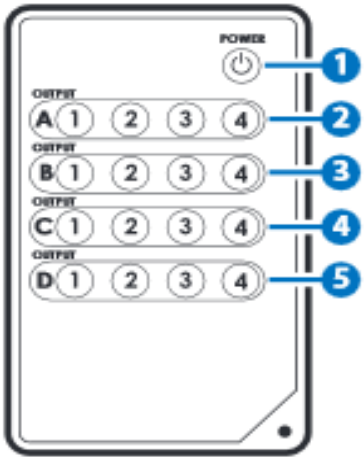
6. SERVICE:

Manufacturer use only.

7. DC 5V:

Connect the 5V DC power supply to the unit and plug the adaptor into an AC outlet.

Remote Control



1. POWER:

Press this button to switch the unit ON or to put it into standby mode.

2. OUTPUT A and 1~4:

Press buttons 1~4 to select the required source for Output A.

3. OUTPUT B and 1~4:

Press buttons 1~4 to select the required source for Output B.

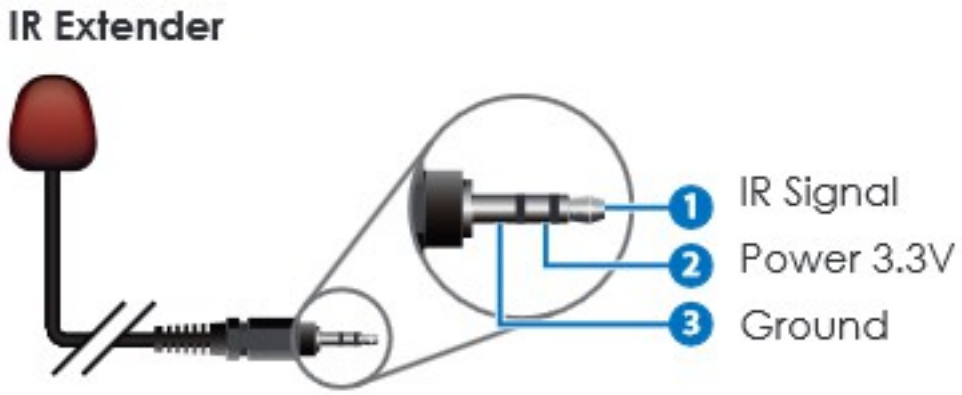
4. OUTPUT C and 1~4:

Press buttons 1~4 to select the required source for Output C.

5. OUTPUT D and 1~4:

Press buttons 1~4 to select the required source for Output D

IR Cable Pin Assignments



RS-232 Protocol

Matrix			Remote Control	
Pin	Assignment		Pin	Assignment
1	NC		1	NC
2	TX		2	RX
3	RX	▶	3	TX
4	NC		4	NC
5	GND		5	GND
6	NC	◀	6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Baud Rate: 19,200bps Parity: None Flow Control: None
Data Bit: 8 bits Stop Bit: 1

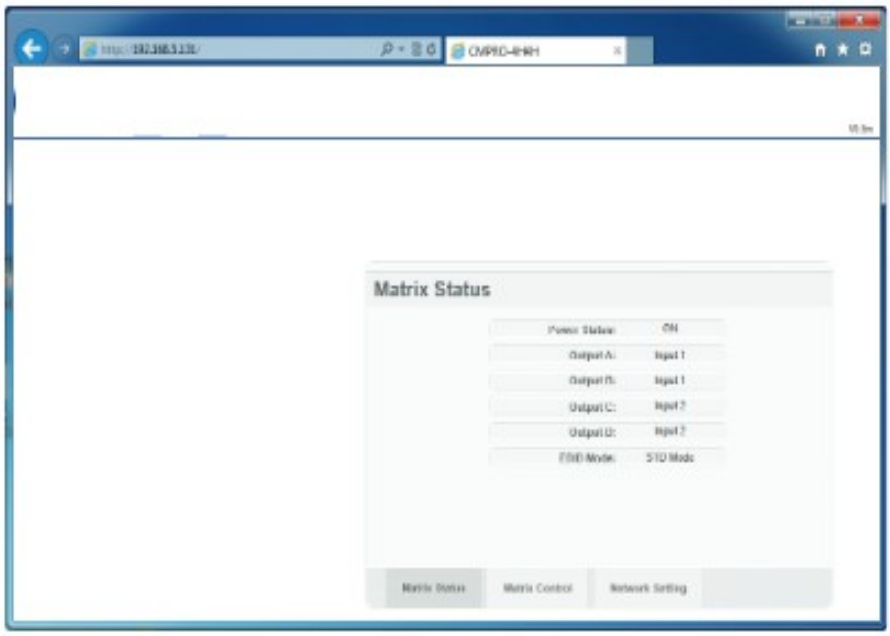
RS-232 Commands

Command	Description
A1~A4	Switch Output A to 1~4
B1~B4	Switch Output B to 1~4
C1~C4	Switch Output C to 1~4
D1~D4	Switch Output D to 1~4
AB... 1~AB... 4	Switch Output A B C... to 1~4 at the same time
SETIP <IP> <SUBNET> <GW>	Setting IP. SubNet. GateWay <Static IP>
RSTIP	IP configuration was reset to factory default<DHCP>
IPCONFIG	Display the current IP config
P0	Power Off
P1	Power On
L1~L4	Switch all the output to 1~4
ST	Display the current matrix state and firmware version
RS	System Reset to A1, B1
EM1~EM2	Setting EDID MODE. 1-STD 2-TV
?	Display all available commands

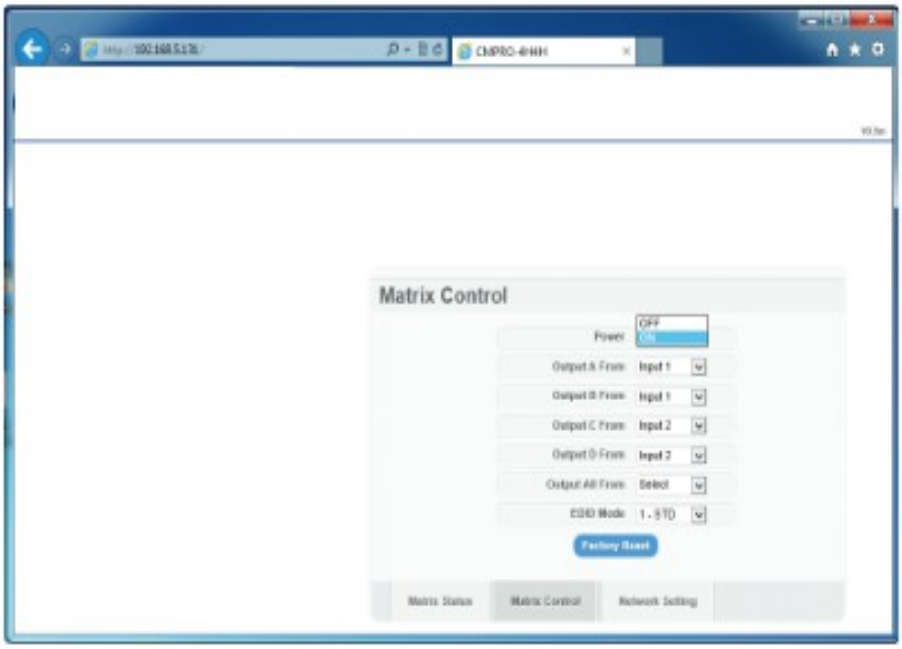
Note:
RS-232 commands will not execute unless followed by a carriage return.
Commands are not case sensitive.

Web GUI Control

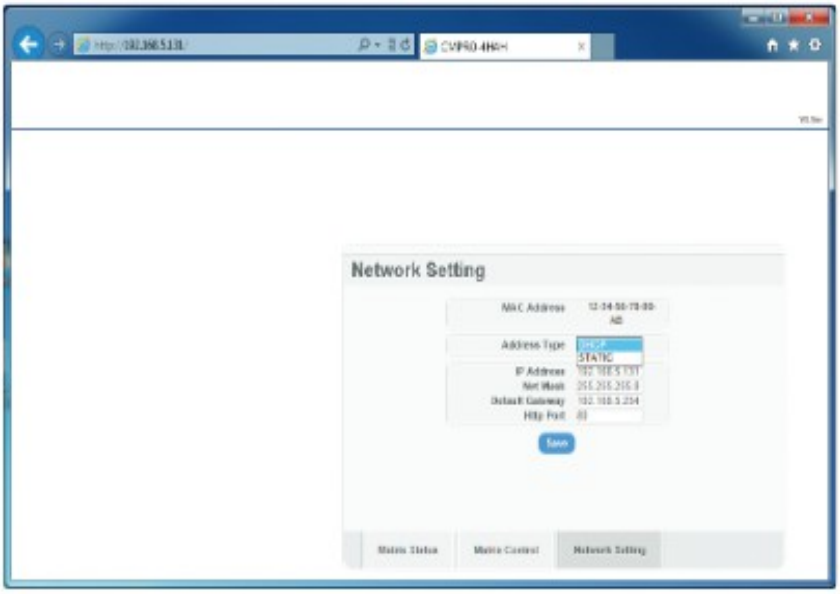
On a PC/Laptop that is connected to the same active network as the Matrix, open a web browser and type the Matrix's IP address on the web address entry bar (The IP Address can be obtained via RS-232 by using the 'help' command or use the default IP: 192.168.0.1). The browser will display the Matrix's status, control and user setting pages



Click on the 'Control' tab access to power, input/output ports, EDID and factory reset settings.



Click on the 'Setting' tab allows user to reset the IP configuration. The system will ask for a reboot of the Matrix each time any of the settings are changed. The IP address used to access the Web GUI control will also need to be changed on the web address entry bar.



Note: The version of Internet Explorer being used should be Version 8 or better to ensure compatibility with the Web GUI function

Specifications

Video Bandwidth	340Mbps /10.2Gbps
Input Ports	4×HDMI (Type A Female), 1×IR Extender (3.5mm mini-jack),1×RS-232 (D-Sub 9-pin), 1×Control (RJ45/LAN), 1×Mini USB (Manufacturer use only)
Output Ports	4×HDMI (Type A Female)
Output Resolution	VGA~WUXGA, 480i ~1080p & 4K×2K@24/25/30Hz
HDMI I/O Cable Distance	15m@8-bit, 10m@12-bit, 5m@4K×2K
Power Supply	5V/3.6A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4KV (contact discharge)
Dimensions	436mm (W)×167mm (D)×48mm (H)
Weight	1945g
Chassis Material	Metal
Color	Black
Operating Temperature	0℃ ~ 40℃ / 32℉ ~ 104℉
Storage Temperature	−20℃ ~ 60℃ / −4℉ ~ 140℉
Relative Humidity	20 ~ 90% RH (non-condensing)
Power Consumption	10.8W

Connection Diagram