

BG-UHD-42M

4x2 HDMI 2.0 Matrix Switcher with Audio
Extraction & ARC, HDMI Downscaling, and EDID Management

User Manual







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Statement

Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

Safety Precaution

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- Unplug this device during lightning storms
- Clean only with a soft dry microfiber cloth.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGear is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.
- Only use accessories specified by the manufacturer.
- Product specifications may be subject to technical upgrades without further notice



Introduction

The BZ-UHD-42M HDMI Matrix Switcher can switch any of its four connected HDMI sources to two connected HDMI displays. It supports resolutions of up to 4K2K@60Hz YCbCr 4:4:4 at 18Gbps and it is also HDCP 2.2 compliant. It can extract HDMI source device audio to S/PDIF optical and analog 3.5mm stereo mini (L/R) outputs. It supports 4K→1080P downscaling if the source is 4K but TV only supports up to 1080P. It also supports ARC and EDID (AUTO/COPY/ STD) functionality. Flexible control via front panel buttons and IR remote allow users to easily manage the device.

Features

- HDMI 2.0, HDCP 2.2 / HDCP 1.4, and DVI 1.0 compliant
- 4 HDMI inputs and 2 HDMI outputs
- Video resolution up to 4K2K@60Hz YCbCr 4:4:4
- 18Gbps uncompressed bandwidth on all HDMI
- Dolby Vision, HDR 10+, HLG, and CEC function
- Extract HDMI input source device audio of OUT A or OUT B to S/PDIF optical and 3.5mm stereo analog L/R outputs
- OUT A and OUT B support 4K to 1080P downscaling
- ARC (Audio Return Channel) functionality
- Advanced EDID management including AUTO, COPY, and STD
- Control via front panel buttons or IR remote

Packing List

- 1x HDMI 2.0 Matrix Switcher
- 1x IR Remote
- 1x 12V/1A Locking Power Adapter
- 1x User Manual
- 2x Mounting Ears
- 1x Quick Start Guide



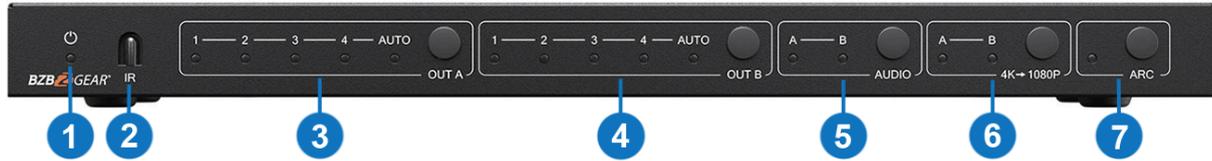
Specifications

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 formats, etc.
Color Space	RGB, YCbCr4:4:4, YCbCr4:2:2, YCbCr 4:2:0
Color Depth	8-bit, 10-bit, 12-bit [1080P, 4K@30Hz, 4K@60Hz (YCbCr 4:2:0)] 8-bit [4K@60Hz (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	PCM 2.0CH (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	4× HDMI Type A [19-pin female]
Output Ports	2× HDMI Type A [19-pin female] 1× L/R audio out [3.5mm Stereo Mini-jack] 1× dOPTICAL audio out [S/PDIF]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	9.9"(W) x 4.1"(D) x 0.79"(H) [251mm(W) x 105mm(D) x 20mm(H)]
Weight	1.97lbs [620g]
Power Supply	Input: AC100~240V 50/60Hz Output: DC12V/1A
Power Consumption	3.8W (max)
Operating Temperature	32°F ~ 104°F / 0°C ~ 40°C
Storage Temperature	-4°F ~ 140°F / -20°C ~ 60°C
Relative Humidity	20~90% RH (non-condensing)



Operation Controls and Functions

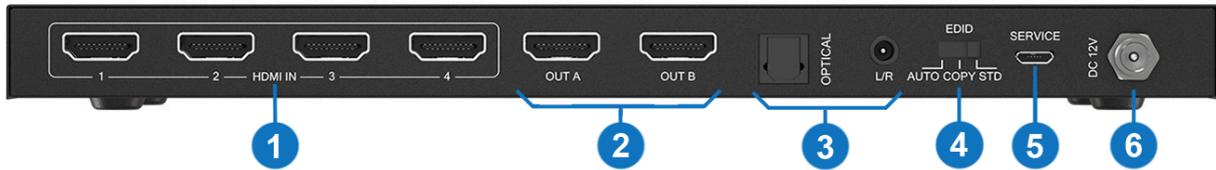
Front Panel



Number	Name	Function description
1	Power LED	The blue LED will illuminate when the product is connected to the power supply.
2	IR	IR receiver window. It only receives IR remote signals from this product's remote.
3	OUT A button and LED	Press the OUT A button to select an input source to OUT A output, 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 OUT A button for up to 3 seconds. Press the OUT A button up to 3 seconds again and it will turn off the AUTO function. AUTO function: Detects input signal source. If the AUTO function is turned on and multiple HDMI sources are connected then the OUT A port will output the signal from the last connected input source.
4	OUT B button and LED	Press the OUT B button to select an input source to OUT B output, 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 OUT B button for up to 3 seconds. Press the OUT B button up to 3 seconds again and it will turn off the AUTO function. AUTO function: Detects input signal source. If the AUTO function is turned on and multiple HDMI sources are connected then the OUT B port will output the signal from the last connected input source.
5	AUDIO button	<ul style="list-style-type: none"> Press the AUDIO button to select and extract the input source audio from OUT A port or OUT B port to the optical and analog L/R outputs. The corresponding blue LED will illuminate for the selected source. If ARC functionality is turned on, press the Audio button to select the return the audio signal from OUT A or OUT B display device to the optical output and the corresponding blue LED will illuminate. The analog 3.5mm L/R port will be muted.
6	4K—1080P button	Press the button to select OUT A or OUT B 4K—1080P downscaling function and the corresponding blue LED will illuminate. For example, if the source is 4K but the TV only supports 1080P, the input resolution of 4K will downscale to 1080P to the HDMI output.
7	ARC button	Turn on / off ARC function. The ARC LED will illuminate when you turn on the ARC function.



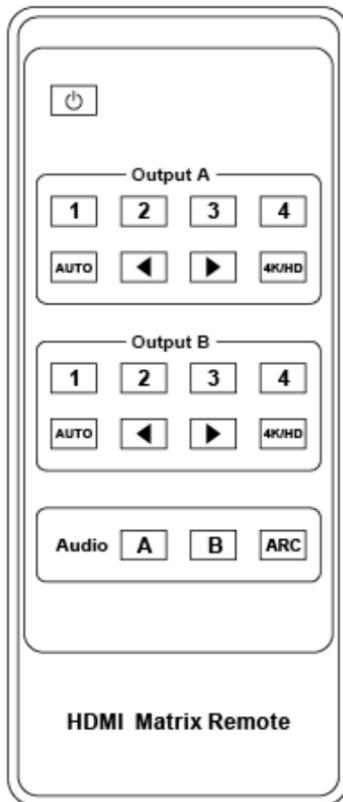
Rear Panel



Number	Name	Function description
1	HDMI IN ports	Connect to an HDMI source device such as a Blu-ray player, media player, or gaming console with HDMI cables.
2	HDMI OUT A/ OUT B port	Connect to an HDMI display device such as a TV, Monitor, or projector with HDMI cables.
3	OPTICAL / L/R port	Connect to an audio output device such as an amplifier or speaker with an optical or analog audio cable.
4	EDID AUTO/ COPY / STD	AUTO: Compare HDMI Out A and Out B display device's EDID information, and then sends the best EDID information to the source device of Out A and Out B. The source device of Out A and Out B will send the EDID information again to Out A and Out B display devices. COPY: Copy Out A display device's EDID information to source device of Out A and Out B. Then the source device of Out A and Out B will send the EDID information again to Out A and Out B display devices. STD: Out A and Out B display device output default 1080P.
5	SERVICE port	Firmware update port.
6	DC 12V	Plug in the 12V/1A adapter to an AC wall outlet for power supply.



IR Remote



Power on the product or set it to standby mode.

Output A

1/2/3/4: Select the input source signal to the Out A output and the corresponding blue LED on the front panel will illuminate.

◀ ▶ : Select the last or next input source signal to OUT A output and the corresponding blue LED on the front panel will illuminate.

AUTO: Detects input signal source. If the AUTO function is turned on and multiple HDMI sources are connected then the OUT A port will output the signal from the last connected input source.

4K/HD: Select Out A 4K→1080P downscale function.

For example, if the source is 4K but the TV only supports 1080P, the input resolution of 4K will downscale to 1080P to the HDMI output.

Output B

1/2/3/4: Select the input source signal to the Out B output and the corresponding blue LED on the front panel will illuminate.

◀ ▶ : Select the last or next input source signal to OUT B output and the corresponding blue LED on the front panel will illuminate.

AUTO: Detects input signal source. If the AUTO function is turned on and multiple HDMI sources are connected then the OUT B port will output the signal from the last connected input source.

4K/HD: Select Out B 4K→1080P downscale function.

For example, if the source is 4K but the TV only supports 1080P, the input resolution of 4K will downscale to 1080P to the HDMI output.

Audio function

ARC: Turn on / off ARC function.

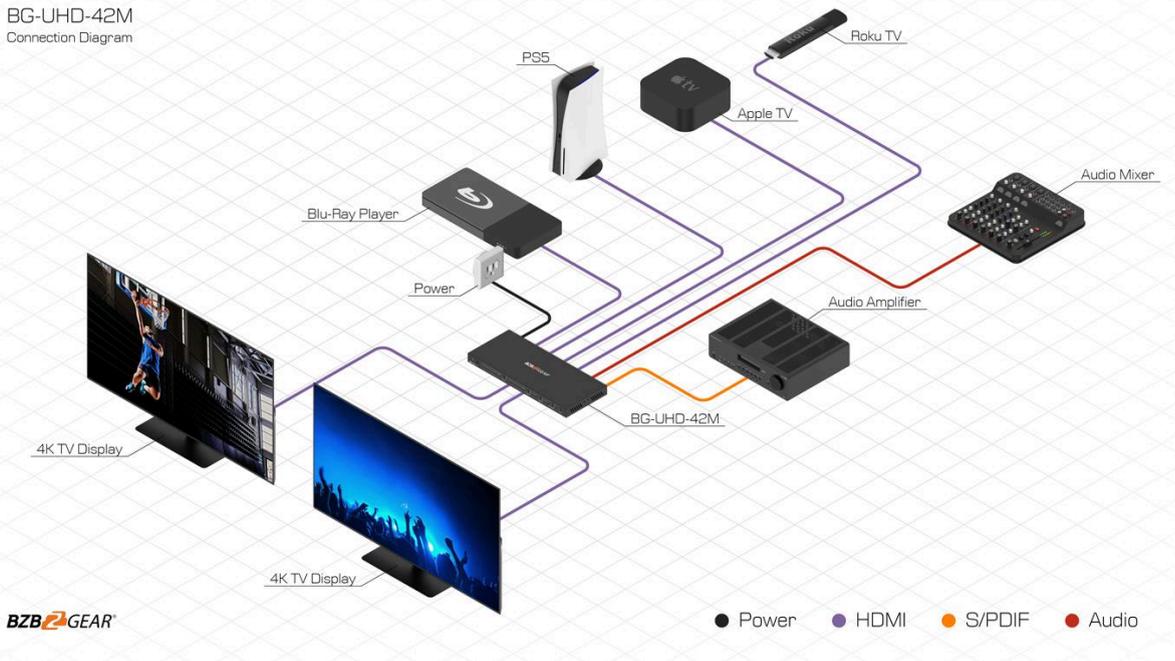
Audio A / B:

- If the ARC function is turned on, press the Audio A or B button to select a return audio signal from the Out A or Out B display devices to the optical output (S/PDIF). At this time, the analog L/R port (Audio out) is mute.
- If the ARC function is turned off, press the Audio A or B button to select and extract the input source audio from the Out A or Out B ports to the optical (S/PDIF) and analog L/R (3.5mm stereo mini) outputs.



Application Example

BG-UHD-42M
Connection Diagram





Tech Support

Have technical questions? We may have answered them already!

Please visit BZBGear's support page (bzbgear.com/support) for helpful information and tips regarding our products. Here you will find our Knowledge Base (bzbgear.com/knowledge-base) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV (youtube.com/c/BZBTVchannel), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

Phone

1.888.499.9906

Email

support@bzbgear.com

Live Chat

bzbgear.com

Limited Product Warranty Terms

Pro Line: 5-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Essential Line: 3-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Cables: Lifetime Limited Product Warranty.

For complete warranty information, please visit bzbgear.com/warranty.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.



Mission Statement

BZBGear is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGear delivers quality products designed with users in mind.

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