HDMI 4x2 Matrix Switch 4K60

Operation Manual

100510

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 burns.
- 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 overheating.
- Unplug the power when left unused for a long period of time.
- Information on disposal of this device: do not burn or mix with general household waste, please treat as normal electrical waste.

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

Table of Contents

1.Introduction

This high performance HDMI 4x2 Matrix Switch 4K60 device can switch any of four HDMI sources to two HDMI displays. It supports resolution up to 4K x 2K @ 60Hz YCbCr 4:4:4 and is HDCP 2.2 compliant. It can extract HDMI source audio to digital optical and analog L/R outputs. It supports a 4K to 1080P downscale function for cases where the source is 4K, but the TV only supports up to 1080P. It also supports ARC (Audio Return Channel) capability and an EDID (AUTO/COPY/STD) function. The device supports an 18Gbps bandwidth and the additional features, including the latest HDMI standards. Flexible control is available via front panel buttons and an IR remote.

2. Features

- HDMI 2.0, HDCP 2.2 / HDCP 1.4 and DVI 1.0 compliant
- Supports 4 HDMI inputs and 2 HDMI outputs
- Video resolution up to 4K x 2K @x60Hz YCbCr 4:4:4
- Supports 18Gbps uncompressed bandwidth on all HDMI ports
- Supports Dolby Vision, HDR 10+, HLG
- Supports audio extract from HDMI input sources to digital optical audio OUT A or OUT B, and to analog L/R OUT A and OUT B
- Supports a 4K to 1080P downscale function
- Supports ARC (Audio Return Channel)
- Supports advanced EDID management including AUTO, COPY and STD
- Control is via front panel buttons and included IR remote

3. Package Contents

- One (1) HDMI 4x2 Matrix Switch 4K60
- One (1) 12V/1A DC Locking Power Adapter
- One (1) Quick Reference Sheet
- One (1) HDMI Matrix IR Remote
- Two (2) Mounting Ears

Notes：Please confirm if the product and the accessories are all included. If not, please contact the supplier from whom you purchased the unit.

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2 and HDCP 1.4
Video Bandwidth	18 Gbps
Video Resolution	Up to 4K2K@50/60Hz(YCbCr 4:4:4), 4K2K@30Hz. All HDMI 3D TV format, etc.
Color Space	RGB, YCbCr4:4:4,YCbCr4:2:2, YCbCr 4:2:0
Color Depth	8-bit, 10-bit, 12-bit [1080P, 4K30Hz, 4K60Hz (YCbCr 4:2:0)] 8-bit [4K60Hz (YCbCr4:4:4)]
HDMI Audio Formats	PCM2.0/5.1/7.1CH, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX,DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD
Optical Audio Formats	PCM2.0, Dolby Digital / Plus, DTS
L/R Audio Formats	PCM2.0CH (Note: If the ARC function is turned on, the audio port will mute.)
ESD Protection	Human-body Model: ±8kV (Air-gap discharge), ±4kV (Contact discharge)
Connections	
Input Ports	Four (4) HDMI Type A [19-pin female]
Output Ports	Two (2) HDMI Type A [19-pin female] One (1) L/R analog audio out [3.5mm Stereo Mini-jack] One (1) Digital Optical audio out [S/PDIF - TosLink]
Mechanical	
Housing	Metal Enclosure
Color	Black
Power Supply	Input: AC100~240V 50/60Hz Output: DC12V/1A
Power Consumption	3.8W (max)
Operating 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)
Dimensions	251mm(W) × 105mm(D) × 20mm(H)
Weight	620g
Warranty	1 Year

5. Panels Description

5.1 Front Panel

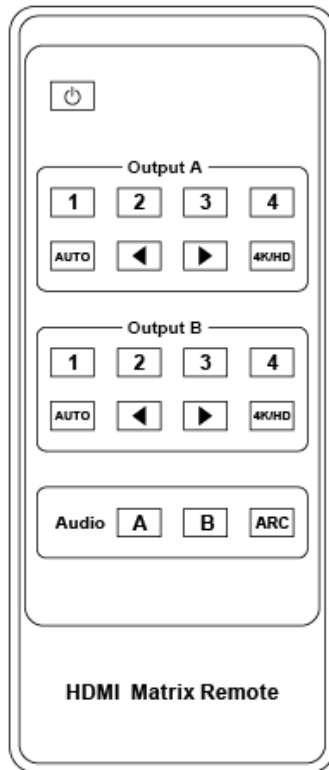| Number	Name	Front Panel Function description
1	Power LED	The blue LED will illuminate when the product is connected to AC power via the included power supply.
2	IR Sensor	IR receiver window. Receives IR remote signals for unit control.
3	Output 1 button and LEDs	Press the Output A button to select an input source to Output 1. The corresponding blue LED will illuminate.
	Auto LED	The blue Auto LED will illuminate and the Auto function will be turned on when you press the Output 1 button for up to 3 seconds. Press the Output 1 button again for up to 3 seconds to turn off the Auto function. Auto function: Auto-detects the input signal source. The Auto function is active when one or more HDMI Inputs have an HDMI signal present. The Output 1 port will output the signal from the last connected input source.
4	Output 2 button and LEDs	Press the Output 2 button to select an input source to Output 2. The corresponding blue LED will illuminate.
	Auto LED	The blue Auto LED will illuminate and the AUTO function will be turned on when you press the Output 2 button for up to 3 seconds. Press the Output 2 button again for up to 3 seconds to turn off the Auto function. Auto function: A when one or more HDMI inputs have an HDMI signal present. Auto function: Auto-detects the input signal source. The Auto function is active when one or more HDMI Inputs have an HDMI signal present. The Output 2 port will output the signal from the last connected input source.
5	Audio button	▪ Press the Audio button to select which output to extract audio from (either from Output 1 or Output 2). The extracted audio will be sent to the digital optical and analog L/R outputs (depending on the signal), and the corresponding blue LED will illuminate. ▪ If the ARC function is turned on, press the Audio button to select and return the audio signal from Output 1 or Output 2 to the digital optical output. The

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		corresponding blue LED will illuminate. Note that in this case the analog L/R port is muted.
6	4k→1080P button	Press the 4k→1080P button to select Output 1 or Output 2 to downscale this output from 4K to 1080p. The corresponding blue LED will illuminate. For example, if the source is 4K but the TV only supports 1080P, then this function will downscale the 4K signal to 1080P to TV.
7	ARC button	Turns on / off the ARC function. The ARC LED will illuminate when the ARC function is active.

5.2 Rear Panel
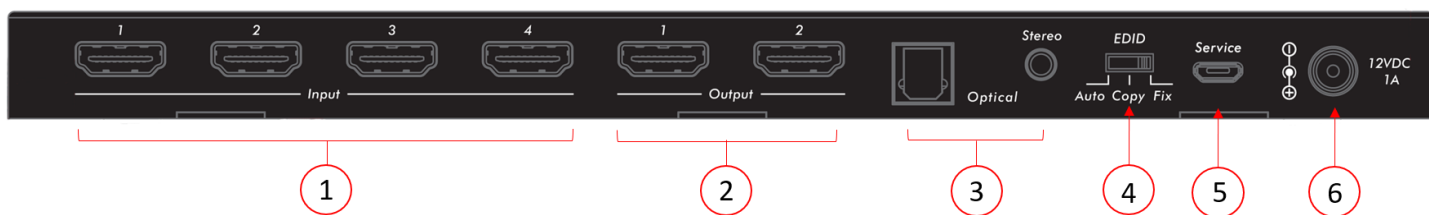
Number	Name	Rear Panel Function description
1	HDMI Input port	HDMI input ports, connect to HDMI source devices such as DVDs, TV Set Top Boxes, PS4 stations, etc., with a high quality HDMI cable.
2	HDMI Output port	HDMI output ports, connect to HDMI display devices such as TVs or Monitors with a high quality HDMI cable.
3	Optical / Stereo Port	Connect to an audio output device such as amplifier or powered speaker with corresponding optical and analog audio cable.
4	EDID Auto / Copy / Fix	**AUTO:** Compare with Output 1 and Output 2 display device's EDID information, and then sending the best EDID information to source devices of Output 1 and Output 2. The source devices of Output 1 and Output 2 will send the EDID information again to the Output 1 and Output 2 display devices. **COPY:** Copy Output 1 display device's EDID information to source devices of Output 1 and Output 2. Then the source devices of Output 1 and Output 2 will send the EDID information again to the Output 1 and Output 2 display devices. **STD:** Output 1 and Output 2 display device defaults to 1080P.
5	Service	Firmware update port.
6	Power	Connects to the 12VDC, 1A power adapter for unit power. The power adapter must also be plugged into an appropriate AC outlet.

6. Remote Control

⏻		Power on the product or set it to standby mode.
Output A (Output 1 on unit) and Output B (Output 2 on unit)		
1/2/3/4		Selects the input source signal to the corresponding Output port. The corresponding blue LED on the unit front panel will illuminate.
◄ ►		Select the previous or next input source signal to the corresponding Output port. The corresponding blue LED on the unit front panel will illuminate.
AUTO		Turn on or off AUTO function. The Auto function is turned on, if one or more HDMI input ports are connected to source devices, the corresponding Output port will output the signal from the last connected input source.
4K/HD		Selects the corresponding Output to downscale from 4K to 1080P. For example, if the source is 4K but TV only supports 1080P, at this time the input resolution with 4K will downscale to 1080P to the TV.
Audio function		
ARC		Turns on / off the ARC function.
Audio A / B		▪ If ARC function is turned off, press the Audio A or B button to select which output to extract audio from (either from Output 1 or Output 2). The extracted audio will be sent to the digital optical and analog L/R outputs (depending on the signal), and the corresponding blue LED will illuminate. ▪ If the ARC function is turned on, press the Audio A or B button to select and return the audio signal from Output 1 or Output 2 respectively, to the digital optical output. The corresponding blue LED will illuminate. Note that in this case the analog L/R port is muted.

7. Connections and Operation
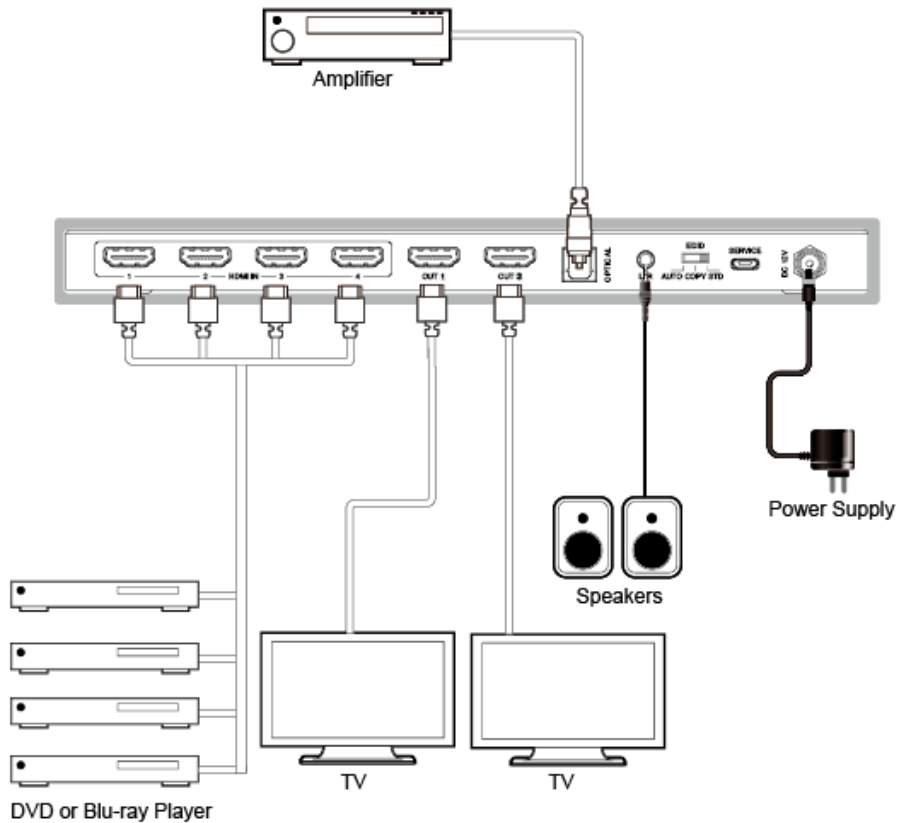
Notes: 1) Speakers shown above represent active speakers.
2) HDMI sources may include DVD Players, Blu-ray Players, Medi Players, Set Top Boxes, Game consoles, PCs, etc.

1. Make sure all equipment is powered off. Connect all cables carefully with the power SWITCHED OFF. Connecting and disconnecting cables while the unit is powered can result in damage to equipment.

2. Connect up to 4 sources such as a Blu-Ray Player, Media Players, Game Consoles, TV Set Top Boxes, etc. to the HDMI inputs on the unit. Note that high-quality HDMI cables are recommended.

3. Connect the HDMI output ports to 1080p or 4K HDMI Displays/TVs or Projectors. Note that high-quality HDMI cables are recommended.

4. Connect the TosLink Optical audio output port to an AV Receiver/Amplifier, and/or connect the 3.5mm L/R analog audio output port to active speakers.

5. For power, plug in power adapter to the unit power jack first, and then plug in the power adapter to the AC wall outlet.

6. If additional devices need to be added later, follow the same sequence as above.

7. At this point each display connected should display the assigned source (Input 1 by default when powered on initially), scroll through each of the sources on each display to ensure everything is in proper 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 the signal is displayed). Please note that a 24 Hz vertical refresh rate may work better than 60 Hz or higher.

Regulatory Compliance

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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.

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