

NEXIS

18Gbps 4x4 Seamless UHD Matrix



User Manual

VER 2.1

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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1. Introduction

The 18Gbps 4x4 seamless UHD Matrix can connect 4 HDMI sources to 4 HDMI displays. Supported video resolution is up to 4K60 4:4:4. The product supports IR matrix and Audio matrix. IR matrix routing follows the video routing. Audio extract and insert are supported. The product supports CEC management and strong video wall processing.

2. Features

- ☆ HDMI 2.0 and HDCP 2.2 compliant
- ☆ Support 18 Gbps video bandwidth
- ☆ Support video resolution up to 4K60 4:4:4
- ☆ Color space: RGB, YCbCr 4:4:4, YCbCr 4:2:2
- ☆ Support seamless switching, video wall function
- ☆ Support CEC management
- ☆ Support audio matrix and IR matrix function
- ☆ Support external L/R audio insert on HDMI stream
- ☆ Support EDID management
- ☆ Support front panel, RS232, TCP/IP (LAN 10M/100M) control

3. Package Contents

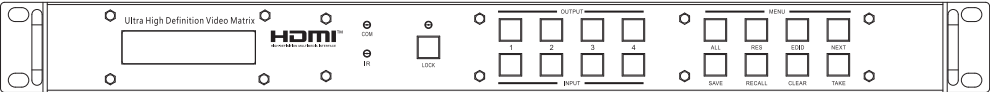
- ① 1 x 4x4 seamless UHD Matrix
- ② 1 x AC Power Cord
- ③ 1 x Matrix IR Remote
- ④ 4 x IR Receiver cable (1.5 meters)
- ⑤ 4 x IR Blaster cable (1.5 meters)
- ⑥ 1 x 3-pin Phoenix Connector
- ⑦ 1× CAT6 cable
- ⑧ 1× USB to RS232 Cable
- ⑨ 1× User Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K60 4:4:4
Color Space	RGB, YCbCr 4:4:4/4:2:2
HDMI Amplitude	T.M.D.S +/- 0.4Vpp
Differential Impedance	100±15ohm
ESD Protection	Human-body Model: ±8kV (Air-gap discharge) , ±4kV (Contact discharge)
RS232/Ethernet Control	
Baud rate and Protocol	Baud rate: 9600, data bit: 8 Stop bit: 1, no parity checking
Ethernet	IE10.0+,HTML5
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	430mm (W)×220mm (D)×44mm (H)
Weight	5Kg
Power Supply	AC 110 - 240V
Power Consumption	60W (Max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 70°C / -4°F ~ 158°F
Relative Humidity	10%~50% RH (non-condensing)

5. Operation Controls and Functions

Front Panel



Item	Description
LCD Panel	Displays the current video selections
COM	Power LED (also indicates control commands)
LOCK	Front panel lock/unlock
OUTPUT	Output selection buttons 1~4
INPUT	Input selection buttons 1~4
ALL	Set all outputs to the next input selection
RES	Set the output scaler resolution
EDID	Set the EDID options for the next input selection
NEXT	Select the next available option
SAVE	Save the current matrix setting as a preset
RECALL	Set the matrix setting from a saved preset
CLEAR	Cancel the current command function
ENTER	Set the displayed option

- Press buttons ALL + INPUT m + TAKE by sequence, to switch input m to all the outputs.
- Press buttons SAVE + OUTPUT n to save current routing/video wall scene as scene n. Up to 8 scenes can be saved.
- Press buttons RECALL + OUTPUT n to recall routing scene n as the current routing.
- Press buttons RES + OUTPUT n + NEXT + TAKE, to change the output resolution of OUTPUT n.

Resolution options:

Number	Output Resolution Setting	Number	Output Resolution Setting
1	3840x2160p 60Hz	9	1440x1050 60Hz
2	3840x2160p 50Hz	10	1366x768 60Hz
3	3840x2160p 30Hz	11	1360x768 60Hz
4	3840x2160p 25Hz	12	1280x1024 60Hz
5	1920x1200 60Hz	13	1280x768 60Hz
6	1920x1080p 60Hz	14	1280x720p 60Hz
7	1920x1080p 50Hz	15	1280x720p 50Hz
8	1600x1200 60Hz	16	1024x768 60Hz

- Press buttons EDID + INPUT m + NEXT + TAKE, change the EDID mode of port INPUT m
EDID options:

Number	Output Resolution Setting	Number	Output Resolution Setting
1	Manual	5	1920x1080 60Hz
2	3840x2160 60Hz	6	1280x1024 60Hz
3	3840x2160 30Hz	7	1280x720p 60H
4	1920x1200 60z	8	1024x768 60Hz

Manual EDID is loaded by PC Tool

- Front Lock button

The front panel control buttons can be locked to prevent accidental use or operation by unauthorized persons. Press and hold the LOCK button for two seconds to lock or unlock the front panel. When the panel is locked, all buttons (except the LOCK button) will not function until the front panel is unlocked. The LOCKED/UNLOCKED state is shown on the LCD panel and by the LED above the LOCK button, which is lit when the front panel is fully LOCKED. When the unit is UNLOCKED, press and hold the LOCK button for six seconds - The LCD panel will show the following (any exiting numbers indicates that those buttons are already locked):

Output: -----

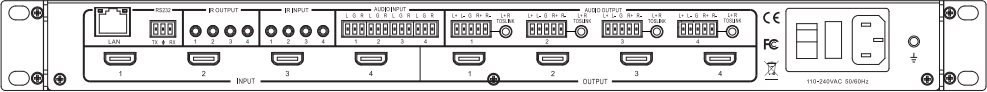
Input: -----

Pressing any of the numbered Output or Input buttons will toggle the lock status of that button. The button will become locked when the respective button number is shown on the LCD panel. When all selection are done, press the ENTER button to set the new LOCK/UNLOCK states of those buttons.

Whenever a locked Output or Input button is activated, the LCD panel will show that the button is locked. In this mode, the LOCK LED is not lit.

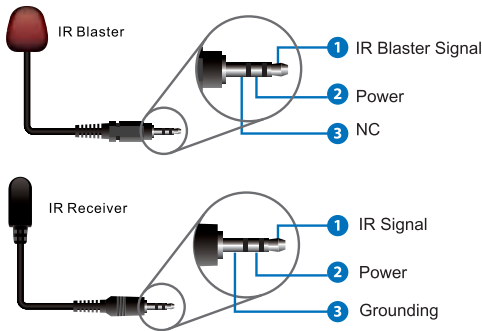
To unlock those buttons, repeat the above steps to remove the button numbers from the LCD panel before pressing ENTER to accept the changes.

Rear Panel



- LAN(10M/100M), RS232 are for PC control.
- Analog Audio IN/OUT ports bind to corresponding HDMI ports.
For example:
If HDMI 1 audio source is selected with External LR, then analog AUDIO IN LR1 (with phoenix connector) will be selected to replace the embedded audio of the HDMI input 1 data stream. If HDMI 1 audio source is selected with AUTO by PC TOOL or command, then the original embedded audio of input HDMI 1 will be used as its audio data stream. If the input is DVI signal, no matter how it is set up, system will get external analog audio input. Analog AUDIO OUT n will always output the same audio content with HDMI OUTPUT n.
- IR IN and IR OUT
IR IN/OUT routing follows the video matrix routing, no need to separately control IR matrix.

IR extender connectors (not as accessories)

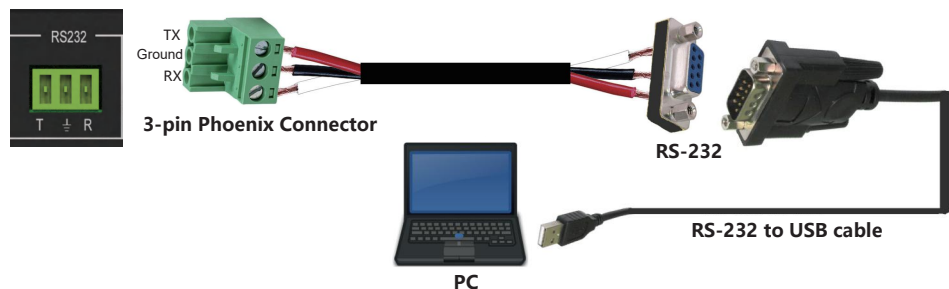


- Audio Input
4 3-pin Phoenix connectors to input external analog LR audio, user can select this audio to replace the corresponding embedded HDMI audio.
- Audio Output
4 5-pin Phoenix connectors to output balanced LR audio, and 4 mini Toslink jackets to output analog LR audio and digital Spdif audio.
The 4 sets of Audio output (LR and Toslink) channels can be independent of video and switched by PC Tool or commands.

6. RS232/LAN Control Connection

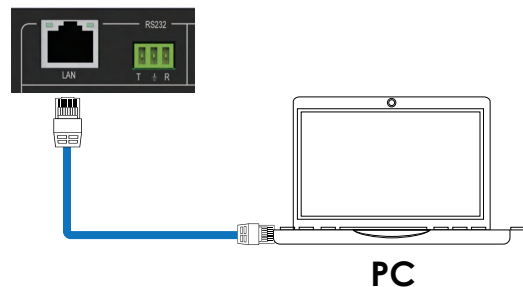
6.1 RS232 Control Connection

The product supports RS232 control. Connect the RS232 port of the product to a PC via a serial cable, as shown in the following figure:



6.2 Network Control Connection

The product also supports Network control. Connect the LAN port of the product to a PC via a UTP cable, as shown in the following figure:



Note: Factory default network setting:

IP Type	Static IP
Static IP	192 . 168 . 0 . 247
Subnet Mask	255 . 255 . 255 . 0
Gateway	192 . 168 . 0 . 1