NEXIS

8K HDMI 4x2 Matrix
HM842A



User Manual

VER 1.1

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

This 8K HDMI 4x2 Matrix can not only switch any of the four HDMI input signals, but also distribute it to two displays simultaneously. The video resolution is up to 8K@60Hz 4:2:0. It supports eARC function (only for INPUTS 1 port and OUT 1 port). Built-in EDID DIP switch supports advanced EDID management. It also supports audio de-embedding function. As able to be used either as a splitter or a switcher, this multi-functional product can be widely applied in scenarios of demonstration, video conference, multimedia teaching and other occasions requiring for big-screen demonstration.

2. Features

- ☆ HDMI 2.1 and HDCP 2.3 compliant
- ☆ Support 40Gbps video bandwidth
- ☆ Support video resolution up to 8K@60Hz 4:2:0 10bit, 8K@30Hz 4:4:4 10bit, 4K@120Hz 4:4:4 10bit
- ☆ VRR, FVA, ALLM supported
- ☆ Support HDR, HDR10, HDR10+, Dolby Vision, HLG pass through
- ☆ Support HDMI audio formats: LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD
- ☆ INPUTS 1 port and OUT 1 port support eARC/ARC function
- ☆ Allows HD audio up to Dolby Atmos, DTS:X over TrueHD from ANY external HDMI source to any eARC/ARC sound system
- ☆ Support audio de-embedding function (output through the optical and analog port)
- ☆ Built-in EDID DIP switch supports advanced EDID management
- ☆ 8K->4K, 8K/4K->2K downscaler support
- ☆ Support IR remote control and front panel button switching
- ☆ Built-in Equalizer, Retiming and Driver
- ☆ Compact design for easy and flexible installation

3. Package Contents

① 1 × 8K HDMI 4x2 Matrix
② 1 × IR Remote
③ 1 × 5V/2A Multinational Power Supply
④ 1 × User Manual

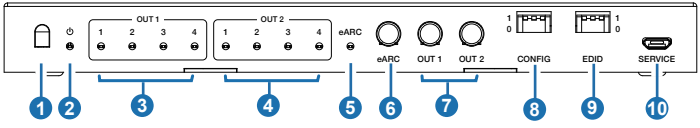
4. Specifications

Technical	
HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	40Gbps
Video Resolution	Up to 8K@60Hz 4:2:0 10bit, 8K@30Hz 4:4:4 10bit, 4K@120Hz 4:4:4 10bit
Color Depth	8/10/12-bit
Color Space	RGB_4:4:4, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
Audio Formats	**HDMI input/output:** LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD **Audio de-embedding output:** Optical: Up to LPCM/Dolby/DTS 5.1 CH Analog: LPCM 2.0 CH
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input	4 × HDMI IN [Type A, 19-pin female]
Output	2 × HDMI OUT [Type A, 19-pin female] 1 × OPTICAL [S/PDIF port] 1 × L/R [3.5mm Stereo Mini-jack]
Control	1 × SERVICE [Micro USB, Update port]
Mechanical	
Housing	Metal Enclosure
Silkscreen Color	Black
Dimensions	200mm (W) × 85mm (D) × 21mm (H)
Weight	411 g
Power Supply	Input: AC100 - 240V 50/60Hz, Output: DC 5V/2A (US/EU standards, CE/FCC/UL certified)
Power Consumption	2.05 W (Max)
Operation 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)

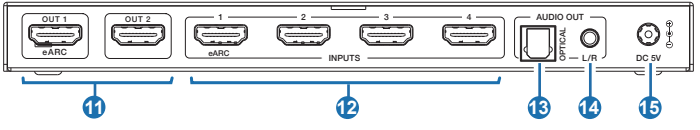
Recommended HDMI Cable				
Video Resolution	8K	4K60	4K24	1080P
HDMI Cable Type	Ultra HDMI 2.1	HDMI 2.0	HDMI 1.4	HDMI 1.4
HDMI Cable Length (HDMI IN / OUT)	3m/10ft	8m/26ft	12m/39ft	15m/49ft
The use of “Premium High Speed HDMI” cable is highly recommended.				

5. Operation Controls and Functions

Front Panel



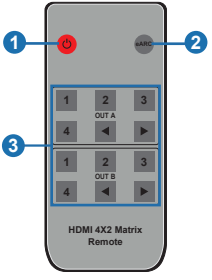
Rear Panel



No.	Name	Function Description
1	IR Window	IR input signal receiving window.
2	POWER LED	The power LED lights in green when the device is working, and red when the device is in standby.
3	OUT 1 LED (1~4)	When the INPUTS 1/2/3/4 port is selected as the signal source input channel for OUT 1 port, the corresponding green LED 1/2/3/4 will be on.
4	OUT 2 LED (1~4)	When the INPUTS 1/2/3/4 port is selected as the signal source input channel for OUT 2 port, the corresponding green LED 1/2/3/4 will be on.
5	eARC LED	The eARC LED will be on when you turn on the eARC function.
6	eARC button	Press the button to turn on/off eARC function.

No.	Name	Function Description
7	OUT 1~2 button	Used to select signal source for OUT 1/2 port. Pressing the button OUT 1/2 will allow the device to switch any of the four HDMI input signals and distribute it to the corresponding output port.
8	CONFIG DIP switch	Use the DIP switch to set working mode (x means 1 or 0). 1xx- Matrix mode 0xx- Splitter mode x11- OUT 2 pass-through mode x10- OUT 2 scaler mode (8K->4K) x01- OUT 2 scaler mode (8K/4K->1080P) x00- OUT 2 pass-through mode
9	EDID DIP switch	Use the DIP switch to set EDID. 111- Copy OUT 1 port sink EDID (as factory default) 110- HDMI 1080p@60Hz, Audio 2ch PCM 101- HDMI 4K@60Hz 4:4:4, Audio 2ch PCM 100- HDMI 4K@60Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY 011- HDMI 4K@60Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD 010- HDMI 8K@60Hz 4:2:0+8K@30Hz 4:4:4, Audio 2ch PCM 001- HDMI 8K@60Hz 4:2:0+8K@30Hz 4:4:4, Audio 5.1ch PCM/ DTS/DOLBY 000- HDMI 8K@60Hz 4:2:0+8K@30Hz 4:4:4, Audio 7.1ch PCM/ DTS/DOLBY/HD
10	SERVICE	Firmware update and debug port.
11	OUT (1~2) port	HDMI signal output port, connected to HDMI display device such as TV or Monitor with an HDMI cable. **Note:** When the eARC function is turned off, connect the “OUT 1 (eARC)” port to HDMI display device to work as an output port; When the eARC function is turned on, you can connect the “OUT 1 (eARC)” port to an HDMI TV with eARC function.
12	INPUTS (1~4) port	HDMI signal input port, connected to HDMI source device such as DVD or PS5 with an HDMI cable. **Note:** When the eARC function is turned off, connect the “INPUTS 1 (eARC)” port to HDMI source device to work as an input port; When the eARC function is turned on, connect the “INPUTS 1 (eARC)” port to soundbar to output the audio signal returned from the “OUT 1 (eARC)” port.
13	OPTICAL	Optical fiber audio output port. **Note:** When the eARC function is turned on, this port is muted.
14	L/R	Analog audio output port. **Note:** When the eARC function is turned on, this port is muted.
15	DC 5V	DC 5V/2A Power input port.

6. IR Remote



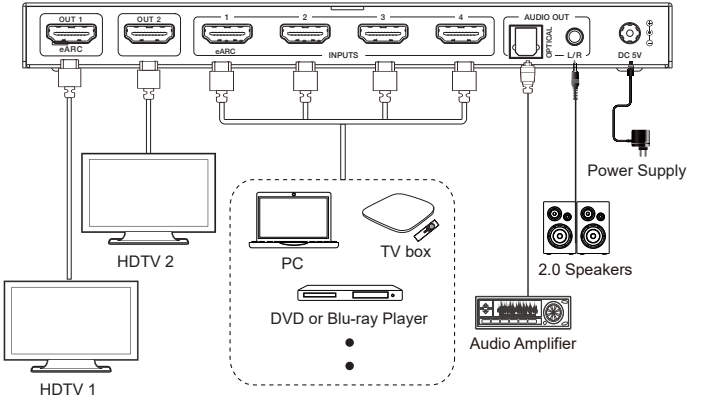
① ⏻: Power on the device or set it to standby mode.

② **eARC:** Press this button to turn on/off eARC function. When eARC function is turned on, the eARC LED on the front panel will be on.

③ **OUT A/OUT B:** Press **1/2/3/4** directly to select the relevant input source 1/2/3/4 to OUT 1/2 display.
Or press ◀/▶ to select the last or next signal input source.

7. Application Example

Situation 1:
When the eARC function is turned off, the connection diagram is as following.

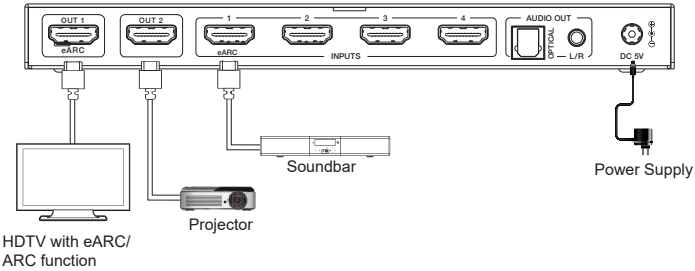


Situation 2:
When the eARC function is turned on, connect the “INPUTS 1 (eARC)” port to a Soundbar to output the audio signal returned from the “OUT 1 (eARC)” port, the INPUTS 1 LED for OUT 1 lights on, the connection diagram is as following.

Note:

(1) If the HDTV supports eARC/ARC function, the Soundbar will receive the audio signal returned from the HDTV, and then emit the sound; otherwise it will not emit sound.

(2) If the HDTV supports eARC/ARC function, but the Soundbar only supports ARC function, please turn off the eARC function of the HDTV.



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