



BG-8K-DA18

Direktronik Art 20124376

**1x8 8K UHD HDMI 2.1 Splitter with 48Gbps Bandwidth,
HDR/VRR/ALLM Support, Per-Port Downscaling, HDR-to-SDR
Conversion, 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.
- 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-DA18 is a high-performance 1x8 HDMI splitter that distributes a single HDMI source to up to eight displays simultaneously, delivering uncompromised video and audio quality. Supporting resolutions up to 8K@60Hz (4:2:0 12-bit) and 4K@120Hz (4:4:4 12-bit), it is fully compliant with HDMI 2.1 and HDCP 2.3 standards for seamless compatibility with devices like the Xbox Series X and PlayStation 5. The splitter supports both FRL (48Gbps) and TMDS (18Gbps) bandwidths, along with key HDMI 2.1 features including VRR, ALLM, QMS, QFT, and SBTM for a dynamic and responsive viewing experience. HDR formats such as HDR10, HDR10+, Dolby Vision, and HLG are also fully supported.

Designed for flexibility, each output offers auto downscaling and HDR-to-SDR conversion, making it easy to mix new and legacy displays. The BG-8K-DA18 ensures rich, immersive audio with support for LPCM 7.1, Dolby TrueHD, Dolby Atmos, and DTS-HD Master Audio. Advanced EDID management and built-in cable equalization streamline installation and maintain optimal signal performance in demanding AV environments.

Features

- **Ultra-High Resolutions:** Supports up to 8K@60Hz (4:2:0, 12-bit) and 4K@120Hz (4:4:4, 12-bit) per HDMI 2.1 specifications.
- **Gaming and Motion Enhancements:** Supports VRR, ALLM, QMS, QFT, and SBTM for smoother visuals and reduced latency.
- **HDR Format Compatibility:** Pass-through support for HDR, HDR10, HDR10+, Dolby Vision, and HLG.
- **Advanced Audio Support:** Compatible with LPCM 7.1CH, Dolby TrueHD, Dolby Atmos, and DTS-HD Master Audio formats.
- **Per-Port Downscaling:** Automatically downscales resolution on each output to match connected displays.
- **HDR to SDR Conversion:** Automatically converts HDR content to SDR on each output for non-HDR displays.
- **HDCP 2.3 Compliant:** Ensures secure content transmission across all connected devices.
- **High-Bandwidth Support:** Handles up to 48Gbps FRL and 18Gbps TMDS video bandwidth.
- **Comprehensive EDID Management:** Enables precise control over display communication and compatibility.



Packing List

- 1 × 48Gbps 1x8 Splitter
- 1 × 12V/2.5A Multinational Locking Power Supply
- 2 × Mounting Ear
- 4 × Machine Screw (KM3*6)
- 1 × User Manual



Specifications

Technical	
HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3, HDCP 1.4
Video Bandwidth	48Gbps FRL and 18Gbps TMDS
Video Resolution	Up to 8K@60Hz 4:2:0 12-bit, 4K@120Hz 4:4:4 12-bit
Color Depth	8/10/12-bit
Color Space	RGB, YCbCr 4:4:4 / 4:2:2 / 4:2:0
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	HDMI IN/OUT: LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input	1 × IN [HDMI Type A, 19-pin female]
Output	8 × OUT [HDMI Type A, 19-pin female]
Control	1 × SERVICE [USB Type C, Update port]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	9.8in × 4.1in × 1.2in / 250mm [W] × 104mm [D] × 30mm [H]
Weight	1.6 lbs [743g]
Power Supply	DC 12V/2.5A
Power Consumption	12.2W (Max)
Operation Temperature	32°F ~ 104°F / 0°C ~ 40°C



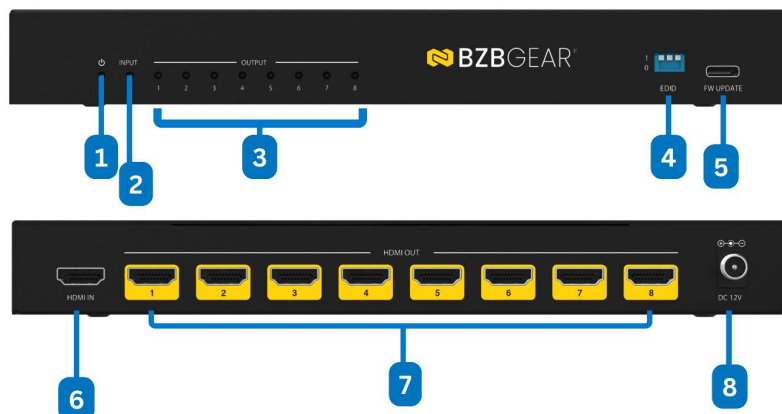
Storage Temperature	-4°F ~ 140°F / -20°C ~ 60°C
Relative Humidity	20~90% RH (Non-condensing)
Recommended HDMI Cable	
Video Resolution	8K
HDMI Cable Length (HDMI IN / OUT)	3m/10ft (Ultra HDMI 2.1)

Note: The use of “Premium High Speed HDMI” cable is highly recommended.



Operation Controls and Functions

Front and Rear Panel

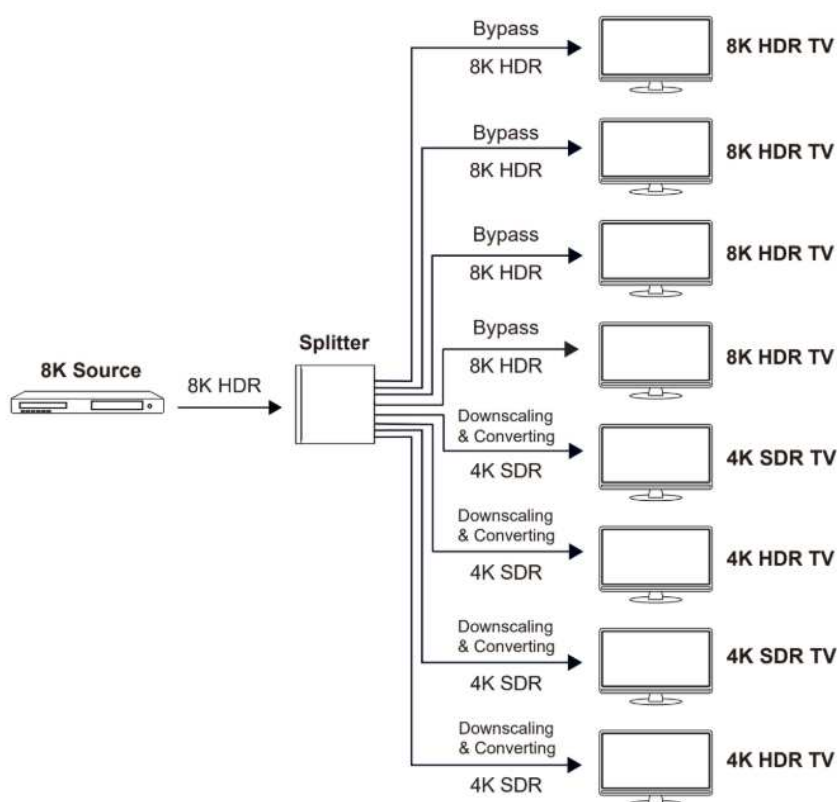


No.	Name	Function Description
1	POWER LED	When the device is powered on, the red LED will be on.
2	IN LED	When the HDMI IN port connects to an active source device, the green LED will be on.
3	OUT LED (1~8)	When the HDMI OUT 1/2/3/4/5/6/7/8 port connects to a display device and outputs signal, the corresponding green LED will be on.
4	EDID DIP switch	Use the DIP switch to set EDID: - [DIP]=111: Copy OUT port sink EDID (Factory default) - [DIP]=110: 4K60(4:4:4), 2.0CH - [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
5	SERVICE	Firmware update port.
6	IN port	HDMI signal input port, connecting to an HDMI source device such as DVD player or PS5 with an HDMI cable.
7	OUT port (1~8)	HDMI signal output ports, connecting to HDMI display devices such as TVs or monitors with HDMI cables.
8	DC 12V	12V/2.5A power input port.

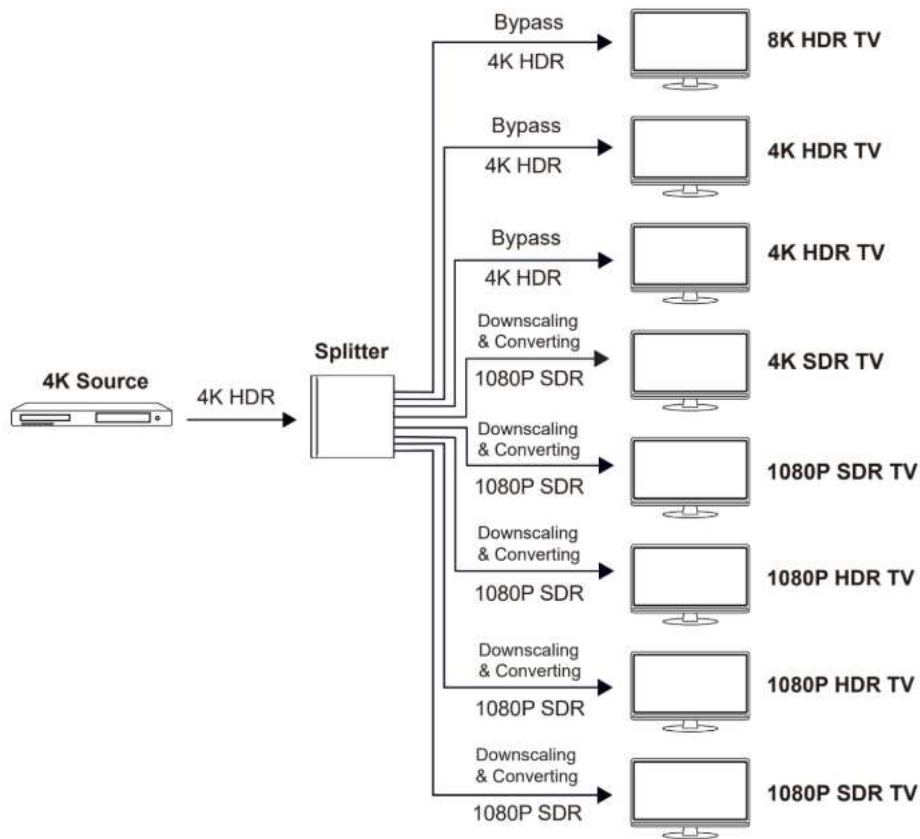


Auto Downscaling & Format Conversion

The 48Gbps 1x8 HDMI splitter features automatic downscaling and format conversion on all outputs, ensuring optimal compatibility with connected display devices. It intelligently reads the EDID information from each display and determines the appropriate output signal. Before applying downscaling, the splitter compares the EDID data from all connected displays and selects the lowest supported resolution as the output baseline. This ensures that every display receives a compatible signal without manual configuration. For example:



In the example above, since 4K is lower than the resolution of the input source, the splitter will automatically downscale the signal and output it at the minimum supported resolution of 4K SDR.



Note: If the source signal is downscaled and converted to 1080p DVI based on the EDID of connected display devices, the output will not include audio, as DVI does not carry sound.

In the example above, since 1080p is lower than the input resolution, the splitter will automatically downscale the signal and output it at the minimum supported resolution of 1080p SDR.

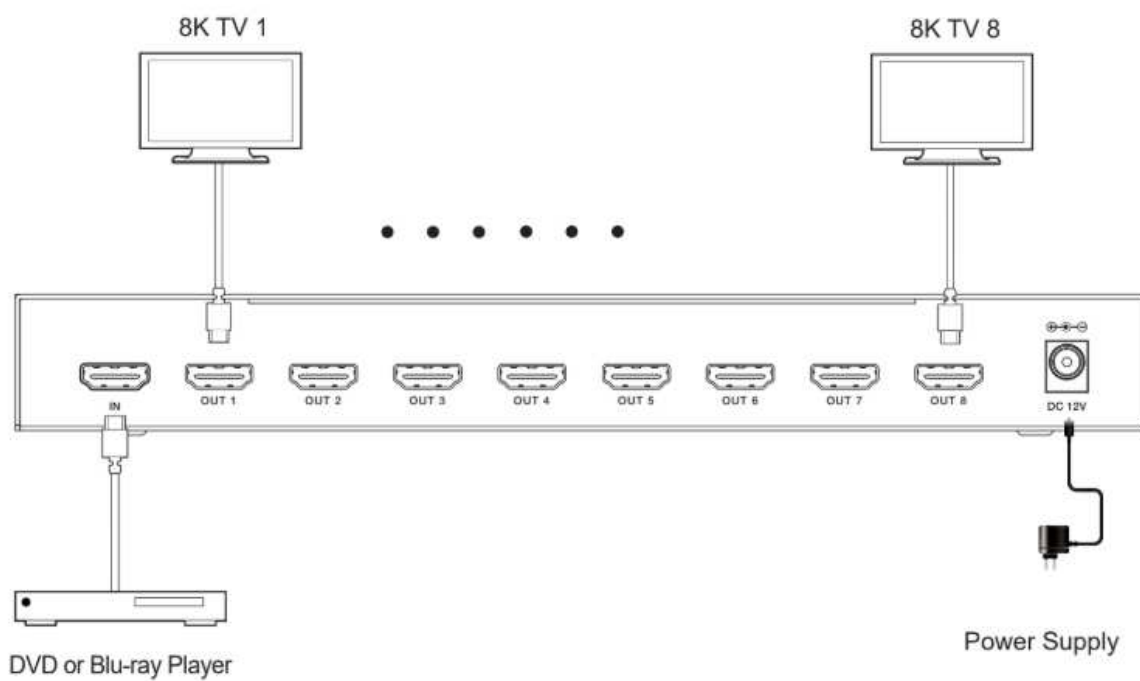
Limitations of Downscaling:

Downscaling will not function under the following conditions:

1. The input source is using the 8K DSC (Display Stream Compression) format.
2. The input resolution is not supported by the splitter.



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

1.888.499.9906

Email

support@bzbgear.com

Live Chat

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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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