



# 4x4 HDMI 2.0 Matrix LT User's Guide



P/N:Matrix44HD2-LT

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## **Important Safety Notices**

Please read safety instructions carefully before installation and operation.

- Please pay close attention to all warnings and hints for this device
- Do not expose this unit to rain, heavy moisture, or liquid
- Do not put any items into the device or attempt to modify its operation
- Do not repair the device or open the enclosure without professional guidance to avoid electric shocks. Doing so may void your warranty
- Keep the product in a well-ventilated location to avoid damage from overheating
- Shut off power and make sure environment is safe before installation
- Do not plug the HDMI cables in/out when the device is in use to avoid cable damage. Make sure they are plugged into the correct ports
- Use the included 12VDC power adapter only. Make sure the specification matches if using 3rd-party DC power adapters

## Introduction

The 4x4 HDMI 2.0 Matrix LT allows you to connect up to four HDMI source devices and independently switch any source to any of the four HDMI displays.

## Features

- Supports up to 4K@60Hz YUV 4:4:4 8-bit, HDR (at 4K@60Hz YUV 4:2:0 10-bit), HDMI 2.0, HDCP 2.2/1.4, 18Gbps
- Supports HD digital audio, LPCM 7.1, 24-bit, 96KHz, Dolby Atmos
- 4K to 1080p auto downscaling to support mixed 4K & 1080p outputs
- Control methods: Panel buttons, IR remote
- EDID management: Built-in EDID, EDID copy
- Firmware upgradable for expanded capability and compatibility

## Installation Requirements

- HDMI source devices (DVD player, set top box, PC, etc.)
- HDMI displays (SDTV/Monitor, HDTV/Monitor, projector, etc.)
- HDMI cables (not included)

## Package Contents

- 4x4 HDMI 2.0 Matrix LT
- IR remote control
- Mounting accessories
- Power adapter, 12VDC/2A
- User's guide

# Product Layout

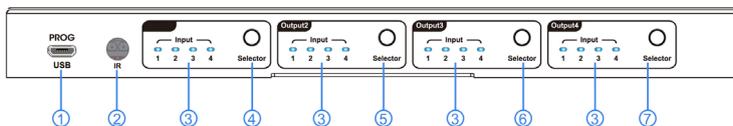
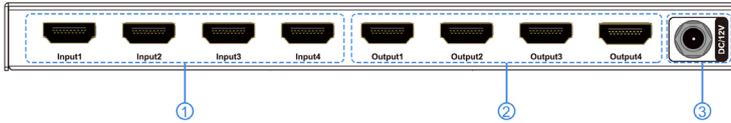


Figure 1: Front Panel Layout

1. **Micro USB Port:** For firmware update
2. **IR In:** Receives IR signals from the included remote control
3. **Input LED:** HDMI Input indicator for HDMI Out 1/ 2/3/4 or EDID indicator for HDMI In 1/2/3/4
4. **HDMI Out 1 Select Button:** Press to select the HDMI input device to display on HDMI Out 1
5. **HDMI Out 2 Select Button:** Press to select the HDMI input device to display on HDMI Out 2
6. **HDMI Out 3 Select Button:** Press to select the HDMI input device to display on HDMI Out 3
7. **HDMI Out 4 Select Button:** Press to select the HDMI input device to display on HDMI Out 4

## Select Button Functions

Select Button	Operation	Function
HDMI Out 1-4	Short press	1. Selects the HDMI Input device for HDMI Out 1-4
		2. Selects the EDID for HDMI Out 1-4 when EDID management mode is enabled
HDMI Out 1-4	Long press	Enter/Exit EDID management mode
HDMI Out 1 + HDMI Out 4	Long press simultaneously	Reset the Matrix to default settings



**Figure 2: Rear Panel Layout**

1. **HDMI In (1-4):** Connect to your HDMI sources
2. **HDMI Out (1-4):** Connect to your HDMI displays
3. **Power Jack:** Connects to the included power adapter

## Hardware Installation

1. Power off all devices including your HDMI source(s) and HDMI display(s).
2. Connect your HDMI source devices to the Matrix's HDMI In connectors with HDMI cables (HDMI cables not included).
3. Connect your HDMI displays to the Matrix's HDMI Out connectors with HDMI cables (HDMI cables not included).
4. Plug the included power adapter into the Matrix's Power Jack, then plug the power adapter into a reliable power outlet.
5. Power on all connected devices. The Matrix is ready for use.

# Application Diagram

The application diagram shows the most typical input and output devices used with the 4x4 HDMI 2.0 Matrix LT.

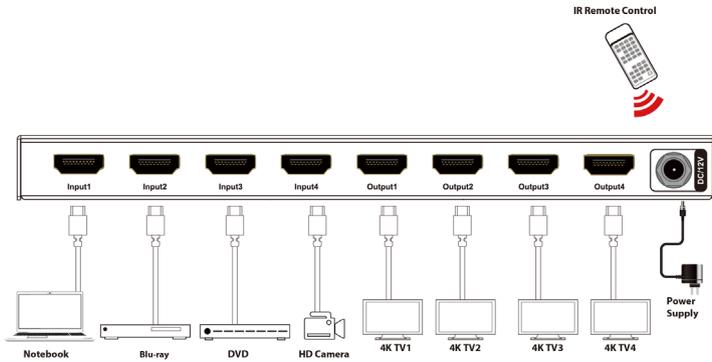
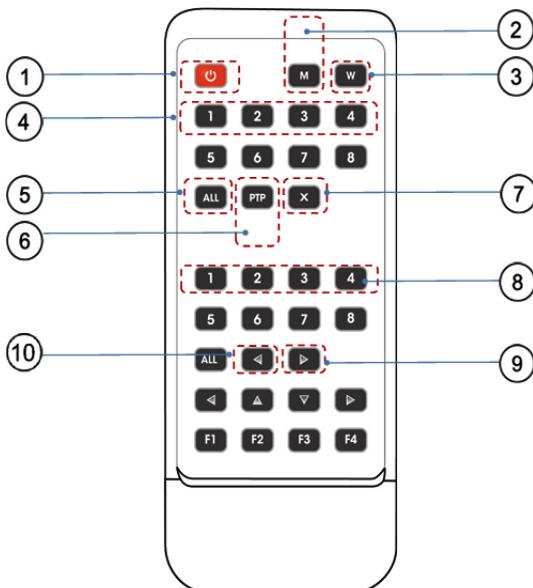


Figure 3: Application Diagram

## Matrix Device Control

### Remote Control

Users can control the 4x4 HDMI 2.0 Matrix LT using the included IR remote. Point the remote control towards the Matrix's IR In window located on the front panel.



1. **Standby:** Press to place the Matrix into standby mode. Press again to wake up the Matrix
2. **Mute:** Turns audio On/Off. Choose the output first, then press M. Example: To mute output 1 - press **Output 1** button (see #4), then press **M**
3. **Lock:** Press to lock the remote control
4. **Output 1/2/3/4:** Selects an input source to display on an output port. Example: To select Input 1 source to display on Output 1 port - Press Output 1 button, then press Input 1 button (see #8)

5. **All:** Selects one input device to display on all outputs. Example: Press All button, then press Input 1/2/3/4 (see # 8)
6. **PTP (Port to Port):** Press to assign all inputs and outputs to their numerical counterparts. Examples: Input 1 to Output 1, Input 2 to Output 2, Input 3 to Output 3, Input 4 to Output 4
7. **X:** Turn off output port. Example: To turn off display on Output 1 - Press Output 1 button (see #4), then press X. To turn on the display, press Output 1 + X again
8. **Input Select:** Press to select input 1/2/3/4
9. **Next:** Switch to the next input device. Example: To switch Output 1 to the next input device - Press Output 1 button (see #4), then press >. **Note:** If the next input device is inactive it will automatically skip to the next active input device
10. **Last:** Switch to the previous input device. Example: To switch Output 1 to the previous input device - Press Output 1 button (see #4), then press <. **Note:** If the previous input device is inactive it will automatically skip to the next active input device

**Note:** All buttons support short press, long press function is not supported.

## EDID Management

Allows you to choose the EDID for each input.

Supports built-in and EDID copy modes.

There are 8 EDID groups.

EDID groups	Indicator status	EDID instruction
0001	Input1 flickering	Def1 : 4K60HZ-YUV444-8bit/2CH
0010	Input2 flickering	Def2 : 4K60HZ-YUV420-8bit/2CH
0011	Input1 + Input2 flickering	Def3 : 4K30HZ-YUV444-8bit/2CH
0100	Input3 flickering	Def4 : 1080P-YUV444-8bit/2CH
0101	Input1 + Input3 flickering	Copy output1
0110	Input2 + Input3 flickering	Copy output2
0111	Input1 + Input2 + Input3 flickering	Copy output3
1000	Input4 flickering	Copy output4

EDID Table

## EDID Configuration Mode Setup

The Matrix's default EDID is 4K@60Hz YUV 4:4:4 8-bit 2-ch (0,0,0,1). Do Not make any changes if the default EDID works properly.

1. To change the EDID for Input 1, long press the **HDMI Out 1 Select** button (on the Matrix's front panel) for 1 second to enter EDID configuration mode. Release the button when the HDMI Out 1 LED begin to flicker. Example: If only Input 1 LED is flickering, it represents EDID Def1: 4K60Hz YUV 4:4:4 8-bit 2Ch (see Indicator status in EDID table on page 9).
2. Quick press the **HDMI Out 1 Select** button to choose the EDID setting (see Indicator status in EDID table on page 9). Example: If only Input 2 LED is flickering, it represents EDID Def2: 4K60Hz YUV 4:2:0 8-bit 2Ch. **Note:** EDID switching sequence: Built-in EDID > Copy EDID.

3. Long press the **HDMI Out 1 Select** button for about 1 second or wait 10 seconds to save your changes and exit EDID mode.
4. Repeat steps 1-3 for each HDMI input if necessary.

## Specifications

HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2/1.4
Resolution	480p@60Hz, 576p@50Hz, 720p@60Hz, 1080p@24/50/60Hz, 4K@24/30Hz, 4K@60Hz YUV 4:2:0, 4K@60Hz YUV 4:4:4
Bandwidth	18Gbps
Input Video Signal	0.5 - 1.0 volts p-p
Input DDC signal	5 volts p-p (TTL)
Video Compatibility	HDR10, HDR, Dolby Vision
Deep Color	8bit, 10bit, 12bit
Audio Output	LPCM 7.1/24bit/ 96khz, Dolby Atmos, DTS-X
Power Consumption	12.3W (max)
Operating Temperature	0 - 40 C (32 to 104 F)
Operating Humidity	5 to 90% RH (no condensation)

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