

PAEXEARC Product Manual

Digital Audio Extender with eARC



Safety Instructions

For optimum performance and safety, please read these instructions carefully before use and keep this manual for future reference. Please have the part number, serial number, and invoice available when requesting support.

- To prevent electric shock, please ensure that all apparatus is properly grounded.
- Place the device in a well-ventilated area and do not block any ventilation openings.
- Do not expose or place this device near water. Any liquid that goes into the device may cause a failure, fire, or electric shock.
- Do not place the device on an uneven or unstable surface. The device may fall resulting in a malfunction.
- Never insert anything metallic into the open parts of this device - this may cause an electric shock.
- If a third-party power supply is used, please ensure that the power supply specifications meet the device requirements.

Introduction

The PulseAudio PAEXEARC digital audio extender with eARC is capable of transmitting HDMI eARC or ARC digital audio signals up to 328ft (100m) over a single CAT5e/6 cable. It can also transmit digital optical audio signals up to 656ft (200m). The receiver is equipped with a built-in ARC backup plan, ensuring that both SPDIF and HDMI outputs are active to accommodate various scenarios. The extender features bi-directional PoC (power over cable), allowing either end to be plugged into power for flexible installation. It also supports CEC pass-through when HDMI eARC/ARC audio is selected.

Product features:

- Extends eARC/ARC or optical digital audio signals over a single Cat5e/6 cable
- Supports eARC/ARC distribution up to 328ft (100m)
- Supports optical audio distribution up to 656ft (200m)
- Supports CEC pass-through when HDMI eARC/ARC mode is selected
- SPDIF and HDMI outputs are always live for a truly customized audio solution
- Features bi-directional PoC (Power over Cable)
- Selection between HDMI eARC/ARC or optical digital audio via switch on the TX

Package contents:

- (1) Digital audio extender set - TX and RX
- (1) Power adapter (12VDC, 1A)
- (1) Mounting brackets and screws
- (1) Quick start guide

Specifications

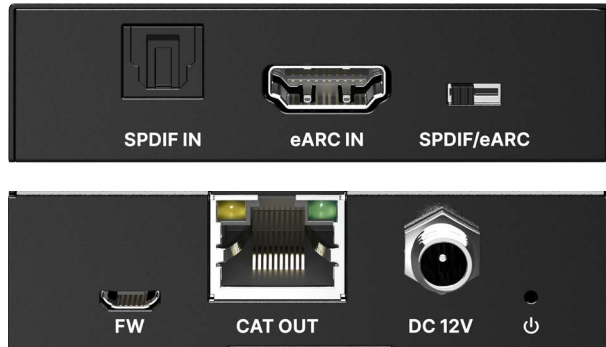
Product specifications may change without prior notice due to upgrade or update of product functions and capabilities. Please visit www.vanco1.com for the most up to date version of this manual.

TX Connections		RX Connections	
Input	(1) SPDIF, (1) eARC/ARC In	(1) CATx In	
Input connector	(1) Toslink, (1) HDMI	(1) RJ45	
Output	(1) CATx Out	(1) SPDIF, (1) eARC/ARC Out	
Output connector	(1) RJ45	(1) Toslink, (1) HDMI	
Control	(1) Firmware	(1) Firmware	
Control connector	(1) Micro USB	(1) Micro USB	
General			
Audio formats	eARC	PCM 2.0/5.1/7.1ch, Dolby Digital Plus, DTS, Dolby TrueHD, DTS-HD MA, Dolby Atmos	
	ARC	PCM 2.0ch, Dolby 5.1ch, DTS 5.1ch	
	Optical	PCM 2.0ch, Dolby 5.1ch, DTS 5.1ch	
Frequency response	All audio: 20Hz to 20kHz, < ±0.3dB		
Sample rate	SPDIF	48/96/192kHz	
	HDMI	48/96/192kHz	
Transmission range	SPDIF	Up to 656ft (200m) via CATx	
	HDMI	Up to 328ft (100m) via CATx	
	Optical fiber transmission sampling rate at 96kHz up to 656ft (200m) and 192kHz up to 328ft (100m)		
External power supply	DC 12V, 1A		
Dimensions	TX & RX	3.15in x 0.83in x 2.91in (80mm x 21mm x 74mm)	
Net weight	TX & RX	0.33lbs (150g)	
Power consumption	2.5W (max)		
Temperature	Operating: 32 to 104°F (0 to +40°C)		Storage: 14 to 122°F (-10 to +50°C)
Relative humidity	0 to 90%		

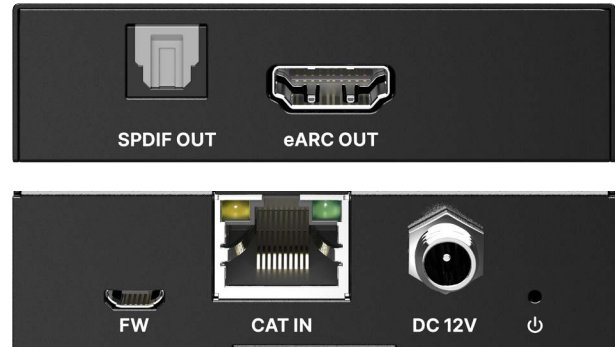
Panel Descriptions

Please reference the panel descriptions below for port information and descriptions. A detailed connection diagram illustrating the PAEXEARC in use is shown on the following page.

Transmitter Unit



Receiver Unit



Transmitter Unit	
SPDIF IN	Connect to display equipped with optical audio output (if not using eARC/ARC from HDMI connection from display).
eARC IN	Connect to eARC/ARC port on HDMI display. Ensure display is equipped with eARC/ARC and connected to the designated eARC/ARC HDMI port.
SPDIF/eARC	Select between eARC/ARC input port between HDMI or optical audio input.
FW	USB upgrade port reserved for firmware updates.
CAT OUT	Connect a single Cat5e/6 cable from the Transmitter to the Receiver. Home-run cabling strongly recommended without any couplings, punch-downs, or patch panels.
DC 12V	Connect the included DC 12V, 1A power supply. Note: This extender set features bi-directional PoC so only one unit needs to be plugged into power.
LED	Emits green when power is connected.
Receiver Unit	
SPDIF OUT	Connect to amplifier, AVR, soundbar, etc. for optical audio return.
eARC OUT	Connect to amplifier, AVR, soundbar, etc. audio return channel (ensure component is equipped with eARC/ARC and connected to the designated eARC/ARC HDMI port).
FW	USB upgrade port reserved for firmware updates.
CAT IN	Connect a single Cat5e/6 cable from the Receiver to the Transmitter. Home-run cabling strongly recommended without any couplings, punch-downs, or patch panels.
DC 12V	Connects the included DC 12V, 1A power supply. Note: This extender set features bi-directional PoC so only one unit needs to be plugged into power.
LED	Emits green when power is connected.

Connection Diagram

Please reference the diagrams below for how to connect and operate the PAEXEARC digital audio extender with eARC.

HDMI eARC/ARC: For displays, amplifiers, and soundbars with eARC/ARC functionality

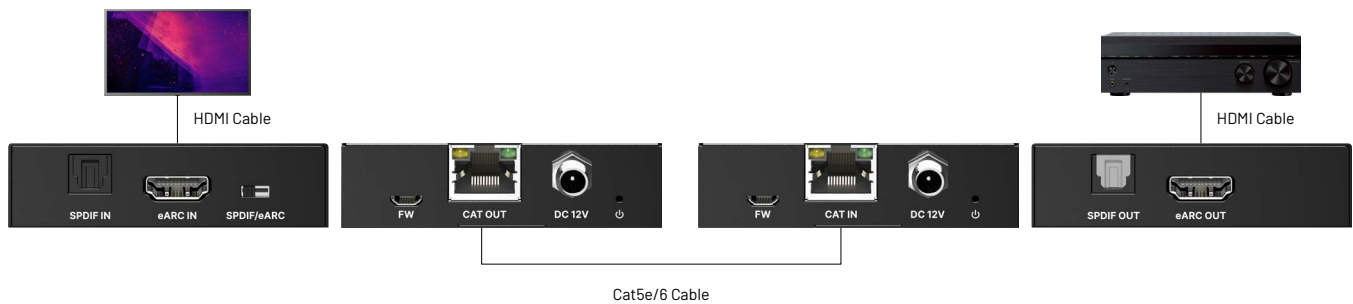
1. Connect an eARC/ARC equipped display, such as an UHD TV or HD projector, using the eARC/ARC HDMI port of the display to the HDMI input on the transmitter and set the SPDIF/eARC toggle switch to eARC/ARC.

Note: Please refer to the displays manual on how to enable eARC/ARC settings.

2. Connect an amplifier, AV receiver, or soundbar to the HDMI output on the receiver.

Note: If there are multiple HDMI ports on the audio device connected to the receiver, ensure it is connected to the designated HDMI port labeled eARC/ARC. Refer to the device's manual if additional eARC/ARC settings need to be enabled.

3. Connect a single Cat5e/6 cable to the CAT OUT port of the transmitter and the other end to the CAT IN port of the receiver.
4. For power, plug in the transmitter -or- the receiver to the included power supply.
5. Power on and test (transmitter and receiver units will already be powered when either unit is plugged in).

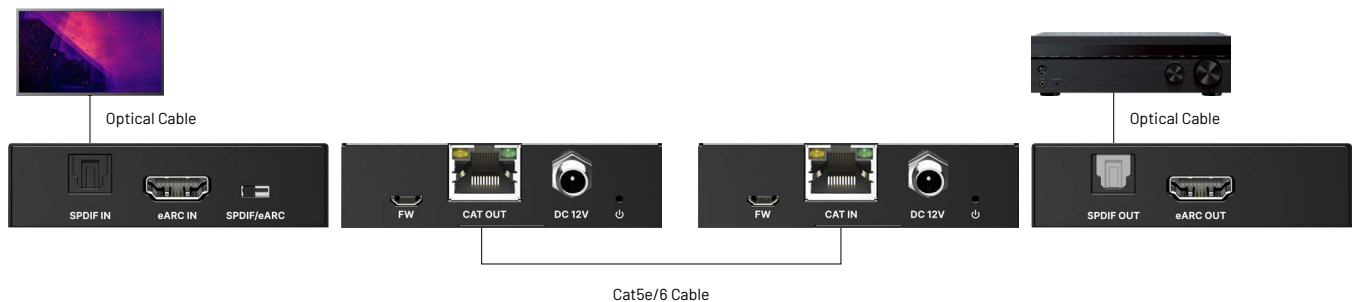


SPDIF Digital Audio

1. Connect an optical audio cable from the display, such as a UHD TV or HD projector, to the SPDIF IN port on the transmitter and set the SPDIF/eARC/ARC toggle switch to SPDIF.

Note: Please refer to the displays manual on how to enable or change audio output settings.

2. Connect an amplifier, AV receiver, or soundbar to the SPDIF OUT port on the receiving unit.
3. Connect a single Cat5e/6 to the CAT OUT port of the transmitter and the other end to the CAT IN port of the receiver.
4. For power, plug in the transmitter -or- the receiver to the included power supply.
5. Power on and test (transmitter and receiver units will already be powered when either unit is plugged in).



ARC "Built-In" Backup Plan

In instances where eARC/ARC or SPDIF settings and connections are not working as anticipated, the PAEXEARC allows for either an HDMI input on the transmitter to be converted to a SPDIF output on the receiver, or a SPDIF input on the transmitter to be converted to a HDMI output on the receiver.

Note: The PAEXEARC will not downmix Dolby or DTS audio formats.

Limited Warranty

With the exceptions noted in the next paragraph, Vanco warrants to the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of 2 years from the date of purchase. Should this product, in Vanco's opinion, prove defective within this warranty period, Vanco, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of Vanco. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into Vanco products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to Vanco. A surge protector, power conditioner unit, or an uninterruptible power supply must be installed in the electrical circuit to protect against power surges.

If repairs are needed during the warranty period, the purchaser will be required to provide a sales receipt/invoice or another acceptable proof of purchase to the seller of this equipment. The seller will then contact Vanco regarding repair or replacement.

Liability Statement

Every effort has been made to ensure that this product is free of defects. The manufacturer of this product cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user and installer of the hardware to check that it is suitable for their requirements and that it is installed correctly. All rights are reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

Manufacturer reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way. For additional information, please visit www.vanco1.com.

Technical Support

Please read this product manual prior to calling or installing this unit, since it will familiarize you with the capabilities of this product and its proper installation.

In case of problems, please contact Vanco Technical Support by dialing 1-800-626-6445. You can also email technical support issues to techsupport@vanco1.com. When calling, please have the part number, serial number, and invoice available for reference.

All active electronic products are 100% inspected and tested to insure highest product quality and trouble-free installation and operation. The testing process utilizes the types of high-definition sources and displays typically installed for entertainment and home theater applications.

Vanco Tech Support

Phone: 1-800-626-6445

Email: techsupport@vanco1.com

Web: www.vanco1.com/tech-support

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