

# Long-Range ARC Audio Extender over CAT (150m/492ft)

## Dual-Input TX/RX Kit — HDMI ARC or Optical S/PDIF to Amplifier over CAT5e/6/7

SKU: AUD-EXT-ARC150M

**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 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.

**Caution:** The product requires the use of UTP connectors. Please connect using the direct interconnection method (T568B) — do not cross-connect.

## 1. INTRODUCTION

This Audio Extender transmits HDMI ARC or S/PDIF audio signal up to 150m/495ft (96kHz) or 90m/295ft (192kHz, ARC only) over a single CAT cable. It supports CEC pass-through between the HDMI ARC input and ARC output ports to handshake for ARC transmission.

For TVs without ARC function, the extender provides an independent S/PDIF audio pass-through channel to transmit S/PDIF audio from the S/PDIF IN port of the transmitter to the S/PDIF OUT port of the receiver. Plug-and-play solution for sending HDMI ARC and S/PDIF audio from an HDTV back to an amplifier, AVR, or multi-room audio system.

## 2. FEATURES

- ✓ Extends HDMI ARC or optical S/PDIF audio up to 150m/495ft over a single CAT5e/6/7 cable — no signal repeaters or dedicated audio cabling required
- ✓ Dedicated ARC IN (HDMI Type-A) and S/PDIF IN (Optical) ports on the transmitter with front-panel toggle switch — one kit covers both ARC-capable displays and legacy S/PDIF sources
- ✓ High-resolution audio support up to 192kHz — 150m reach at 96kHz, 90m/295ft at 192kHz for installations requiring extended sample rates
- ✓ CEC pass-through in ARC mode — TV remote volume control is preserved end-to-end without additional control infrastructure
- ✓ Supports PCM 2.0, Dolby Digital 5.1, and DTS 5.1 — compatible with standard surround formats used in commercial and residential AV systems
- ✓ Metal-housed TX and RX units with ESD protection ( $\pm 8\text{kV}$  air-gap /  $\pm 4\text{kV}$  contact) — built for installation in ceiling spaces, wall cavities, and AV racks
- ✓ Ultra-low jitter, high-fidelity design — plug-and-play with 5V Micro USB power on both TX and RX units

## 3. PACKAGE CONTENTS

- ① 1 × HDMI Audio Extender (Transmitter)
- ② 1 × HDMI Audio Extender (Receiver)
- ③ 2 × USB Shielded Cable (USB-A to Micro USB, 1m)
- ④ 2 × 5V/1A Power Adapter
- ⑤ 1 × User Manual



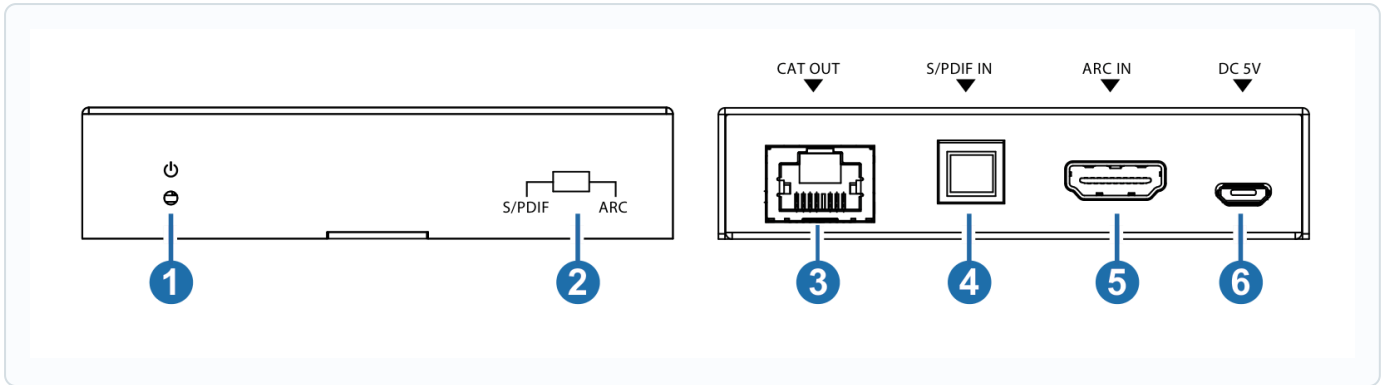
## 4. Specifications

TECHNICAL	
<b>Supported Audio Formats</b>	PCM 2.0ch, Dolby Digital 5.1ch, DTS 5.1ch
<b>Maximum Sample Rate</b>	192kHz
<b>ESD Protection</b>	±8kV air-gap discharge (Human-body Model) / ±4kV contact discharge
TRANSMISSION DISTANCE & SAMPLE RATES	
<b>ARC Audio — 96kHz</b>	150m / 495ft
<b>ARC Audio — 192kHz</b>	90m / 295ft
<b>S/PDIF Audio — 96kHz</b>	150m / 495ft
<b>Cable Type</b>	CAT5e / CAT6 / CAT7 — straight-through, T568B (direct interconnection, do not cross-connect)
TRANSMITTER	
<b>Input Ports</b>	1 × ARC IN [HDMI Type-A, 19-pin female] 1 × S/PDIF IN [Optical Audio Jack / TOSLINK] 1 × Micro-USB (Power)
<b>Output Port</b>	1 × CAT OUT [RJ45]
<b>Input Select</b>	Front-panel S/PDIF / ARC toggle switch
RECEIVER	
<b>Input Ports</b>	1 × CAT IN [RJ45] 1 × Micro-USB (Power)
<b>Output Ports</b>	1 × ARC OUT [HDMI Type-A, 19-pin female] 1 × S/PDIF OUT [Optical Audio Jack / TOSLINK]
MECHANICAL	
<b>Housing</b>	Metal Enclosure
<b>Color</b>	Black
<b>Dimensions</b>	90mm (W) × 72mm (D) × 20mm (H) — Transmitter & Receiver
<b>Weight</b>	175g — Transmitter & Receiver
POWER	
<b>Power Supply</b>	DC 5V / 1A (Micro USB) — both TX and RX
<b>Power Consumption (Max)</b>	Transmitter: 0.35W   Receiver: 0.7W
ENVIRONMENTAL	
<b>Operating Temperature</b>	0°C – 40°C / 32°F – 104°F
<b>Storage Temperature</b>	-20°C – 60°C / -4°F – 140°F
<b>Relative Humidity</b>	20 – 90% RH (non-condensing)



## 5. Operation Controls and Functions

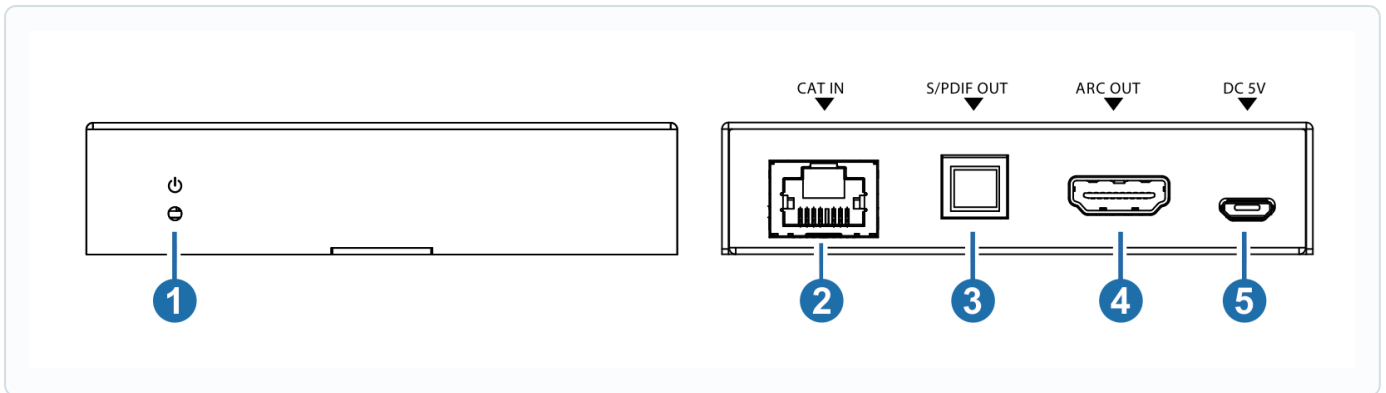
### 5.1 TRANSMITTER



NO.	NAME	FUNCTION DESCRIPTION
1	<b>Power LED</b>	When the transmitter is powered on, the red power LED will be on.
2	<b>S/PDIF / ARC Switch</b>	Selects the active audio pass-through channel. <b>S/PDIF</b> : The S/PDIF OUT port (receiver) outputs optical audio from the S/PDIF IN port of the transmitter. <b>ARC</b> : The ARC OUT port (receiver) outputs HDMI ARC audio from the ARC IN port of the transmitter.
3	<b>CAT OUT</b>	RJ45 output port. Connect to the CAT IN port of the receiver using a CAT5e/6/7 cable (straight-through, T568B).
4	<b>S/PDIF IN</b>	Optical fiber audio input port. Connect to an optical digital audio source device using an Optical TOSLINK cable.
5	<b>ARC IN</b>	HDMI Type-A audio input port. Connect to a TV with ARC function. Used for ARC audio and CEC pass-through.
6	<b>DC 5V</b>	Micro USB power input port. Connect to a 5V/1A USB power source using the supplied USB cable and power adapter.



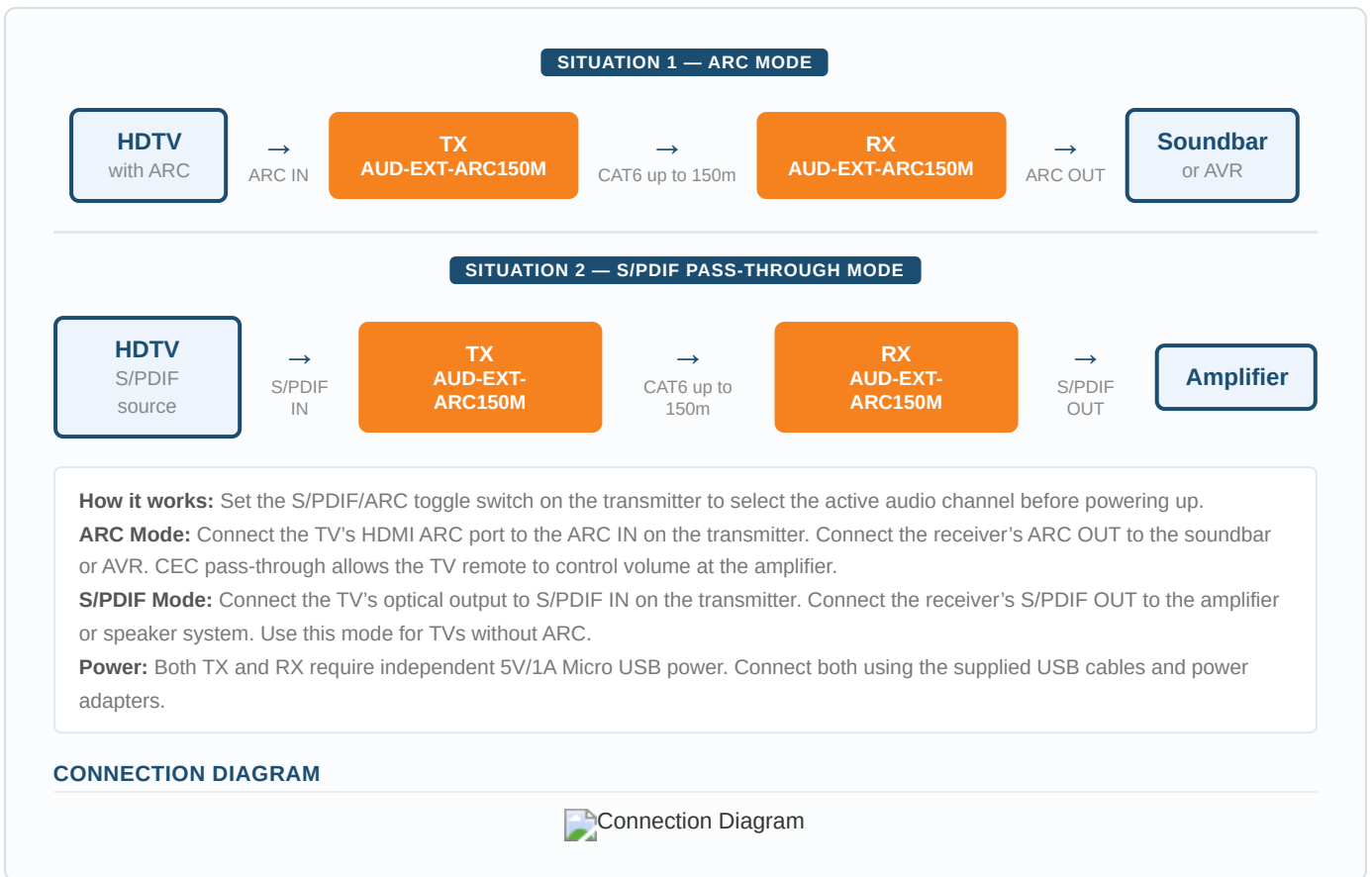
## 5.2 RECEIVER



NO.	NAME	FUNCTION DESCRIPTION
1	<b>Power LED</b>	When the receiver is powered on, the red power LED will be on.
2	<b>CAT IN</b>	RJ45 input port. Connect to the CAT OUT port of the transmitter using a CAT5e/6/7 cable (straight-through, T568B).
3	<b>S/PDIF OUT</b>	Optical fiber audio output port. Connect to an amplifier or speaker system using an Optical TOSLINK cable.
4	<b>ARC OUT</b>	HDMI Type-A audio output port. Connect to an HDMI audio device with ARC function, such as a soundbar or AVR.
5	<b>DC 5V</b>	Micro USB power input port. Connect to a 5V/1A USB power source using the supplied USB cable and power adapter.



## 6. Application Examples



## 7. TROUBLESHOOTING

**Q: No audio at the receiver output?**

**A:** Verify the S/PDIF/ARC toggle switch on the transmitter is set to the correct mode for your connection. Confirm both TX and RX are powered (red LED on). Check that CAT cable is straight-through T568B — do not use crossover cable. Ensure CAT cable length does not exceed 150m (96kHz) or 90m (192kHz for ARC).

**Q: TV remote does not control amplifier volume?**

**A:** CEC pass-through is available in ARC mode only. Confirm the toggle switch is set to ARC. Ensure CEC (e.g. Anynet+, Bravia Sync, SimpLink) is enabled in the TV's settings. Verify the amplifier or soundbar supports ARC and CEC.

**Q: Audio cuts out or is intermittent?**

**A:** Check CAT cable quality — use CAT5e, CAT6, or CAT7. Verify all RJ45 connectors are fully seated. Avoid running CAT cable parallel to high-voltage power cables. If possible, use shielded CAT cable in electrically noisy environments.

