

8K HDMI Audio De-Embedder with ARC

Extract Audio from Any 8K HDMI Source or ARC TV to Optical and Analog Outputs

Surge Protection Recommended. This product contains sensitive electrical components that may be damaged by electrical spikes, surges, or lightning strikes. Use of surge protection systems is highly recommended to protect and extend the life of your equipment.

The KanexPro AUD-DEBED-8K is a professional-grade HDMI 2.1 audio de-embedder engineered for integrators who need to extract high-fidelity audio from next-generation 8K sources or ARC-enabled displays without sacrificing video performance. Supporting 48Gbps FRL bandwidth and full HDMI 2.1 compliance including VRR, ALLM, QMS, QFT, and SBTM, it passes video transparently up to 8K@60Hz and 4K@120Hz while simultaneously de-embedding audio to both S/PDIF optical and analog L/R outputs.

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1. Introduction

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2. Features

- HDMI 2.1 and HDCP 2.3 compliant — supports 48Gbps FRL and 18Gbps TMDS video bandwidth
- Video resolution up to 8K@60Hz 4:2:0 12-bit and 4K@120Hz 4:4:4 12-bit
- HDMI 2.1 advanced features: VRR, ALLM, QMS, QFT, and SBTM supported
- HDR pass-through: HDR, HDR10, HDR10+, Dolby Vision, and HLG
- Audio pass-through: LPCM 7.1CH, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio, DTS:X
- Dual audio output: S/PDIF Optical (PCM 2.0CH, Dolby, DTS 5.1CH) + L/R Analog (PCM 2.0CH)
- ARC mode: extracts TV return audio via ARC-enabled HDMI output port with CEC control
- Advanced 8-mode DIP EDID management — EDID copy, FRL/TMDS modes, 2.0CH/5.1CH selection
- USB-C service port for firmware updates and debug
- Compact metal enclosure: 95×68×18mm, 178g

3. Package Contents

1× AUD-DEBED-8K Audio De-Embedder

1× 5V/1A Multinational Power Supply

1× User Manual



4. Specifications

| Video | |
|-----------------------|--|
| HDMI Compliance | HDMI 2.1 |
| HDCP Compliance | HDCP 2.3 |
| Video Bandwidth | 48Gbps FRL and 18Gbps TMDS |
| Video Resolution | 8K@60Hz 4:2:0 12-bit; 4K@120Hz 4:4:4 12-bit |
| Color Space | RGB, YCbCr 4:4:4, 4:2:2, 4:2:0 |
| Color Depth | 8/10/12-bit |
| HDR | HDR, HDR10, HDR10+, Dolby Vision, HLG |
| HDMI 2.1 Features | VRR, ALLM, QMS, QFT, SBTM |
| Audio | |
| HDMI Audio | LPCM, Dolby Digital/Plus/EX, Dolby TrueHD, Dolby Atmos, DTS, DTS-HD MA, DTS:X, DSD |
| Optical Out | PCM 2.0CH, Dolby, DTS 5.1CH |
| L/R Out | PCM 2.0CH Analog Stereo |
| Connections | |
| Input | 1× Source IN [HDMI Type A] |
| Output | 1× TV(ARC) OUT [HDMI Type A] 1× L/R [3.5mm Stereo mini-jack] 1× OPTICAL [S/PDIF] |
| Control | 1× SERVICE [USB Type C] |
| Mechanical | |
| Dimensions | 95mm [W] × 68mm [D] × 18mm [H] |
| Weight | 178g |
| Housing | Metal Enclosure — Black |
| Power Supply | DC 5V/1A — Input: AC 100–240V 50/60Hz (CE/FCC/UL) |
| Power Consumption | 4W (Max) |
| ESD Protection | ±8kV Air-gap; ±4kV Contact |
| Environment | |
| Operating Temperature | 0°C – 40°C / 32°F – 104°F |
| Storage Temperature | -20°C – 60°C / -4°F – 140°F |
| Relative Humidity | 20–90% RH (non-condensing) |

EDID DIP SWITCH REFERENCE

| DIP (SW3-SW1) | EDID Mode |
|---------------|--|
| 111 | Copy OUT port sink video and audio EDID |
| 110 | Copy OUT port sink video EDID, Audio 2.0CH |
| 101 | Copy OUT port sink video EDID, Audio 5.1CH |
| 100 | FRL12G_8K_HDR, 2.0CH |
| 011 | FRL12G_8K_HDR, 5.1CH |
| 010 | FRL10G_8K_HDR, 2.0CH |
| 001 | FRL10G_8K_HDR, 5.1CH |
| 000 | 1080P, 2.0CH |



5. Operation Controls and Functions

FRONT PANEL

| # | NAME | FUNCTION |
|---|------------|---|
| 1 | Power LED | Red LED: device is powered on. |
| 2 | IN LED | Green LED: HDMI source connected and active. |
| 3 | OUT LED | Green LED: display connected to TV(ARC) OUT port. |
| 4 | ARC LED | On: ARC enabled, normal CEC. Flashing: ARC enabled, CEC error. Off: ARC disabled. |
| 5 | ARC Button | Press to toggle ARC function on/off. |

REAR PANEL

| # | NAME | FUNCTION |
|---|-----------------|--|
| 1 | OPTICAL | S/PDIF optical audio output port. |
| 2 | L/R | 3.5mm stereo analog audio output port. |
| 3 | DC 5V | DC 5V/1A power input port. |
| 4 | HDMI IN | Connect to HDMI 2.1 source (PC, PS5, media player, etc.). |
| 5 | TV(ARC) OUT | Connect to TV/display. ARC audio return enabled when ARC mode is active. |
| 6 | EDID DIP Switch | 3-position DIP: 8 EDID modes — see EDID table below. |
| 7 | SERVICE | USB Type-C firmware update and debug port. |

6. Application Example



Connect HDMI 2.1 source to HDMI IN. Video passes to TV(ARC) OUT at up to 8K@60Hz. Audio de-embeds simultaneously to S/PDIF Optical and L/R analog. Enable ARC mode for TV return audio.

7. Troubleshooting

Q: No audio from Optical output?

A: Verify the EDID DIP switch matches your amplifier's audio capability. Check Optical cable seating. Confirm source is outputting audio over HDMI.

Q: ARC LED is flashing?

A: Flashing indicates ARC enabled but CEC communication is abnormal. Enable HDMI-CEC in the TV's settings. Ensure TV is connected to the TV(ARC) OUT port.

Q: No 8K signal passing through?

A: Use Ultra High Speed HDMI 2.1 cables rated for 48Gbps. Limit cable length to 2–3m for 8K60. Verify source and display are HDMI 2.1 compatible.

For further support, contact: support@kanexpro.com | 888.975.1368 | www.kanexpro.com

Warranty: 3-Year Limited. KanexPro™ reserves the right to make changes without prior notice.

