



PULSEAUDIO™

HDMI® Audio

EXTRACTOR

with Dolby/DTS Downmixing



PART NUMBER PA4KAE-DD

Extracts audio signals from an HDMI source signal

pulseaudio1.com | vanco1.com | 800.626.6445

DEAR CUSTOMER

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.

THIS PRODUCT IS 100% INSPECTED AND TESTED IN THE UNITED STATES TO VERIFY PERFORMANCE PARAMETERS.

WARNING

1. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.
2. To prevent risk of electrical shock or fire hazard, due to overheating do not obstruct unit's ventilation openings.
3. Do not install near any source of heat, including other units that may produce heat.
4. Do not place unit near flames.
5. Only clean unit with a dry cloth.
6. Unplug unit during lightning storms or when not used for an extended period of time.
7. Protect the power cord from being walked on or pinched, particularly at the plugs.
8. Use unit only with accessories specified by the manufacturer.
9. Refer all servicing to qualified personnel.

◦ FEATURES

The Pulse Audio PA4KAE-DD is an audio extractor which can de-embed or break out audio from an HDMI 4K HDR signal source without affecting the HDMI 2.0 output. With both digital and analog audio outputs, the PA4KAE-DD is a perfect solution for breaking out audio to an external amplifier or distributed audio system at the source end, or to connect a sound bar at the display end. In addition, Dolby and DTS formats are able to be downmixed, so that the source audio signal does not have to be downgraded. Features optical connection for digital audio output, and RCA connections for analog audio output. For any audio extraction application where 4K HDR and Dolby/DTS signals are needed, the PA4KAE-DD is a great solution.

HDMI Audio Extractor with Dolby/DTS Downmixing ◦ Part # PA4KAE-DD

- Extracts audio signals from an HDMI source signal
- Passes 4K@60Hz
- Supports HDR (High Dynamic Range) with Dolby and DTS format passthrough such as Dolby TrueHD, Dolby Digital Plus, Dolby Atmos and DTS-HD Master Audio
- Includes digital optical audio and RCA analog audio outputs
- HDMI pass-through audio input to HDMI and optical audio output
- Features bitstream audio down-mix to RCA analog output
- Supports 2ch, Dolby Digital 2/5.1ch, DTS 2/5.1ch audio formats for optical output
- Supports CEC pass-through
- Dimensions: 2.9" W x 2.38" D x 0.8" H

◦ PACKAGE CONTENTS

- PA4KAE-DD Audio Extractor
- (1) 5V 1A Power Supply
- Product Manual

○ SPECIFICATIONS

HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 and HDCP 1.4
Video Resolutions.....	Up to 4K@60Hz (YUV4:4:4), 4K@30Hz, 1080P@120Hz, and 1080P 3D@60Hz
Color Space.....	RGB, YCbCr 4:4:4, YCbCr 4:2:2
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 2/5.1 ch, DTS 2/5.1ch
L/R Audio Formats	Analog Stereo 2ch
ESD Protection.....	Human body model – ±8kV (air- gap discharge) & ±4kV (contact discharge)
Inputs.....	1x HDMI Type A [19-pin female]
Outputs	1x HDMI Type A [19-pin female]; 1x L/R Audio Out [RCA]; 1x Optical Out [S/PDIF]
Housing	Metal Enclosure
Color.....	Black
Dimensions	2.9" W x 2.38" D x 0.8" H
Weight.....	0.3 lbs
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 - 104°F / 0 - 40°C
Storage Temperature.....	-4 - 140°F / -20 - 60°C
Relative Humidity.....	20 - 90% RH (no condensation)

◦ PANEL DESCRIPTIONS

FRONT PANEL



1. DC 5V: Connect the included 5v 1A power supply to AC wall outlet for power

2. Power LED: Power indicator

3. TV/Bitstream/2CH: Manual switch to select between:

Bitstream (multi-channel audio, Dolby, and DTS audio formats)

2CH (stereo PCM audio formats)

TV - this copies EDID from the display if there is an issue with the incorrect audio format being passed through

4. HDMI IN: Connect an HDMI source

5. Status LED:

Solid Red: Audio source signal is PCM or no signal

Blinking Red: Audio source signal is Dolby

Blinking Green: Audio source signal is DTS

BACK PANEL



1. HDMI OUT: Connect an HDMI display

2. OPTICAL Out: Connect an optical cable to an external amplifier, audio distribution system, or soundbar

Note: For digital audio formats

3. R/L OUT: Connect an RCA cable or RCA to 3.5mm cable to an external amplifier, audio distribution system, or soundbar

Note: For analog audio formats

○ CONNECT AND OPERATE



1. Connect an HDMI source to the HDMI input
2. Connect an HDMI display to the HDMI output
3. Select the audio format desired whether it is 2CH (analog), Bitstream (multi-channel or digital), or TV to copy EDID from the display
4. Connect the desired audio output whether it is optical (digital) out, or RCA (analog) out to an external amplifier, distributed audio system, soundbar, etc.
5. Connect the included power supply

At this point check for correct video and audio formats on the display, and check the audio extraction ports to ensure they are outputting the desired format

○ SAFETY AND NOTICE

The PA4KAE-DD has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the PA4KAE-DD should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit.
- Always unplug the power to the device before cleaning

◦ TECHNICAL SUPPORT

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 Model Number, Serial Number (affixed to the bottom of the unit) and Invoice available for reference during the call. Please read this Instruction Manual prior to calling or installing this unit, since it will familiarize you with the capabilities of this product and its proper installation. 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 theatre applications. For additional information please visit www.vanco1.com.

◦ 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.

◦ 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 two 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/sales invoice or other acceptable proof of purchase to the seller of this equipment. The seller will then contact Vanco regarding warranty repair or replacement.

Vanco® International

506 Kingsland Drive Batavia, Illinois 60510

call: 800.626.6445 | fax: 630.879.9189

visit: www.vanco1.com

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