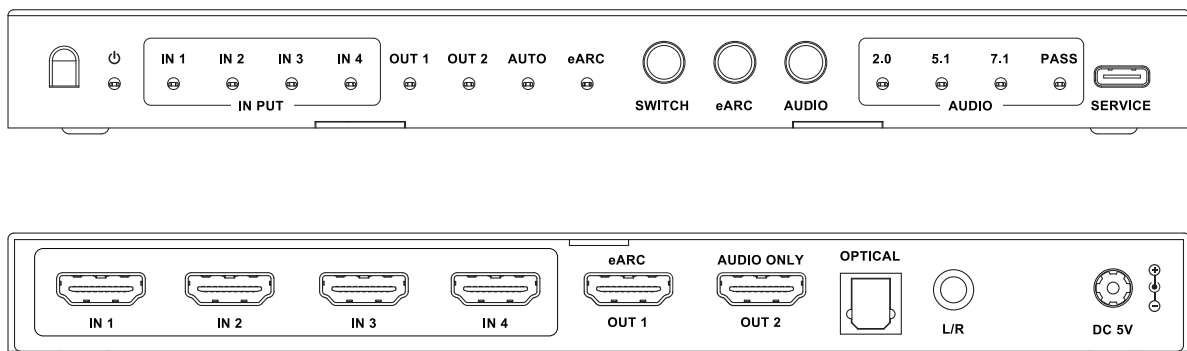


USER MANUAL



**8K60 4x1 Video Switcher with HDMI plus
Audio Extraction, CEC Control, IR Remote**

P/N **48164**

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, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

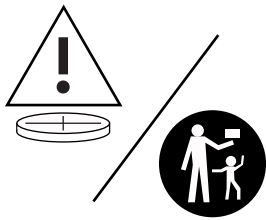
Safety Warnings and Guidelines

Please read this entire manual before using this device, paying extra attention to these safety warnings and guidelines. Please keep this manual in a safe place for future reference.

- This device is intended for indoor use only. Ensure all connected devices are properly grounded before use.
- Do not expose this device to water or moisture of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately unplug it from the power source and allow it to fully dry before reapplying power.
- Do not touch the device, the power cord, or any other connected cables with wet hands.
- Do not expose this device to excessive vibration. Do not subject the product to extreme force, shock, or fluctuations in temperature or humidity.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near heat sources, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- Do not place or install this device in an area where it can be exposed to excessive amounts of dust, humidity, oil, smoke, or combustible vapors.
- Place this device on a flat, stable surface to prevent falls and potential damage or malfunction.
- This device ventilates excessive heat through the slots and openings in the case. Do not block or cover these openings. Ensure that the device is in an open area where it can get sufficient airflow to keep from overheating.
- Do not insert metallic objects into any openings of the device, as this poses a risk of electric shock.
- Prior to operation, check the unit and power cord for physical damage. Do not use if physical damage has occurred.
- Before plugging the unit into a power outlet, ensure that the outlet provides the same type and level of power required by the device.

- Unplug this device from the power source when not in use.
- Take care to prevent damage to the power cord. Do not allow it to become crimped, pinched, walked on, or become tangled with other cords. Ensure that the power cord does not present a tripping hazard.
- Never unplug the unit by pulling on the power cord. Always grasp the connector head or adapter body.
- Ensure that power is turned off and disconnected before making any electrical connections.
- Clean using a soft, dry cloth only. Do not use chemical cleaners, solvents, or detergents. For stubborn deposits, moisten the cloth with warm water.
- This device has no user-serviceable parts. Do not attempt to open, service, or modify this device.

Remote Control (Model): CR2032

 WARNING	
• INGESTION HAZARD: This product contains a button cell or coin battery • DEATH or serious injury can occur if ingested. • A swallowed button cell or coin battery can cause Internal Chemical Burns in as little as 2 hours. • KEEP new and used batteries OUT OF REACH of CHILDREN • Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body.	

- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. DO NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death. Call a local poison control center for treatment information.
- Identification of compatible battery type: CR2032
- Nominal battery voltage: 3V
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above manufacturer's specified temperature rating, or incinerate. Doing so may result in injury due to venting, leakage, or explosion resulting in chemical burns.
- Ensure the batteries are installed correctly according to polarity (+ and -).
- Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.

- Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

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1. Introduction

This 8K HDMI 4x1 Switcher allows you to connect 4 HDMI sources to 1 TV to output, with video resolution up to 8K@60Hz 4:2:0 12bit. The audio can be de-embedded from HDMI source to output on an AV receiver or a soundbar, in audio format such as Dolby Atmos, DTS-HD. Furthermore, analog stereo sound can be transmitted to headphones or active speakers, and digital 2.0/5.1 audio to audio amplifier via SPDIF Toslink.

2. Features

- HDCP 2.3 compliant
- Support 48Gbps FRL and 18Gbps TMDS video bandwidth
- Video resolution is up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit
- HDMI 2.1 protocol: VRR, ALLM, QMS, QFT, SBTM are supported
- Support HDR, HDR10, HDR10+, Dolby Vision, HLG pass-through
- LPCM 7.1CH, Dolby TrueHD, Atmos and DTS-HD Master, DTS:X Audio pass-through
- Features 4x HDMI inputs routed to 1x HDMI output
- Support TV eARC audio and de-embedding audio from HDMI inputs to output through HDMI (audio only), optical and L/R audio ports
- Support auto switching and manual switching for inputs
- Support CEC control from TV at output to source at input
- Support CEC volume control from TV to any HDMI sound system
- Support advanced EDID management

3. Package Contents

- 1 × 8K HDMI 4×1 Switcher
- 1 × 5V/1A Multinational Power Supply
- 1 × IR Remote
- 1 × User Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	48Gbps FRL and 18Gbps TMDS
Audio Latency	No Latency
Video Latency	No Latency
Video Resolution	Up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit * All available resolutions are shown as follow in Page 8.
Color Depth	8/10/12bit
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
Audio Formats	HDMI Input/Output: LPCM 2.0-7.1, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS, DTS-HD Master, DTS:X Audio De-embedding Output: Optical Audio (S/PDIF): LPCM 2.0, Dolby Digital, Dolby Digital Plus, DTS Analog Audio (L/R): LPCM 2.0
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
IR Level	5V
IR Frequency	Fixed Frequency 38KHz
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)

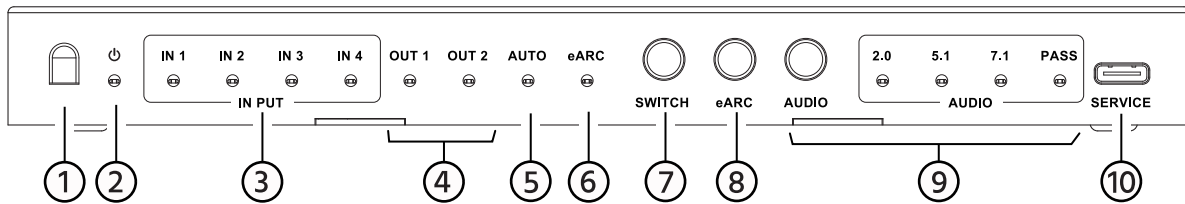
Connection			
Input	4 × HDMI IN		
Output	1 × HDMI OUT 1 (eARC) 1 × HDMI OUT 2 (AUDIO ONLY) 1 × OPTICAL [S/PDIF] 1 × L/R [3.5mm Stereo Mini-jack]		
Control	1 × SERVICE [USB-C, update port]		
Mechanical			
Housing	Metal Enclosure		
Color	Black		
Dimensions	200mm [W] × 84mm [D] × 20mm [H]		
Weight	430g		
Power Supply	Input: AC100-240V 50/60Hz, Output: DC 5V/1A (US/EU standards, CE/FCC/UL certified)		
Power Consumption	1.7W (Max)		
Operation Temperature	0°C ~ 40°C / 32°F ~ 104°F		
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F		
Operating Humidity	20% ~ 80% (relative humidity, non-condensing)		
Storage Humidity	10% ~ 90% (relative humidity, non-condensing)		
Recommended HDMI Cable			
Video Resolution	8K60/8K30/4K120	4K60	1080P
HDMI Cable Length (HDMI IN / OUT)	2m/6.6ft (Ultra HDMI 2.1)	5m/16.4ft	10m/32.8ft
The use of “Premium High Speed HDMI” cable is highly recommended.			

*** All available input/output resolutions:**

640x480p60Hz, 800x600p60Hz,
1024x768p60Hz, 1280x1024p60Hz,
1360x768p60Hz, 1440x900p60Hz,
1440x1050p60Hz, 1600x1200p60Hz,
720x480i59.94Hz(480i59), 720x480p59.94Hz(480p59),
720x576i50Hz(576i50), 720x576p50Hz(576p50),
1280x720p50Hz(720p50), 1280x720p59.94Hz(720p59),
1280x720p60Hz(720p60), 1920x1080i50Hz(1080i50),
1920x1080i59.94Hz(1080i59), 1920x1080i60Hz(1080i60),
1920x1080p23.98Hz(1080p23), 1920x1080p24Hz(1080p24),
1920x1080p25Hz(1080p25), 1920x1080p29.97Hz(1080p29),
1920x1080p30Hz(1080p30), 1920x1080p50Hz(1080p50),
1920x1080p59.94Hz(1080p59), 1920x1080p60Hz(1080p60),
3840x2160p23.98Hz(2160p23), 3840x2160p24Hz(2160p24),
3840x2160p25Hz(2160p25), 3840x2160p29.97Hz(2160p29),
3840x2160p30Hz(2160p30), 3840x2160p50Hz(2160p50),
3840x2160p59.94Hz(2160p59), 3840x2160p60Hz(2160p60),
3840x2160p100Hz(2160p100), 3840x2160p120Hz(2160p120),
4096x2160p23.98Hz, 4096x2160p24Hz,
4096x2160p25Hz, 4096x2160p29.97Hz,
4096x2160p30Hz, 4096x2160p50Hz,
4096x2160p59.94Hz, 4096x2160p60Hz,
4096x2160p100Hz, 4096x2160p120Hz,
5120x2160p50Hz, 5120x2160p60Hz,
7680x4320p23.98Hz, 7680x4320p24Hz,
7680x4320p25Hz, 7680x4320p29.97Hz,
7680x4320p30Hz, 7680x4320p50Hz,
7680x4320p60Hz(4:2:0)

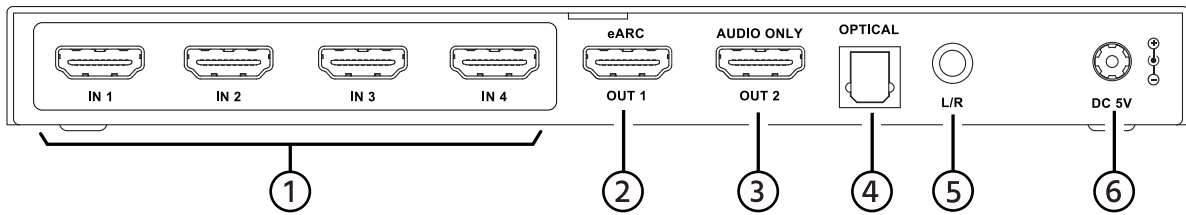
5.Operation Controls and Functions

5.1 Front Panel



No.	Name	Function Description
1	IR Window	IR input signal receiving window.
2	Power LED	When the device is powered on, the power LED is green; When the device is standby, the power LED is red.
3	IN LED (1~4)	When the HDMI IN 1/2/3/4 port is selected as the signal source input channel, the corresponding green LED will be on.
4	OUT LED (1~2)	When the HDMI OUT 1/2 port is connected to the display device, the corresponding green LED will be on.
5	AUTO LED	When the auto switching function is enabled, the green LED will be on.
6	eARC LED	eARC status indicator. ▪ On: eARC function is working normally. ▪ Blinking: eARC function is working abnormally. ▪ Off: eARC function is disabled.
7	SWITCH Button	▪ Short press this button to circularly switch HDMI input signal to the OUT 1 port. ▪ Long press for 3 seconds to enable or disable the auto switching*. Note: Auto switching is enabled by default.
8	eARC Button	Press the button to enable or disable the ARC/eARC function.
9	AUDIO Button & LEDs	Press the button to circularly switch the four EDID for inputs. 2.0 - Copy out1 video EDID + 2.0CH AUDIO EDID 5.1 - Copy out1 video EDID + 5.1CH AUDIO EDID 7.1 - Copy out1 video EDID + 7.1CH AUDIO EDID PASS - Copy out1 EDID When the EDID is selected, the corresponding LED will be on.
10	SERVICE	Firmware update and debug port.

5.2 Rear Panel



No.	Name	Function Description
1	IN 1/2/3/4	HDMI input ports, connected to HDMI source device such as DVD, PS4 or Set-top Box with HDMI cable.
2	OUT 1 (eARC)	HDMI output port, connected to an HDMI display device such as TV with eARC function.
3	OUT 2 (AUDIO ONLY)	HDMI audio output port, connected to an audio device such as soundbar or amplifier.
4	OPTICAL	Optical fiber audio output port, connected to an audio playback device such as amplifier.
5	L/R	Analog audio output port, connected to an audio playback device such as speaker.
6	DC 5V	DC 5V/1A power input port.

* Auto Switching

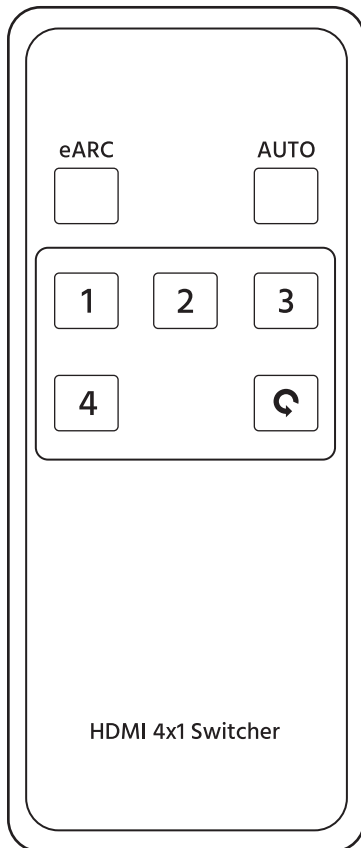
The auto switching function can be enabled/disabled via the SWITCH button on the front panel or IR remote. Auto switching function is enabled by default.

1. If one IN port is connected, and the others are connected later. It will switch to the latest one automatically (last in gets priority) as the input channel, and the corresponding LED will be on.
2. If the four IN ports are all connected, when one of them is disconnected, it will switch to the next IN port automatically according to the order of IN 1~4.
3. If only one IN port is connected, it will not automatically switch to the others when disconnected.

* Standby Function

You can make the switcher enter standby mode via the remote of source devices or the TV remote. This function can be enabled or disabled via long press eARC button for 5 seconds.

6.IR Remote



eARC:

Press this button to enable or disable eARC/ARC function.

Auto:

Press this button to enable or disable the auto switching function.

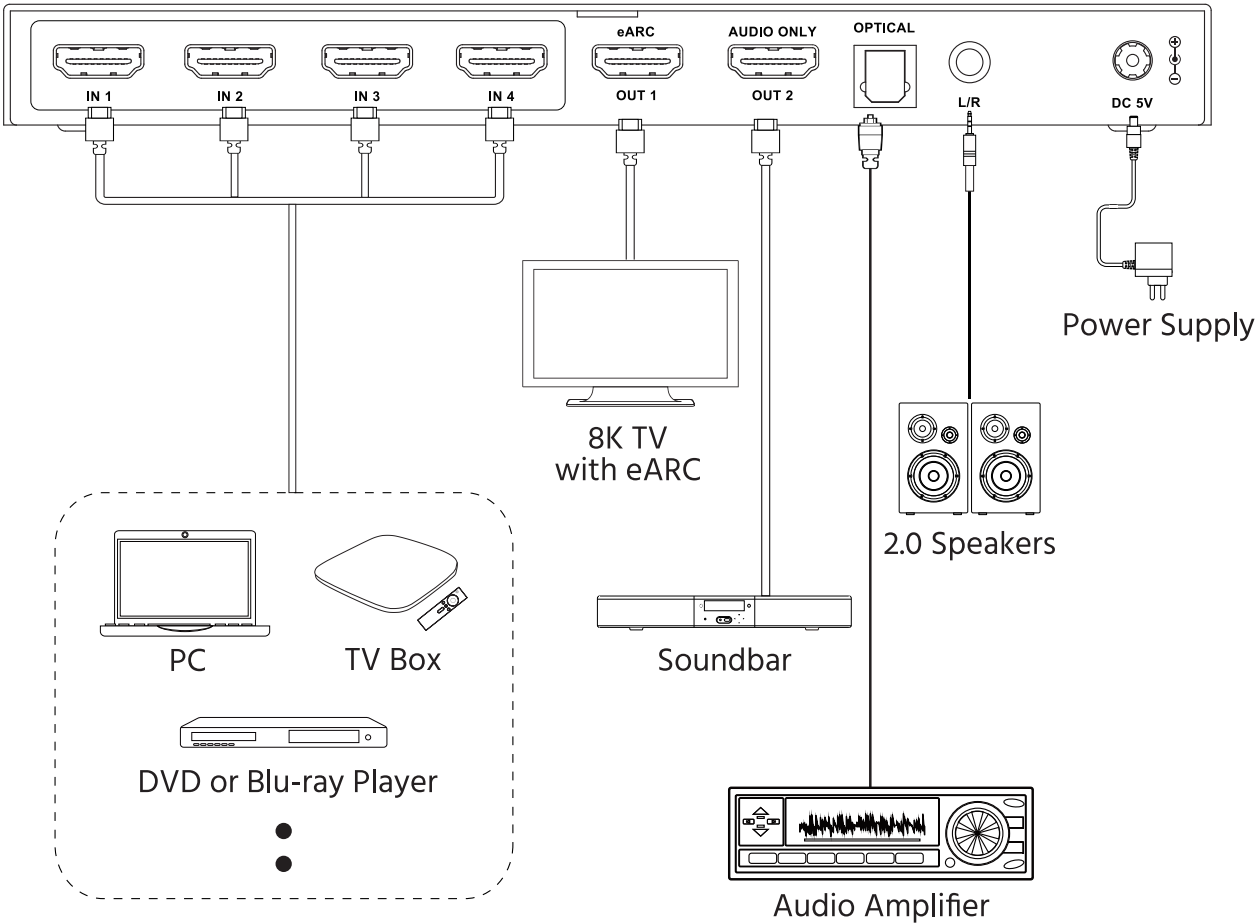
1/2/3/4:

Press 1/2/3/4 button to select HDMI signal source IN 1/2/3/4.

↻:

Press this button to select the HDMI signal source circularly.

7. Application Example



The terms HDMI and HDMI High-Definition Multimedia interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

Notice for FCC



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.

Modifying the equipment without Manufacturer's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

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. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.