



OR-HD24S

v1.3 HDMI 2 x 4 Matrix Switcher

OPERATION MANUAL





Precautions

Failure to follow the precautions described below may cause damage to this v1.3 HDMI Matrix and void the warranty.

- DO NOT open the case. This will void the warranty, if you find a problem with this product, please return it to your retailer or seller who will assist you or provide you with a solution.
- DO NOT use third-Party AC adaptors or power cords. This may damage the Matrix.
- DO NOT bump, jar or drop the product because it may cause damage and void the warranty.
- DO NOT allow liquids to come into contact with the Matrix because they may cause damage.



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1. Introduction

Thank you for purchasing this v1.3 HDMI Matrix. As HDMI products become increasingly popular, users often have multiple HDMI sources and displays. This HDMI matrix provides an excellent and convenient solution for connecting all your HDMI equipment. You can select which source to view on each of the displays using the remote control. This matrix can also transfer deep colour video and bitstream audio with maximum performance. It supports v.1.3 HDMI, HDCP 1.1 and DVI 1.0.

Please follow this manual to start enjoying the benefits of this Matrix. We suggest you keep it in a safe place for future reference.

2. Application

- High performance v1.3 HDMI Matrix with 2 inputs and 4 outputs including a remote for Infra red control, allowing you to link all your favourite HDMI devices and enjoy your music, movies and games.
- Each of the two HDMI sources can be simultaneously directed to any of the four HDMI Displays independently (e.g one source to screen 2, the other to screen 4).
- As the HDMI signal progresses through the system, it is re-timed, and level-compensated.
- The HDCP & HDMI/DVI LEDs will illuminate accordingly to define the input source's format.
- Switchable EDID function, choose between built in EDID or read the external EDID of connected display.

3. Package Contents

- OR-HD24S v1.3 HDMI Matrix.
- CR33 Remote Control (with Battery)
- IR Receiver
- Power Cord
- 5V DC power supply adaptor.
- Operation Manual.



4. System Requirements

HDMI source device(s) and HDMI display device(s).

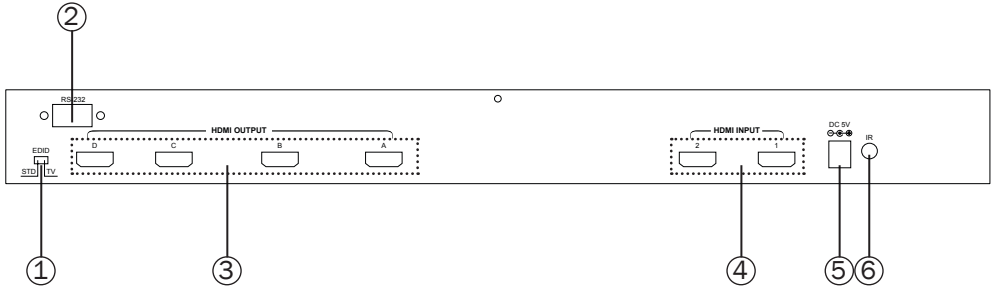
5. Features

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant.
- Supports digital video formats in Deep Colour 12bit and new lossless digital audio (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio).
- The HDMI input is compensated, clock / phase adjusted and jitter eliminated so the output is a brand new standard HDMI signal.
- LEDs on each output to indicate which input is currently selected.
- Compatible with all HDMI sources and displays.
- Supports a wide range of PC and HDTV resolutions from VGA to UXGA
- and 480i to 1080p including 1080p24fps.
- Supports RS-232 control.
- Supports IR remote control and IR extender (via 3.5mm jack IR input).
- Dolby Digital, DTS digital audio transmission (32-192 kHz Fs sample rate).
- Supports LPCM7.1 channel audio from each independent HDMI output.
- At 1080p/8bit resolution, source to input cable length can be up to 10m, output to display cable length can be up to 10m.
- At 1080p/12bit, the source to input cable length can be up 10m, Output to display cable can run up to 6 metres.



6. Operation Controls and Functions

6.1 Rear Panel



1. EDID Control Switch: EDID Control Switch setting is either: STD(internal) or TV(external)*
2. RS-232 communication port: Connect to the COM (serial) port of your PC or control device for control over settings via RS-232. Commands and settings can be found in section 9 of this manual.
3. HDMI outputs: Connect these to your HDMI displays.
4. HDMI inputs: Connect to the HDMI or DVI (via adaptor- not included) output of your source equipment such as a DVD player or set-top-box.
5. Power: Plug the 5V DC power supply into the unit and connect the adaptor to AC wall outlet.
6. IR extender input- connect the supplied IR extender to this input.

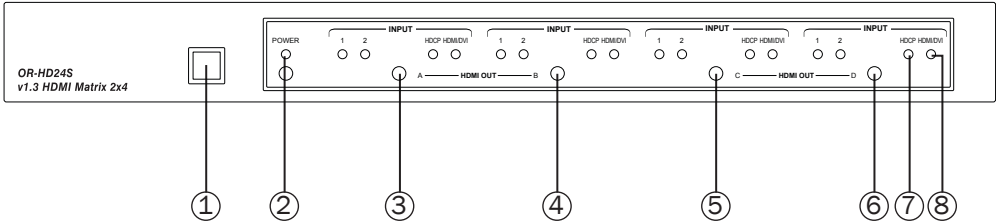
*Please Leave the EDID switch on the default factory setting of 'TV' if the displays are working correctly, the unit will read the EDID data from the first connected HDMI display and store it. If the first device is connected via DVI adaptor, the matrix will move on to the second output to check for a HDMI connection. The detection priority of the matrix is v1.3 HDMI, v1.2 HDMI, DVI.

*If you experience any display problems with the EDID switch in the TV position, you can set the EDID switch to STD, the unit will then use it's built in EDID- which supports 1080p 12bit(max) video and pcm 2 channel audio.

Please note that If you change the EDID switch's setting on the Matrix then you have to reboot (power off, unplug and turn on again) for your selection to take effect.



6.2 Front Panel



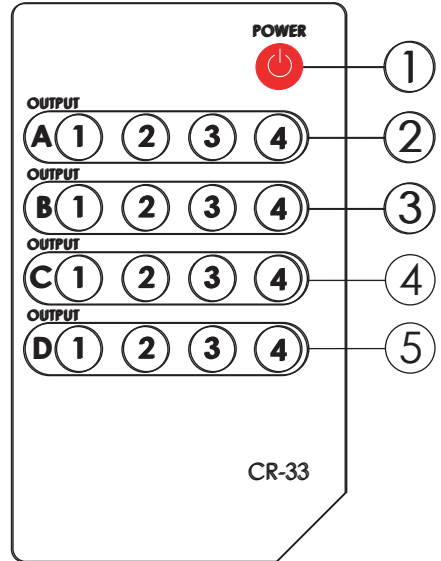
1. Remote control sensor
2. Power switch & LED indicator: Press the button to turn the unit on/off, the LED lights green when power is on and red when the power is off.
3. Input select 'A' button/indicators: Press this button repeatedly to cycle through your inputs and select which source to route to the HDMI A output. The indicator lights will illuminate accordingly (see points 7 and 8).
4. Input select 'B' button/indicators : Press this button repeatedly to cycle through your inputs and select which source to route to the HDMI B output. The indicator lights will illuminate accordingly (see points 7 and 8).
5. Input select 'C' button /indicators : Press this button repeatedly to cycle through your inputs and select which source to route to the HDMI C output. The indicator lights will illuminate accordingly (see points 7 and 8).
6. Input select 'D' button/indicators : Press this button repeatedly to cycle through your inputs and select which source to route to the HDMI D output. The indicator lights will illuminate accordingly (see points 7 and 8).
7. HDCP source light: When the input source has HDCP implemented this light will illuminate.
8. HDMI/DVI indicator light: When the source is connected via HDMI the HDMI/DVI LED will illuminate. If the source is connected via a DVI adaptor then the light will remain off.



7. Remote Control

1. Power: Press to turn the unit on/off.
2. Input Select for HDMI OUT 'A': Press 1, or 2, to select the desired input source for HDMI OUT A.
3. Input Select for HDMI OUT 'B': Press 1, or 2 to select the desired input source for HDMI OUT B.
4. Input Select for HDMI OUT 'C': Press 1, or 2 to select the desired input source for HDMI OUT C.
5. Input Select for HDMI OUT 'D': Press 1, or 2 to select the desired input source for HDMI OUT D.

*N.B: The buttons labeled 3&4 on the remote do not have any effect on this model of Matrix.





8. RS-232 Protocol

OR-HD22S			Remote Control Console	
PIN	Definition		PIN	Definition
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: 9600bps

Data bit: 8bits

Parity: None

Stop bit: 1bit

Flow Control: None

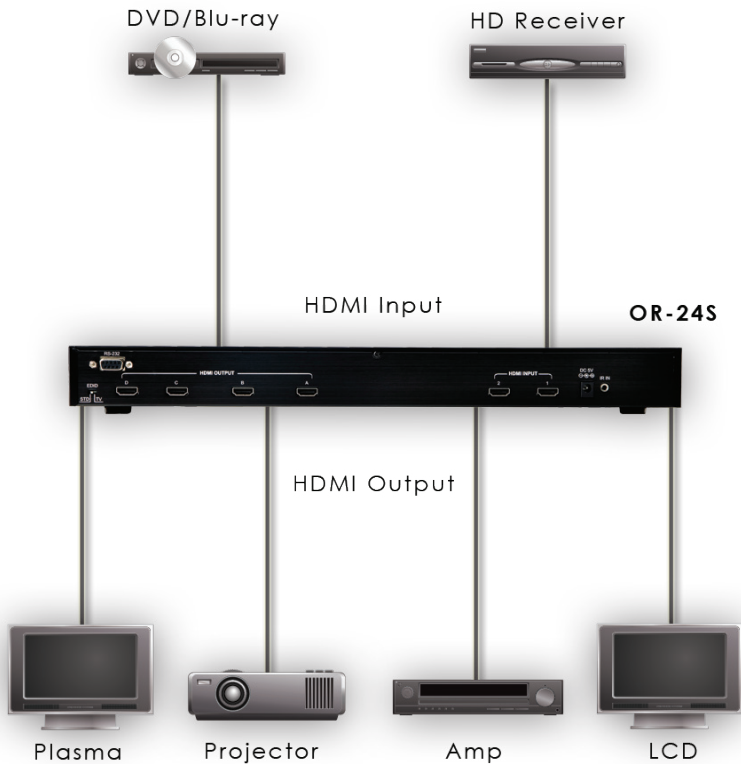


8.1 Command Sets

COMMAND	ACTION
POWER 00	Power Off (standby)
POWER 01	Power On
PORT 11	Output A select Input 1
PORT 12	Output A select Input 2
PORT 13(No Function)	Output A select Input 3
PORT 14(No Function)	Output A select Input 4
PORT 21	Output B select Input 1
PORT 22	Output B select Input 2
PORT 23(No Function)	Output B select Input 3
PORT 24(No Function)	Output B select Input 4
PORT 31	Output C select Input 1
PORT 32	Output C select Input 2
PORT 33(No Function)	Output C select Input 3
PORT 34(No Function)	Output C select Input 4
PORT 41	Output D select Input 1
PORT 42	Output D select Input 2
PORT 43(No Function)	Output D select Input 3
PORT 44(No Function)	Output D select Input 4
ST	Display the current matrix status and F/W version



9. Connection Diagram





10. Specifications

Frequency bandwidth	2.25Gbps (single link)
Input ports	2 x HDMI female ports,
Output ports	4 x HDMI female ports
EDID	Standard, TV/Moving Port 1
HDMI Audio output	PCM2, PCM5.1, PCM7.1, Dolby5.1, DTS5.1, Dolby Digital+, Dolby TrueHD, DTS-HD
HDMI Cable in	1080p 8bit (10m), 1080p 12bit (10m)
HDMI Cable out	1080p 8bit (10m), 1080p 12bit (6m)
Color Space	RGB_24/36,YCbCr 4:4:4_24/36, YCbCr 4:2:2,xvyycc
IR	Yes
Deep Color	1080p 12bit
HDMI Resolution	480I~1080p 50/60, 1080p 24, VGA~UXGA
DVI Resolution	480I~1080p 50/60, 1080p 24, VGA~UXGA
Power Supply	5VDC/6A (US/EU standards, CE/FCC/UL certified)
Dimensions (mm)	438(W) x 175(D) x 49(H)
Weight (g)	3100
Chassis Material	Metal
Silk Skin Color	Black
Operating Temperature	Operating from 0°C ~ 40°C
Power Consumption	8W(Max)



Notes:



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