HDMI 8x8 Matrix Switch UHD-4K

Installation Guide

500441

SAFETY PRECAUTIONS

To insure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

NOTICE: Please read this manual carefully before using this product.

Table of Contents

1.Introduction

The HDMI 8x8 Matrix, UHD-4K connects eight HDMI sources to eight displays. This matrix provide eight HDMI outputs and each HDMI output is supporting 1080p Full HD up to 4K plus all 3D formats and supporting independent EDID control. It works with Blu-Ray players, Set-Top boxes, Home Theater PCs, and game consoles that connect to an HDMI display. Any source is accessible at all times by any display by selecting it via the supplied IR Remote Control, RS-232, TCP/IP or by using the selection buttons on the front panel.

2. Features

- HDMI V1.4 supports: 4K x 2K @30Hz, 1080P @120Hz, and 1080P 3D @60Hz.
- Deep Color support 48/36/30/24-bit.
- Supports LPCM 7.1CH, Dolby True HD, Dolby Digital Plus and DTS-HD Master Audio transmission.
- Allows any source to be displayed on multiple displays at the same time.
- Allows any HDMI display to view any HDMI source at any time.
- 8-input ports support independent EDID.
- Supports IR matrix and Digital Audio output.
- Supports RS-232, remote control, on-panel control and TCP/IP Control.
- Front-panel LCD display for status feedback.
- HDMI connectors with Locking nuts

3. Package Contents

- One (1) HDMI 8x8 Matrix Switch, UHD-4K
- One (1) 12V/2.5A DC power adapter
- One (1)Installation Guide
- One (1) HDMI Matrix IR Remote
- Two (2) Mounting ears
- One (1) RS232 serial cable
- Eight (8) Wideband IR Tx cable
- Nine (9) Wideband IR Rx cable

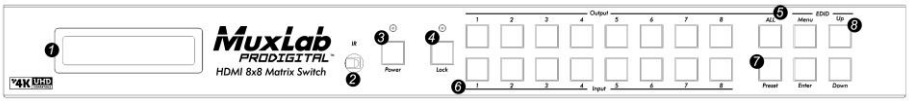
Notes：Please confirm if the product and the accessories are all included. If not, please contact the location at which you purchased the unit.

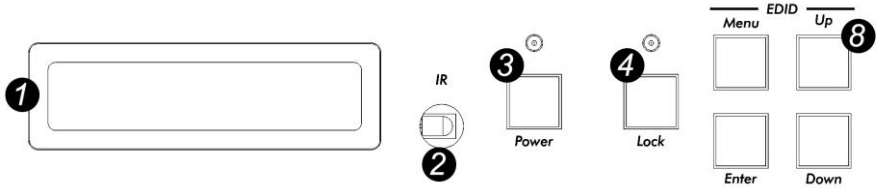
4. Specifications

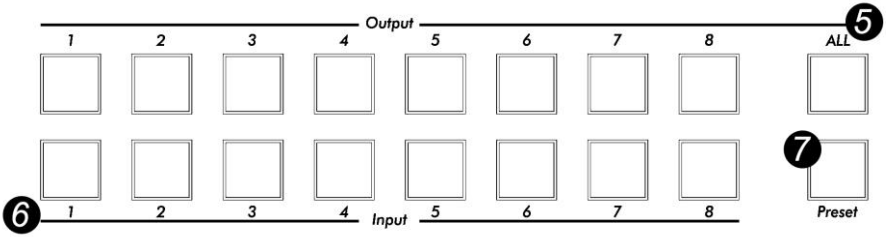
Video Bandwidth	297 MHz
Support Video Resolution	480i,576i,480p,576p,720p,1080i,1080p@ 24/30/50/60Hz, 4K@30Hz, 1080P3D@60Hz
Input Ports	Eight (8) HDMI Receptacle One (1) RS-232 One (1) Ethernet Port (Control) Nine (9) IR Sensor 3.5mm Jack
Output Ports	Eight (8) HDMI Receptacle Eight (8) Digital Audio Output Eight (8) IR Emitter 3.5mm Jack
ESD Protection	Human-body Model: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)
Power Supply	One (1) 110-240V/12VDC/2.5A power supply with interchangeable blades
Dimensions	17.32”x7.87”x1.77” (440 × 200 × 45 mm)
Weight	5.10lb (2310 g)
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	0 ºC to 40 ºC / 32 ºF to 104 ºF
Storage Temperature	–20 ºC to 60 ºC / –4 ºF to 140 ºF
Relative Humidity	20 to 90 % RH (non-condensing)
Power Consumption	23 W(max) / 0.5w(Standby)
Compliance	Regulatory: FCC, CE, RoHS
Warranty	2 Years
Ordering Information	500441 HDMI 8x8 Matrix Switch, UHD-4K

5. Panels Description

5.1 Front Panel







No.	Name	Description
1	LCD	Show the status of input-output selection, EDID info and more.
2	IR	IR sensor for the remote control of the 8x8.
3	Power	Press this button to power the device on/off. The LED will illuminate green when the power is on, red when it is in 'Standby' mode.
4	Lock	Press this button to lock all the buttons on the panel, press again to unlock. The orange LED will illuminate when the button is locked and off unlock.
5	HDMI Output	HDMI output selection button 1 to 8： Press to select the output from 1 to 8. ALL button for HDMI outputs： Press to select all of the outputs from 1 to 8.
6	HDMI Input	HDMI input selection button 1 to 8：Press to select the input from 1 to 8.

No.	Name	Description
7	Preset	Press to recall the last save present configuration. To save the current configuration press the preset button for at least 3 seconds.
8	EDID	Menu button： Press to enter EDID set mode. Enter button： Press to confirm and save the setting. UP button： Press to change segment's value. Down button： Press to change segment's value.

EDID mode table

1. #1 submenu： EDID mode table

Number	EDID Description
1	1080i, 2CH AUDIO
2	1080i, DOLBY/DTS 5.1
3	1080i, HD AUDIO
4	1080p, 2CH AUDIO
5	1080p, DOLBY/DTS 5.1
6	1080p, HD AUDIO
7	3D,1080p, 2CH AUDIO
8	3D, 1080p,DOLBY/DTS 5.1
9	3D,1080p, HD AUDIO
10	4k*2k, 2CH AUDIO
11	4k*2k, DOLBY/DTS 5.1
12	4k*2k, HD AUDIO
13	DVI 1024x768
14	DVI 1920X1080
15	DVI 1920X1200
16	Copy from HDMI Output 1
17	Copy from HDMI Output 2
18	Copy from HDMI Output 3
19	Copy from HDMI Output 4
20	Copy from HDMI Output 5
21	Copy from HDMI Output 6

Number	EDID Description
22	Copy from HDMI Output 7
23	Copy from HDMI Output 8

2. #2 submenu：Input ports selection

Number	Input port Description
1	Input 1
2	Input 2
3	Input 3
4	Input 4
5	Input 5
6	Input 6
7	Input 7
8	Input 8
9	Input ALL

EDID. What is it and what is it used for?

Under normal circumstances, the source device will require information about a connected device/display to assess what resolutions and features are available. The source can then configure its output to send only resolutions and features that are compatible with the attached device/display. This information is called EDID (Extended Display Information Data)

Also, a source device can only accept and read one EDID from a connected device/display. Likewise, the source can only output one resolution for use by a connected device/display.

Why is EDID so important with the HDMI Matrix?

The Matrix is a complex piece of technology that replicates and switches between multiple inputs and outputs. Each connected source device will require one EDID to read. EDID management is carefully handled by the HDMI Matrix to provide a single EDID for each source to read.

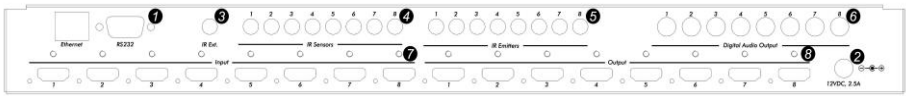
What options do I have to manage the EDID in the HDMI Matrix?

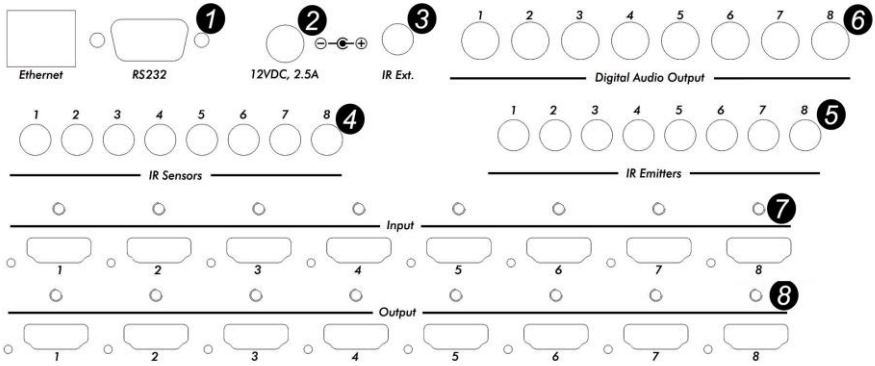
First, it is important to note that each source device can only output one video/audio signal type. This includes resolutions and timings. When multiple devices/displays are used, such as with the HDMI Matrix, it is important to use devices/displays that have similar or compatible resolutions/features. This will ensure that the single video/audio signal produced by the source device is accepted by all of the connected output devices/displays. The user has the option, through the EDID management window, to choose how the unit will manage the EDID from multiple HDMI devices/displays. Therefore the user has some control over the resolutions/features that the source devices will output. The HDMI Matrix has multiple EDID management modes that will control how the EDID information from multiple devices/displays are combined, ignored, and routed.

How to operate the HDMI Matrix?

1. How to select Output and Input Port?
   - **Q.** OUTPUT-X select INPUT-Y:
   - **A.** Press OUTPUT-X (X means 1 to 8 of outputs, including ALL)
     Press INPUT-Y (Y means 1 to 8 of inputs)
2. How to change INPUT-Y EDID
   - **Q.** Fixed EDID to INPUT-Y/ALL:
   - **A.** Press MENU button to enter EDID set mode.
     Press UP/DOWN button to select the EDID you want.
     Press ENTER button ensure and enter Input port submenu.
     Press UP/DOWN button to select Input port you want.
     Press ENTER button ensure and save the setting.

5.2 Rear Panel





No.	Name	Description
1	PC Control	Show the status of input-output selection, EDID info and so on. **Ethernet:** This port is the link for TCP/IP controls. Connect to an active Ethernet link with an RJ45 terminated cable. **RS232:** Connect to a PC or control system with D-Sub 9-pin cable for the transmission of RS-232 commands.
2	Power Jack	Use included DC adaptor to power the HDMI matrix switch.
3	IR Ext.	This port is local IR sensor for extending the IR signal. Connect with an IR Sensor.
4	IR Sensors	These ports are IR Matrix input ports. Connect with IR Sensors.
5	IR Emitter	These ports are IR Matrix output ports. Connect with IR Emitters.
6	Digital Audio	Audio output area, each port is linked to its HDMI output port. For example: the audio signal of Digital

No.	Name	Description
	Output	Audio Output 1 is coming from HDMI output 1.
7	HDMI Input	Connect HDMI sources. LEDs 1-8 illuminate when the HDMI cable is connected and the HDMI signal is active.
8	HDMI Output	Output for HDMI displays, AVR, etc. LEDs 1-8 illuminate when the HDMI cable is connected and the HDMI signal is active..

IR Emitter

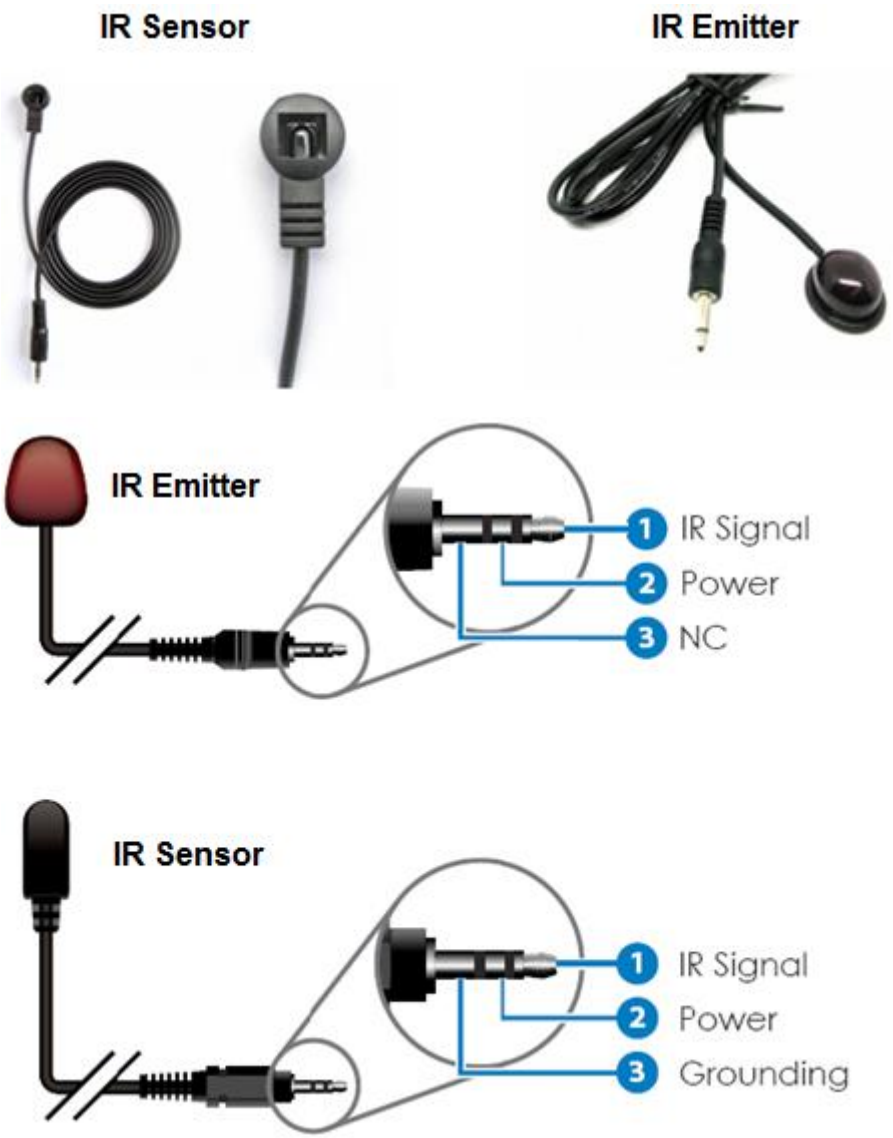
To control the source: Plug the IR Emitter into the IR Emitter port of the HDMI 8x8 matrix switch; place the IR Emitter head in front of the IR eye of the source.

To control the display: Plug the IR Emitter into the IR Emitter port of the HDMI 8x8 matrix switch; place the IR Emitter head in front of the IR eye of the display.

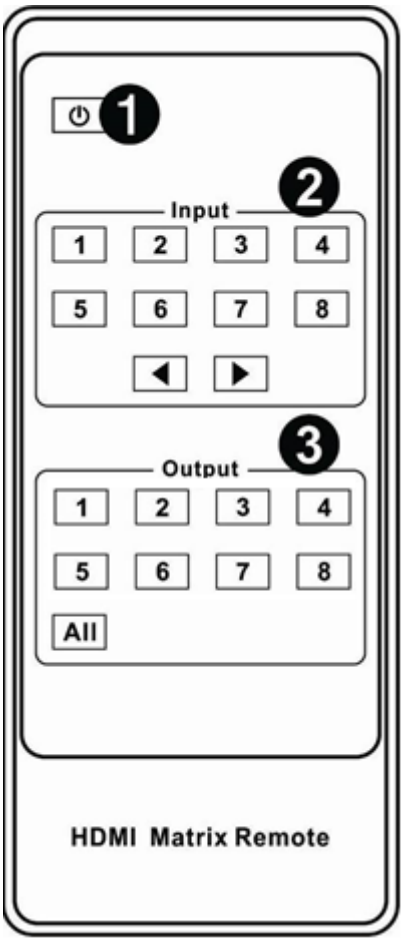
IR Sensor

To control the source: Plug the IR Sensor into the IR Sensor port of the HDMI 8x8 matrix switch; place the IR Sensor head near display.

To control the display: Plug the IR Sensor into the IR Sensor port of the HDMI 8x8 matrix switch; place the IR Sensor head in position where it is able to receive remote signals.


IR Sensor
IR Emitter
IR Emitter
1 IR Signal
2 Power
3 NC
IR Sensor
1 IR Signal
2 Power
3 Grounding

6. Remote Control



1. Power on /Standby： Press this button for powering on the matrix or setting it to standby mode.
2. Input port selection area： Press these buttons to select input 1 to 8. Press forward/backward button to cycle from input 1 to 8.
3. Output port selection area： Press these buttons to select output 1 to 8, including ALL.

How to operate the Matrix Remote?

1. Power on and standby

Q. How to power on and standby?

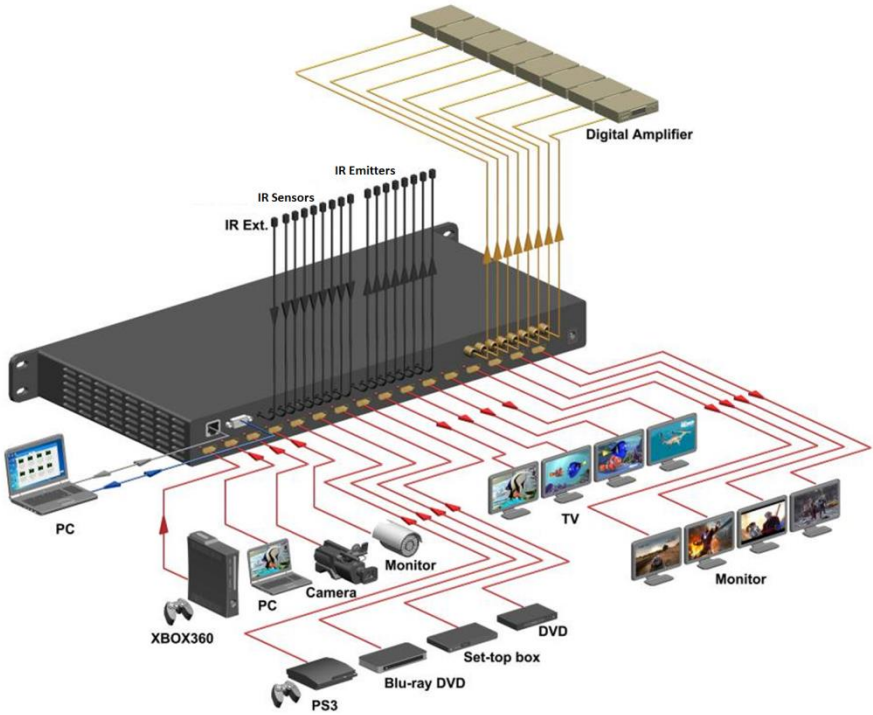
A. Press **Power on /Standby** button and wait a while.

2. How to select Output and Input Ports?

Q. OUTPUT-X select INPUT-Y:

A. Press OUTPUT-X (X means output 1 to 8, or ALL)
Press INPUT-Y (Y means input 1 to 8)

8. Operate and Connect



1. Make sure all equipment is powered off. Insert and extract cables carefully with the power SWITCHED OFF. Connecting and disconnecting while the unit is powered can result in damage to the equipment.
2. Connect up to 8 sources such as a Blu-Ray Player, a game console, an A/V Receiver, a Cable or Satellite Receiver, etc. to the HDMI inputs on the unit. Note that high-quality HDMI cables are recommended.
3. Connect the HDMI output ports to high-definition displays such as an HDTV or an HD projector that uses HDMI inputs. Note that high-quality HDMI cables are recommended.
4. For power, plug in the unit power jack first, and then plug in the power supply to the wall.

5. Power on each device in the same sequence. At this point each display connected should display the assigned source (input 1 at default when powered on initially), scroll through each of the sources on each display to ensure everything is in working order. Use the included IR remote to test the switching function. If a display is having difficulty receiving the HDMI signal, access the display's menu and adjust the resolution (lowest to highest until signal is displayed). Please note that a 24 Hz vertical refresh rate may work better than 60 Hz or higher.

Regulatory Compliance

Disclaimer

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CE/FCC & Recycling Information

CE Certification

This equipment complies with the requirements relating to Electromagnetic Compatibility Standards EN55022/EN55024 and the further Standards cited therein. It must be used with shielded cables only. It has been manufactured under the scope of RoHS compliance.

FCC Certification

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.
This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation

WEEE (Waste of Electrical and Electronic Equipment), Recycling of Electronic Products

In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process.
Each individual EU member state has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose of any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.

MuxLab PRODIGITAL™

8495 Dalton Road, Mount Royal, Quebec, Canada. H4T 1V5

Tel: (514) 905-0588 Fax: (514) 905-0589

Toll Free (North America): (877) 689-5228