



4K HDMI™ Audio Embedder (3.5mm, Optical)

USER MANUAL

HDA-4KMB

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Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating, or adjusting this product. Keep this manual for future reference.

Important Safety Note – Surge Protection Recommended

This product contains sensitive electronic components that may be damaged by electrical spikes, surges, lightning strikes, or static discharge. To protect and extend the service life of your equipment, we strongly recommend using a surge protection device.

Warranty Registration

Activate your warranty by registering your product at:
→ www.orei.com/register

Need Technical Support? We're Here to Help.

Our experienced Technical Support Team is available to answer your questions, offer expert advice, and help troubleshoot any issues to keep your project on track—on time and on budget.

Live Support Hours (US/Canada/Mexico):

🕒 Monday–Friday | 9:00 a.m. – 5:00 p.m. Central Time

Contact Us:

✉ Email: info@orei.com

📞 Phone: 877-290-5530

💬 Chat Live: www.orei.com

Send us an instant message—our team typically responds within moments during live support hours.

Introduction

The HDA-4KMB is a high-performance HDMI™ Audio Embedder designed to seamlessly integrate external audio signals into an HDMI™ output.

It supports embedding audio from either a digital optical (SPDIF) source or Analog stereo line input, providing flexible audio integration options for various AV setups.

With full support for HDMI™ 2.0b and HDCP 2.2 standards, this device handles video resolutions up to 4K@60Hz (YUV 4:4:4) and passes through advanced video formats, including 10-bit HDR (High Dynamic Range).

It also supports high-resolution digital audio formats such as Dolby Atmos, Dolby TrueHD, DTS-HD Master Audio, and more, ensuring an immersive audio-visual experience.

Ideal for home theater systems, commercial AV installations, and professional applications where audio integration with HDMI™ output is required, the HDA-4KMB offers reliable, high-quality performance in a compact design.

Features & Package Contents

1. **Audio Embedding** – Embeds multi-channel digital optical (SPDIF) or Analog stereo line audio into HDMI™ output.
2. **Optical Audio Support** – Handles LPCM 2CH, Dolby Digital 2/5.1CH, and DTS 2/5.1CH formats
3. **Analog Audio Support** – Supports standard PCM 2.0 stereo analog audio embedding.
4. **4K Video Resolution** – Supports video resolutions up to 4K@60Hz (YUV 4:4:4) for stunning image quality.
5. **18Gbps HDMI™ 2.0b Bandwidth** – Delivers high-performance uncompressed video and audio signals.
6. **HDR Pass-through** – Supports 10-bit HDR formats, including High Dynamic Range video content.
7. **High-Resolution Audio Pass-through** – Supports advanced HDMI™ High Bit Rate (HBR) audio formats like Dolby Atmos, Dolby TrueHD, DTS-HD Master Audio, and more.
8. **HDCP 2.2 & CEC Bypass** – Ensures content protection compatibility and allows seamless control integration.
9. **Compact & Reliable Design** – Ideal for both residential and commercial AV environments.

Package Contents & Specifications

Package Contents

1.	HDA-4KMB	1 pcs
2.	Power Adapter	1 pcs
3.	User Manual	1 pcs

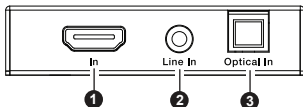
Specifications

Technical	
HDMI™ Compliance	HDMI™ 2.0b
HDCP Compliance	HDCP 2.2 and HDCP 1.4
Video Bandwidth	18Gbps
Video Resolutions	up to 4K2K@50/60Hz(YUV4:4:4), 4K2K@30Hz, 1080P@120Hz and 1080P3D@60Hz
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:0
Color Depth	10-bit, 12-bit
HDMI™ Audio Formats (Pass-through)	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Optical Audio Formats	LPCM 2CH, Dolby Digital 2/5.1CH, DTS 2/5.1CH
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)

Connections	
Inputs	1x HDMI™ [Type A, 19-pin female] 1x 3.5mm [Stereo mini-jack] 1x Optical [S/PDIF]
Outputs	1x HDMI™ [Type A, 19-pin female]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	L: 73.5mm / 2.89in W: 61mm / 2.40in H: 17mm / 0.66in
Weight	122g / 4.30oz
Power Supply	Input: AC100 - 240V 50/60Hz Output: DC 5V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	1.25W (Max)
Operation Temperature	32°F~104°F/0°C~40°C
Storage Temperature	-4°F~140°F/-20°C~60°C
Operating Humidity	20%~80% relative humidity, non-condensing
Storage Humidity	10%~90% relative humidity, non-condensing

Operation Controls and Functions

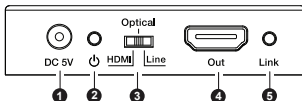
Front Panel



No.	Name	Function Description
1.	In	Connect a media source device such as DVD player, Streaming device, etc.
2.	Line In	Connect an external audio output device such as AVR, AMP, etc.
3.	Optical In	Connect an external audio output device such as AVR, AMP, etc.

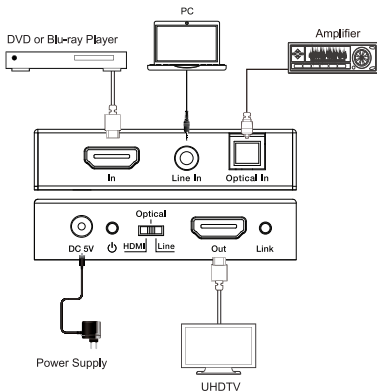
Operation Controls and Functions

Rear Panel



No.	Name	Function Description
1.	DC 5V	Connect the included power adapter.
2.	Power LED	The indicator lights up when the device is powered on.
3.	HDMI/Optical/Line dial switch	Select between HDMI, Optical or Line input to decide which audio gets embedded into the HDMI output.
4.	Out	Connect a display device such as a TV, Monitor, etc.
5.	Link LED	The LED will light up when HDMI output signal is detected.

Application Example



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

1. What video resolutions are supported?

The device supports video resolutions up to 4K@60Hz (YUV 4:4:4), including HDR10, Dolby Vision, and HLG formats, ensuring top-quality video output.

2. Does it support high-quality audio formats?

Yes. It supports Dolby Atmos, Dolby TrueHD, DTS-HD Master Audio, and other high-resolution digital audio formats when using HDMI pass-through.

3. No video output on the display.

- Try lowering the resolution from the media source.
- Try changing the HDMI cables.
- Try a different input port on the display (if available).

4. No audio from the HDMI output.

- Ensure the correct audio input source (HDMI, Line or Optical) is selected on the device.
- Make sure the supported audio format is being sent from the audio source.
- Try switching to another input type (e.g., from Line to Optical) to test functionality.

FAQs & Troubleshooting

Still have some questions?

Please feel free to contact us at: info@orei.com. OR Fill out the form on the 'Contact Us' page on the website. Our team will be more than happy to help you.

OREI Live Technical Support Hours

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