



**BKA-1**

**48Gbps HDMI Audio  
De-embedder**

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**USER MANUAL**

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## **Thank you for purchasing this product**

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 service life of your equipment.

# Registration Page

Please Activate your warranty by registering our product through the link below - [www.orei.com/register](http://www.orei.com/register)

## **Technical Support Need Help?**

Our experienced Technical Support Team is here for you to answer your questions, give technical advice or help troubleshoot your project to get you installed on time and on budget. Call, email or chat with us now.

### **OREI Live Technical Support Hours**

US team (US/Canada/Mexico): Monday-Friday, 9 a.m. - 6 p.m. Central Time **Support Email** - [info@orei.com](mailto:info@orei.com) | **Support Number** - 877-290-5530

Or

### **Chat Live on [www.orei.com](http://www.orei.com)**

Send us an instant message now. Our Technical Support Team will respond momentarily. Available during live support hours.

# Introduction

The BKA-1 audio de-embedder can extract audio signals from an HDMI source or ARC-compatible TV to output analog stereo and digital S/PDIF audio, with a buffered HDMI video output. It supports data rates up to 48 Gbps to comply with HDMI 2.1 and HDCP 2.3 requirements. It is compatible with UHDTV 8K/60. It includes several features for ease of integration, such as EDID management and cable equalization. It provides an easy solution for HDMI installations to send audio signals to a stereo audio or surround sound system.



# Features

1. HDMI 2.1 and HDCP 2.3 compliant
2. Support 48Gbps FRL and 18Gbps TMDS video bandwidth
3. Support video resolution up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit
4. HDMI 2.1 protocols: VRR, ALLM, QMS, QFT, SBTM are supported
5. HDR, HDR10, HDR10+, Dolby Vision, HLG pass-through
6. LPCM 7.1CH, Dolby TrueHD, Atmos and DTS-HD Master, DTS:X Audio pass-through
7. HDMI input audio or TV ARC audio de-embedded to S/PDIF and L/R audio output
8. Support CEC control from output devices to input sources
9. Advanced EDID management
10. Compact design for easy and flexible installation

# Specifications

## Package Contents

1.	BKA-1	1 pcs
2.	5V/1A Multinational Power Supply	1 pcs
3.	User Manual	1 pcs

## 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 Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
Color Depth	8/10/12-bit
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	<b>HDMI IN/OUT:</b> LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD

# Specifications

Audio Formats	<b>AUDIO BREAKOUT:</b> OPTICAL OUT: PCM 2.0CH, Dolby, DTS 5.1CH L/R OUT: PCM 2.0CH
ESD Protection	Human body model – ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
<b>Connection</b>	
Input	1 × Source IN [HDMI Type A, 19-pin female]
Output	1 × TV(ARC) OUT [HDMI Type A, 19-pin female] 1 × L/R [3.5mm Stereo mini-jack] 1 × OPTICAL [S/PDIF, female]
Control	1 × SERVICE [Micro USB, Update port]
<b>Mechanical</b>	
Housing	Metal Enclosure
Color	Black
Dimensions	95mm[W] × 68mm[D] × 18mm[H]
Weight	178g
Power Supply	Input: AC 100-240V 50/60Hz, Output: DC 5V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	2.5W (Max)

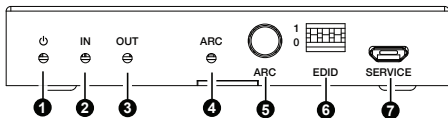
# Specifications

Operation Temperature	32 - 104°F / 0 - 40°C		
Storage temperature	-4 - 140°F / -20 - 60°C		
Relative Humidity	20 - 90% RH (no condensation)		
<b>Recommended HDMI Cable</b>			
Video Resolution	8K60	4K60	1080P
HDMI Cable Type	Ultra HDMI 2.1 cable	HDMI 2.0 cable	HDMI cable
HDMI Cable Length (HDMI IN/OUT)	2m/6.6ft - 3m/10ft	10m/33ft	15m/49ft
The use of "Premium High Speed HDMI" cable is highly recommended.			



# Operation Controls and Functions

## Front Panel



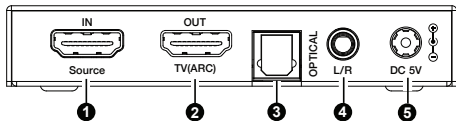
No.	Name	Function Description
1.	Power LED	When the device is powered on, the red LED will be on.
2.	IN LED	When the IN port connects to an active source device, the green LED will be on.
3.	OUT LED	When the OUT port connects to a display device and outputs signal, the corresponding green LED will be on.
4.	ARC LED	<ul style="list-style-type: none"><li>• Light on: The ARC is enabled with a normal CEC communication. The audio is returned to output via the optical port.</li><li>• Light flashing: The ARC is enabled with an abnormal CEC communication. The audio is failed to return to the output optical port.</li><li>• Light off: The ARC is disabled.</li></ul>

# Operation Controls and Functions

No.	Name	Function Description
5.	ARC button	Press this button to enable or disable the ARC function.
6.	EDID DIP switch	Use the DIP switch to set EDID. [DIP]=111: Copy OUT port sink video and audio EDID [DIP]=110: Copy OUT port sink video EDID, Audio 2.0CH [DIP]=101: Copy OUT port sink video EDID, Audio 5.1CH [DIP]=100: FRL12G_8K_HDR, 2.0CH [DIP]=011: FRL12G_8K_HDR, 5.1CH [DIP]=010: FRL10G_8K_HDR, 2.0CH [DIP]=001: FRL10G_8K_HDR, 5.1CH [DIP]=000: 1080P, 2.0CH
7.	SERVICE	Firmware update and debug port.

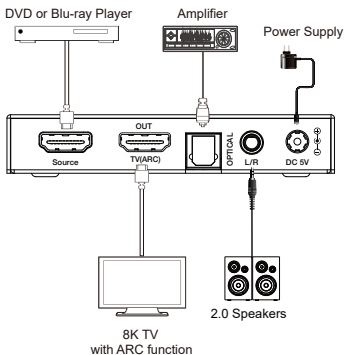
# Operation Controls and Functions

## Rear Panel



No.	Name	Function Description
1.	IN port	HDMI signal input port, connected to HDMI source device such as DVD or PS5 with an HDMI cable.
2.	OUT port	HDMI signal output port, connected to HDMI display device such as TV or Monitor with an HDMI cable. It can be used as the ARC audio channel when the ARC function is enabled.
3.	OPTICAL	Optical audio output port.
4.	L/R	Analog audio output port.
5.	DC 5V	DC 5V/1A power input port.

# Application Example



**HDMI™**  
HIGH-DEFINITION MULTIMEDIA INTERFACE

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