



BG-8K-HS21AR

2X1 8K UHD HDMI 2.1 SWITCHER WITH DIGITAL/
ANALOG AUDIO DE-EMBEDDING/EDID/RS-232
(8K60/4K120HZ 4:4:4 VRR/ALLM SUPPORT)

The BG-8K-HS21AR is a high-performance 2×1 HDMI switcher designed to seamlessly switch between two 8K HDMI sources and deliver crystal-clear video to a single 8K display. Supporting resolutions up to 8K@60Hz 4:2:0 12-bit, 8K@30Hz 4:4:4 12-bit, and 4K@120Hz 4:4:4 12-bit, this device ensures stunning visual quality in compliance with the HDMI 2.1 and HDCP 2.3 standards. Full compatibility with HDR10, HDR10+, Dolby Vision, and ALLM/VRR pass-through guarantees exceptional color performance and dynamic range for a premium viewing experience.

Beyond video switching, the BG-8K-HS21AR features digital and analog audio de-embedding, offering analog audio output with gain control. A built-in HDMI signal generator simplifies troubleshooting and diagnostics, while advanced EDID management and integrated signal equalization ensure stable and reliable signal transmission. Users can operate the device through front panel buttons, an IR remote, or RS-232 API commands, with auto or manual switching modes for added flexibility.



FEATURES



8K & 4K120 SUPPORT

Up to 8K@60Hz YCbCr 4:2:0 12-bit,
8K@30Hz RGB/YCbCr 4:4:4 12-bit, and
4K@120Hz RGB/YCbCr 4:4:4 12-bit



HDMI AUDIO FORMATS

LPCM, Dolby Digital/Plus/EX, Dolby
TrueHD, Dolby Atmos, DTS, DTS-EX, DTS
96/24, DTS High-Resolution Audio, DTS-
HD Master Audio, and DSD



FLEXIBLE SWITCHING MODES

Supports both automatic and manual
input switching



MULTIPLE CONTROL OPTIONS

Control via front panel buttons, IR remote,
and RS-232 API commands



VERSATILE AUDIO DE-EMBEDDING

Supports resolutions up to 8K@30Hz
(4:2:2, 10-bit) extracts both digital and
analog audio with analog output featuring
adjustable gain control and 4K@120Hz
(4:2:2, 10-bit) via USB-C



HDR PASS-THROUGH

Compatible with HDR, HDR10, HDR10+,
Dolby Vision, ALLM (Auto Low Latency
Mode), and VRR (Variable Refresh Rate)



TECH SPECIFICATIONS

Technical

HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	48Gbps
Audio Latency	No Latency
Video Latency	No Latency
Video Resolution	Up to 8K60 YCbCr 4:2:0 12bit, 8K30 RGB/YCbCr 4:4:4 12bit or 4K120 RGB/YCbCr 4:4:4 12bit
Color Depth	8/10/12-bit
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
IR Level	12Vp-p
IR Frequency	Wideband 20K-60KHz
Audio Formats	HDMI input/output: LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD Audio de-embedding output: Optical: Up to LPCM/Dolby/DTS 5.1CH Analog: Only LPCM 2CH
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)

Connection

Input	2x HDMI IN [Type A, 19-pin female]
Output	1x HDMI OUT [Type A, 19-pin female] 1x OPTICAL AUDIO OUT [S/PDIF, female] 1x L/R AUDIO OUT [5pin-3.5mm Phoenix connector]
Control	1x RS-232 [3pin-3.5mm Phoenix connector] 1x IR CTL [3.5mm stereo mini-jack] 1x SERVICE [USB Type C, Update port]

Mechanical

Housing	Metal Enclosure
Color	Black
Dimensions (WxDxH)	8.7in x 4.3in x 0.85in [220mm x 110mm x 21.5mm]
Weight	1.3 lbs [595g]
Power Supply	Input: AC100 - 240V 50/60Hz, Output: DC 12V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	5.04W (Max)
Operating Temperature	-10°C ~ 45°C / 14°F ~ 113°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)

Recommended HDMI Cable	8K60	4K60	4K24	1080P
HDMI Cable Length (HDMI in / out)	2m/6.6ft (Ultra HDMI 2.1)	8m/26ft	12m/39ft	15m/49ft

The use of "Premium High Speed HDMI" cables is highly recommended.

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.

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5-YEAR WARRANTY

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3-YEAR WARRANTY

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