



Amplify Your World™







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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.
- 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.



Introduction

The BG-8K-AE is a high-performance 48Gbps eARC audio adapter designed to extract audio from an HDMI source or a TV with ARC/eARC and route it to an AV receiver, soundbar, or stereo system. Supporting HDMI audio de-embedding to HDMI, digital S/PDIF, or analog L/R outputs, it ensures seamless audio distribution across modern AV setups. Fully compliant with HDMI 2.1 and HDCP 2.3, it handles resolutions up to 8K@60Hz (4:2:0 12-bit) and 4K@120Hz (4:4:4 12-bit), with pass-through for HDR10, HDR10+, Dolby Vision, and HLG, plus support for VRR, ALLM, QMS, QFT, and SBTM.

Designed for flexible integration, the BG-8K-AE includes advanced EDID management, cable equalization, and CEC control, enabling volume and source adjustments directly from the TV. Whether delivering Dolby Atmos or DTS:X audio to a SONOS ARC, Beam, or other eARC-enabled systems, or outputting stereo to a 2.0/5.1-channel amplifier, this adapter provides a reliable and adaptable solution for both home theaters and professional AV installations.

Features

- **HDR Pass-Through:** Compatible with HDR, HDR10, HDR10+, Dolby Vision, and Hybrid Log-Gamma (HLG) formats.
- **High-Definition Audio:** Supports audio pass-through for LPCM 7.1-channel, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio, and DTS:X formats.
- **Audio De-Embedding:** Extracts audio from HDMI sources and TV eARC/ARC to S/PDIF, stereo L/R analog, and HDMI audio outputs.
- **eARC/ARC to Soundbar:** De-embeds audio from HDMI sources to eARC/ARC soundbars, including SONOS ARC and Beam, supporting full Dolby Atmos/DTS:X audio.
- **CEC Control Support:** Enables CEC control from the TV to HDMI source devices.
- **CEC Volume Control:** Allows CEC-based volume control from the TV to any connected eARC audio system.
- **HDCP Compliance:** Fully compliant with HDCP 2.3 for secure content transmission.
- **EDID Management:** Features advanced EDID configuration for optimized compatibility and performance.
- **High Bandwidth Support:** Supports up to 48Gbps video bandwidth and resolutions up to 8K@60Hz (4:2:0, 12-bit) and 4K@120Hz (4:4:4, 12-bit), following HDMI 2.1 specifications.

Packing List

- 1 × 48Gbps eARC Audio Adapter
- 1 × 5V/2A Multinational Power Supply
- 1 × User Manual



Specifications

Technical	
HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	48Gbps FRL and 18Gbps TMDS
Video Resolution	Up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit
Color Depth	8/10/12bit
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	<p>HDMI input/output:LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DSD, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DTS:X</p> <p>eARC AUDIO OUT:LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DSD, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DTS:X</p> <p>Amp AUDIO OUT:LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DSD, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DTS:X</p> <p>Audio de-embedding output:Optical: PCM 2.0CH / Dolby / DTS 5.1CHL/R: PCM 2.0CH</p>
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input	1 × Source IN [HDMI Type A, 19-pin female]
Output	1 × TV(eARC) OUT [HDMI Type A, 19-pin female] 1 × Soundbar eARC OUT [HDMI Type A, 19-pin female] 1 × Amp AUDIO OUT [HDMI Type A, 19-pin female] 1 × OPTICAL [S/PDIF] 1 × L/R [3.5mm Stereo Mini-jack]
Control	1 × SERVICE [USB Type C, Update port]



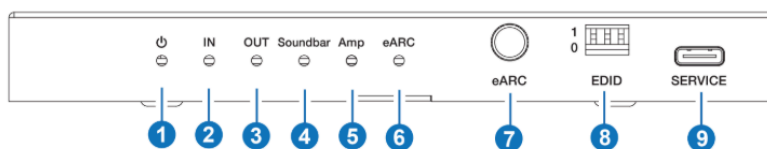
Mechanical				
Housing	Metal Enclosure			
Color	Black			
Dimensions (WxDxH)	5.7in × 2.7in × 0.71in / 145mm × 68mm × 18mm			
Weight	0.58 lbs [262g]			
Power Supply	Input: AC 100-240V 50/60Hz, Output: DC 5V/2A (US/EU standards, CE/FCC/UL certified)			
Power Consumption	5.2W (Max)			
Operation Temperature	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)			
Recommended HDMI Cable				
Video Resolution	8K	4K60	4K24	1080P
HDMI Cable Length (HDMI IN / OUT)	3m / 10ft (Ultra HDMI 2.1)	8m / 26ft	12m / 39ft	15m / 49ft
The use of “Premium High Speed HDMI” cable is highly recommended.				



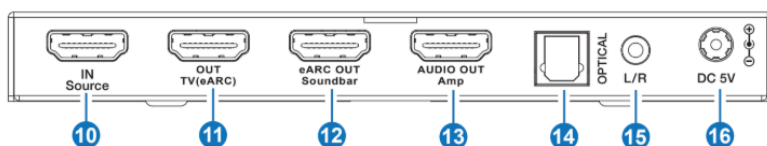
Operation Controls and Functions

Front and Rear Panel

Front Panel



Rear Panel



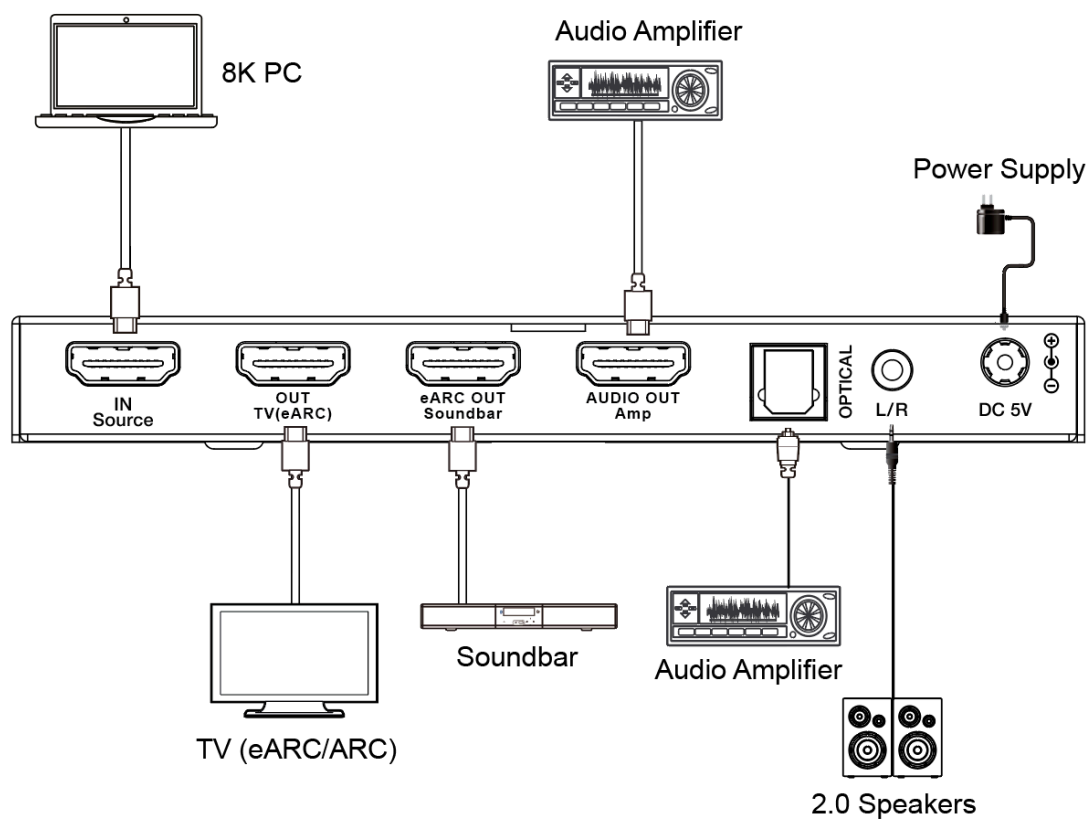
No.	Name	Function Description
1	Power LED	The red LED is on when the device is working.
2	IN LED	The green LED will be on when the input source signal is detected.
3	OUT LED	The green LED will be on when the HDMI OUT port connects a display device and outputs signal.
4	Soundbar LED	The green LED will be on when a soundbar is connected properly.
5	Amp LED	The green LED will be on when an amplifier is connected properly.
6	eARC LED	On: The eARC/ARC mode is enabled. CEC communication and eARC is working properly. Flashing: The eARC/ARC mode is enabled. CEC communication and eARC is not working properly. Off: The eARC mode is disabled.
7	eARC button	Press this button to enable or disable the eARC/ARC mode.
		Use the DIP switch to set EDID. [DIP]=111: Copy OUT port sink EDID (as factory default) [DIP]=110: Copy video EDID of sink and audio EDID of Soundbar
8	EDID DIP switch	[DIP]=101: FRL12G_8K_HDR, 2.0CH [DIP]=100: FRL12G_8K_HDR, 5.1CH [DIP]=011: FRL12G_8K_HDR, 7.1CH [DIP]=010: FRL10G_8K_HDR, 2.0CH [DIP]=001: FRL10G_8K_HDR, 5.1CH [DIP]=000: FRL10G_8K_HDR, 7.1CH



9	SERVICE	Used for firmware update and serial commands control.
10	Source IN	HDMI signal input port, connected to HDMI source device such as 8K PC, DVD or PS5 with an HDMI cable.
11	TV(eARC) OUT	HDMI signal output port, connected to TV (eARC/ARC) with an HDMI cable. It can be used as an eARC/ARC audio channel when the eARC/ARC mode is enabled.
12	Soundbar eARC OUT	HDMI audio output port, connected to a soundbar (eARC/ARC).
13	Amp AUDIO OUT	HDMI audio output port, connected to an amplifier.
14	OPTICAL	Optical fiber audio output port.
15	L/R	Analog audio output port.
16	DC 5V	DC 5V/2A Power input port.



Connection Diagram





Troubleshooting

Problems	Causes	Solutions
No Power / All LED off	Power supply not connected, connected fully, or wrong power supply.	Check if the power supply is connected correctly and the output voltage value is within recommended specifications.
No sound or sound issues	The HDMI connection is faulty, the audio format is not supported by the displays, or the source player is set to another port for audio output	Check if the HDMI cables are connected correctly. Check if the audio format is supported by the display and that a user has not changed the supported audio format on the player's audio output. Ensure output settings from the HDMI source device as set correctly.
No picture or picture flickers	The HDMI cable may be faulty or the category cable quality is faulty.	Check if the HDMI and category cable connections are correct and undamaged. Change to another good working HDMI cable or category cable (CAT6 or better cable is recommended).



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	Email	Live Chat
1.888.499.9906	support@bzbgear.com	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.

Copyright

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