HDMI eARC w/ SPDIF Audio over CAT Extender 100m POC

Extend TV Audio to a Remote Soundbar or AVR Over a Single CAT Cable



Extends HDMI eARC or S/PDIF audio up to 100m/328ft over a single CAT cable, delivering lossless surround sound from a TV to a remote soundbar, AVR, or multi-room audio system. The transmitter connects to the TV's eARC/ARC port and sends full-resolution audio — including Dolby Atmos and DTS-HD Master Audio — over standard CAT6/6a/7 cabling to a receiver at the remote audio endpoint.

For TVs without HDMI eARC, the built-in S/PDIF pass-through channel provides an independent optical audio path from the transmitter's S/PDIF IN port to the receiver's S/PDIF OUT port. Bi-directional Power over Cable eliminates the need for a power source at both ends, and CEC pass-through maintains device control across the link.

Surge Protection Recommended — This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, or lightning strikes. Use of surge protection systems is highly recommended.

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1. Features

- ✓ Extend HDMI™ eARC or S/PDIF audio up to 100m/328ft over a single CAT cable
- ✓ eARC supports PCM 2.0/5.1/7.1ch, DD, DD+, DTS, Dolby TrueHD, DTS-HD MA, Dolby Atmos
- ✓ S/PDIF fallback for TVs without eARC — PCM 2.0ch, Dolby 5.1ch, DTS 5.1ch
- ✓ CEC pass-through when HDMI eARC mode is enabled
- ✓ Bi-directional PoC (Power over Cable) for flexible installation
- ✓ IEC 61000-4-2 ESD protection: ±8kV air-gap, ±4kV contact
- ✓ Compact metal enclosure (90mm × 72mm × 20mm, 184g per unit)
- ✓ CE, FCC, and UL certified (US/EU standard power supply)

2. Package Contents

- ✓ 1× HDMI Audio Extender (Transmitter)
- ✓ 1× HDMI Audio Extender (Receiver)
- ✓ 1× 12V/1A Locking Power Adapter

3. Specifications

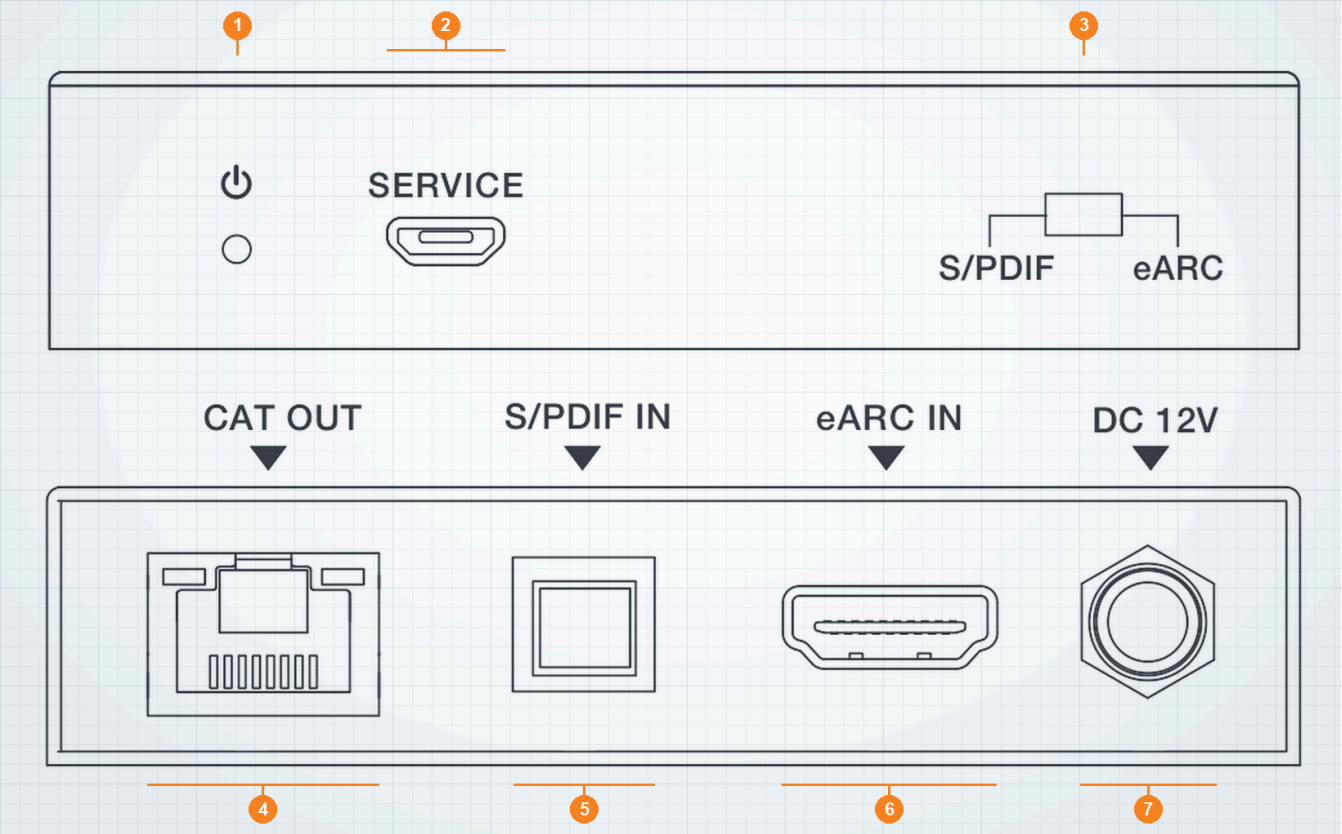
TECHNICAL	
Supported Audio Formats	eARC: PCM 2.0/5.1/7.1ch, DD, DD+, DTS, Dolby TrueHD, DTS-HD MA, Dolby Atmos ARC: PCM 2.0CH, Dolby 5.1CH, DTS 5.1CH S/PDIF: PCM 2.0CH, Dolby 5.1CH, DTS 5.1CH
Transmission Distance	100m / 328ft
ESD Protection	IEC 61000-4-2: ±8kV (air-gap) & ±4kV (contact)
CONNECTION	
Transmitter — Input	1× S/PDIF IN [Optical Audio Jack] • 1× eARC IN [HDMI Type A, 19-pin female]
Transmitter — Output	1× CAT OUT [RJ45, female]
Transmitter — Control	1× SERVICE
Receiver — Input	1× CAT IN [RJ45, female]
Receiver — Output	1× S/PDIF OUT [Optical Audio Jack] • 1× eARC OUT [HDMI Type A, 19-pin female]
Receiver — Control	1× SERVICE
MECHANICAL	
Housing	Metal Enclosure, Black
Dimensions	90mm (W) × 72mm (D) × 20mm (H) — TX & RX each
Weight	184g (TX/RX each)
Power Supply	AC 100–240V 50/60Hz → DC 12V/1A (CE/FCC/UL)
Power Consumption	5.65W (Max)
Operating Temperature	0–40°C / 32–104°F
Storage Temperature	−20–60°C / −4–140°F
Relative Humidity	20–90% RH (non-condensing)
CERTIFICATIONS	
Regulatory	CE, FCC, UL

4. Introduction

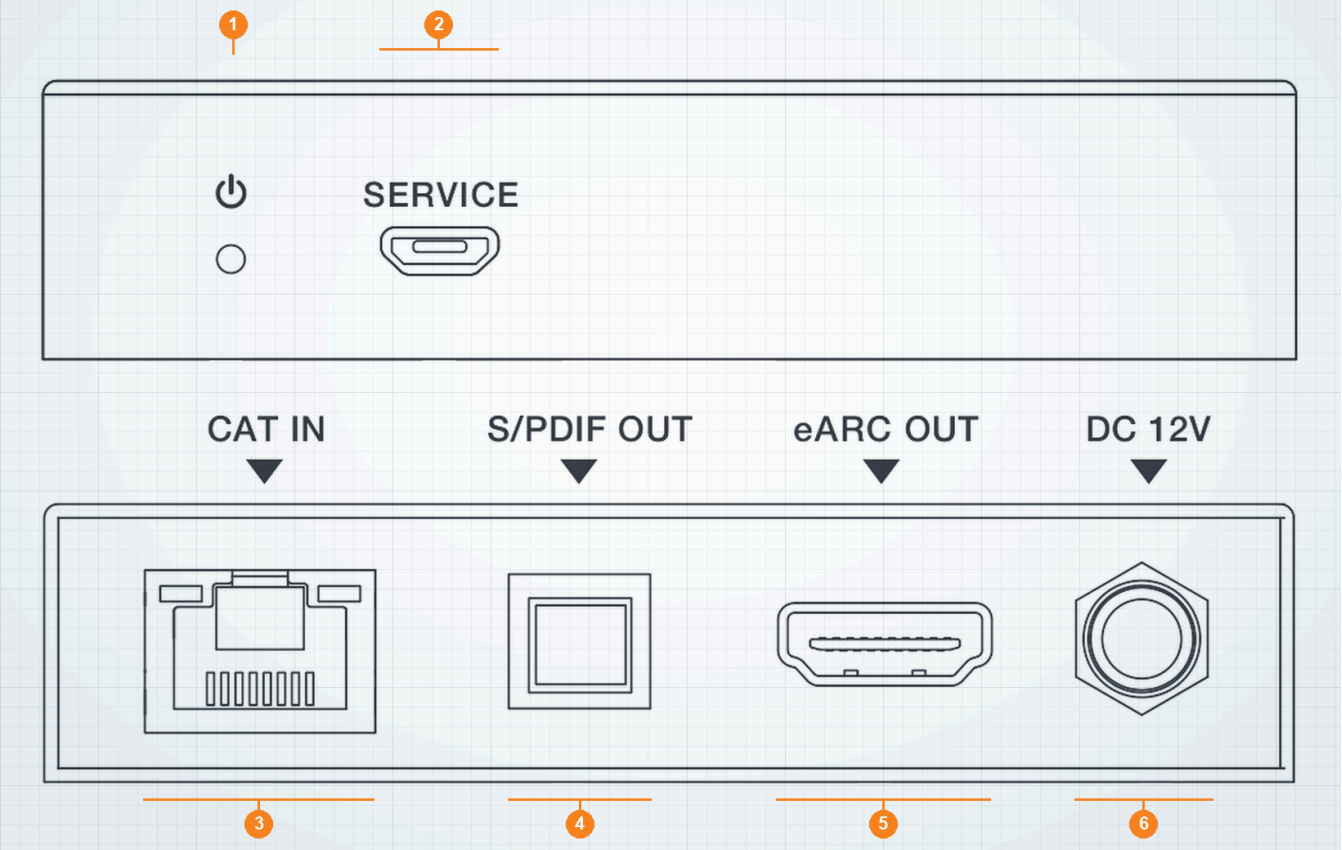
The AUD-EXT-EARC100M carries HDMI™ eARC audio and S/PDIF audio over one CAT cable up to 328ft (100m). In eARC mode, CEC passes between the transmitter's eARC IN and the receiver's eARC OUT, so the TV and the audio device can complete the eARC handshake. If your TV has no HDMI eARC, use the separate S/PDIF channel instead. It carries optical audio from the transmitter's S/PDIF IN to the receiver's S/PDIF OUT.

Surge protection recommended. This product contains sensitive electrical components that electrical spikes, surges, electric shock or lightning strikes can damage. We strongly recommend using surge protection.

5. Panel descriptions



Front panel



Rear panel

The manual gives one panel table per unit and does not split either unit into front and rear. The numbers and row order below are copied exactly from the manual.

TRANSMITTER PANEL

No.	Name	Description
1	**Power LED**	Lights red when the transmitter has power.
2	**SERVICE**	Firmware update port.
3	**S/PDIF / eARC Switch**	Selects which audio channel the system carries. In **S/PDIF**, optical audio from this S/PDIF IN comes out of the receiver's S/PDIF OUT. In **eARC**, HDMI eARC audio from this eARC IN comes out of the receiver's eARC OUT.
4	**CAT OUT**	Connect to the receiver's CAT IN with Cat6, Cat6a or Cat7 cable.
5	**S/PDIF IN**	Optical audio input. Connect it to an optical digital audio source, such as the TV's optical output.
6	**eARC IN**	HDMI audio input. Connect it to the TV's ARC/eARC HDMI port for audio and CEC pass-through.
7	**DC 12V**	12V DC power input.

RECEIVER PANEL

No.	Name	Description
1	**Power LED**	Lights red when the receiver has power.
2	**SERVICE**	Firmware update port.
3	**CAT IN**	Connect to the transmitter's CAT OUT with Cat6, Cat6a or Cat7 cable.
4	**S/PDIF OUT**	Optical audio output. Connect it to an amplifier or speaker with an optical Toslink cable.
5	**eARC OUT**	HDMI audio output. Connect it to an HDMI audio device with ARC/eARC, such as a soundbar or AV receiver.
6	**DC 12V**	12V DC power input.

6. Certifications

The AUD-EXT-EARC100M is **CE**, **FCC** and **UL** certified. The power supply is also CE, FCC and UL certified.

7. Troubleshooting

No audio from the receiver? Check that the S/PDIF / eARC switch on the transmitter matches how the TV is connected. In eARC mode, turn on ARC or eARC in the TV's settings. In S/PDIF mode, check that the optical cable is firmly seated at both ends. Make sure the CAT cable is Cat6 or better and no longer than 328ft (100m).

CEC commands are not passing through? CEC pass-through works only in eARC mode. Check that the switch is set to eARC and that CEC is on in both the TV and the soundbar or AV receiver. Some TV brands give CEC a different name, such as Anynet+, BRAVIA Sync or SimpLink.

Audio drops out or cuts in and out? Use solid-core Cat6, Cat6a or Cat7 cable rated for structured wiring, and avoid patch cables for permanent runs. Terminate every RJ45 connector to T568B as a straight-through connection, not a crossover. Route the cable away from high-voltage power lines.

Power LED is off on one unit? PoC works in both directions, so one power adapter at either the transmitter or the receiver runs both units. If the far unit's LED stays off, check the CAT cable for continuity. For runs longer than 262ft (80m), powering both ends may make the system more stable.

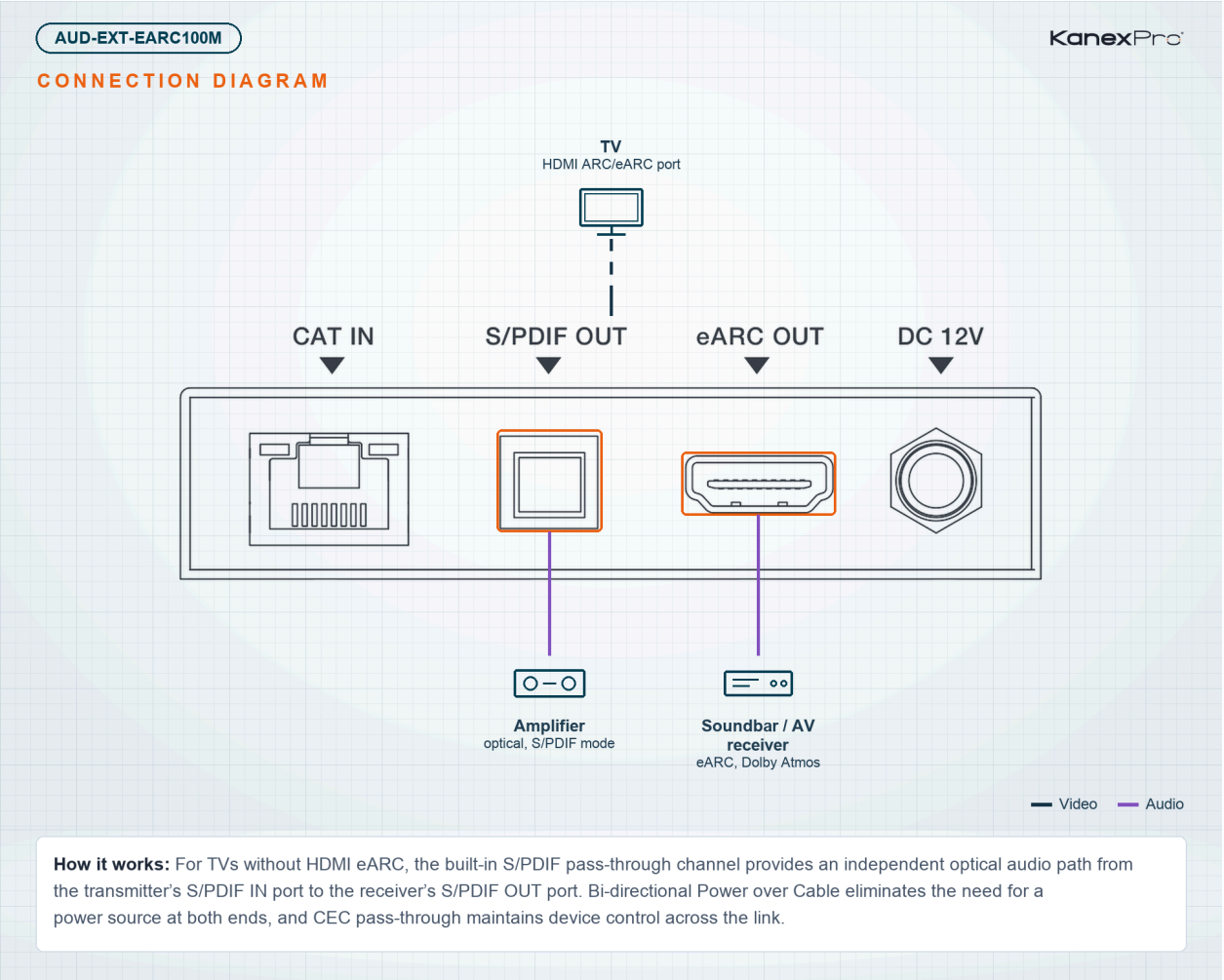
8. Cable Requirements

Use Cat6, Cat6a or Cat7 UTP or STP cable, wired straight-through with T568B at both ends. The maximum run is 328ft (100m). Do not use crossover cables. Where there is a lot of electromagnetic interference, we recommend shielded (STP) cable.

9. Warranty & Support

For warranty information and technical support, call KanexPro at 888.975.1368. Product documentation and firmware updates are at kanexpro.com.

10. Connection Diagram



11. Troubleshooting

Q: Dolby Atmos or TrueHD is not reaching the AV receiver. What should I check?
A: Set the transmitter's switch to eARC. Then confirm that the TV's eARC HDMI port goes to eARC IN, that eARC is turned on in the TV's settings, and that eARC OUT goes to an eARC-capable soundbar or AV receiver. Over ARC or S/PDIF, the extender carries only PCM 2.0, Dolby 5.1 and DTS 5.1.

Q: The amplifier on the optical output is silent but the HDMI soundbar plays, or the other way around. What is wrong?
A: The transmitter's switch carries only one channel at a time. In S/PDIF mode, audio goes from S/PDIF IN to S/PDIF OUT only. In eARC mode, audio goes from eARC IN to eARC OUT only. Set the switch to match the input the TV is actually connected to.

Q: Audio is noisy or unstable on a long run near electrical equipment. What should I check?
A: Use shielded (STP) Cat6, Cat6a or Cat7 cable and route it away from high-voltage power lines. Check that both ends are terminated T568B straight-through and that the run is no longer than 328ft (100m). On runs over 262ft (80m), powering both units may make the system more stable.

Need help? — For additional support, visit kanexpro.com/support, or scan the QR code below for the product page.

12. Installation FAQ

Q: How do I wire the extender for eARC mode?
A: Connect the TV's ARC/eARC HDMI port to the transmitter's eARC IN. Run the CAT cable from the transmitter's CAT OUT to the receiver's CAT IN, then connect the receiver's eARC OUT to the soundbar or AV receiver. Set the transmitter's switch to eARC and plug the 12V adapter into either unit.

Q: How do I wire the extender for a TV that only has an optical output?
A: Connect the TV's optical output to the transmitter's S/PDIF IN and run the CAT cable from the transmitter's CAT OUT to the receiver's CAT IN. Connect the receiver's S/PDIF OUT to an amplifier or powered speaker with a Toslink cable, then set the transmitter's switch to S/PDIF.

Q: How should the RJ45 ends of the CAT run be terminated?
A: Terminate both ends to T568B as a straight-through connection. Do not use a crossover cable. For permanent runs, use solid-core cable rated for structured wiring instead of patch cable.

Q: Should I use shielded cable or surge protection?
A: Use shielded (STP) cable where there is a lot of electromagnetic interference, and route the run away from high-voltage power lines. Surge protection is strongly recommended because spikes, surges and lightning strikes can damage the units.

13. Integration FAQ

Q: Can the extender be controlled over RS-232 or IP from a control system?
A: No. The extender has no RS-232, IP, Telnet or web control. The SERVICE port on each unit is used only for firmware updates.

Q: Can the TV and the soundbar control each other through the extender?
A: Yes, in eARC mode CEC passes between the transmitter's eARC IN and the receiver's eARC OUT, so the TV and the soundbar or AV receiver can control each other. CEC must be turned on in both devices; some brands call it Anynet+, BRAVIA Sync or SimpLink.

Q: What equipment does the AUD-EXT-EARC100M pair with at each end?
A: At the transmitter end it connects to a TV, either through the TV's ARC/eARC HDMI port or its optical output. At the receiver end it feeds a soundbar or AV receiver with HDMI ARC/eARC, or an amplifier or powered speaker with an optical input.