

User Manual

ALTIMIUM

CVHA2

HDMI Audio Splitter/De-embedder 1x2



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Version: CVHA2_2016V1.1

Preface

Read this user manual carefully before using this product. Pictures shown in this manual is for reference only, different model and specifications are subject to real product.

This manual is only for operation instruction only, not for any maintenance usage. The functions described in this version are updated till December 2016. Any changes of functions and parameters since then will be informed separately. Please refer to the dealers for the latest details.

All product function is valid till 2016-12-2.

Trademarks

Product model and logo are trademarks. Any other trademarks mentioned in this manual are acknowledged as the properties of the trademark owner. No part of this publication may be copied or reproduced without the prior written consent.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



SAFETY PRECAUTIONS

To insure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

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1. Introduction

1.1. Introduction to CVHA2

CVHA2 is a high-quality HDMI audio splitter/de-embedder, with 1 HDMI and 1 split stereo audio output, HDCP compliant and HDTV compatible.

The antistatic case design of CVHA2 provides good protection for stable performance, and its transmission resolution ups to 1920*1200@60Hz.

1.2. Features

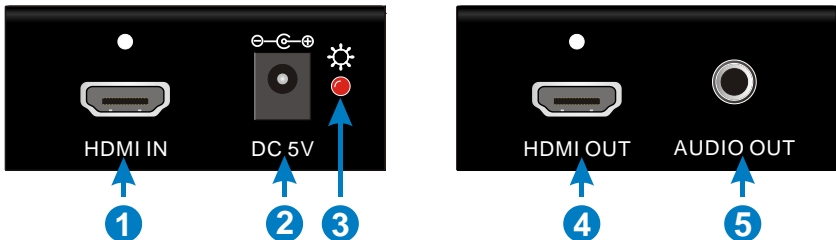
- De-embed and split the HDMI audio to two different formats output (1 video output, 1 audio output).
- HDCP compliant, use HDMI 1.3 standard.
- HDTV compatible with High Definition Transmission up to 1920*1200@60Hz resolution (max).
- Antistatic case design to provide good protection for long-term and stable performance.

1.3. Package Contents

- 1 x CVHA2
- 1 x Power Adapter (DC 5V)
- 2 x Mounting Ears
- 1 x Audio cable (3.5mm mini jack to 2 RCA connectors for L&R audio channels)
- 4 x Screws
- 1 x User Manual

Notes: Please confirm if the product and the accessories are all included, if not, please contact with the dealers.

2. Product Appearance



HDMI Audio Splitter/De-embedder 1x2

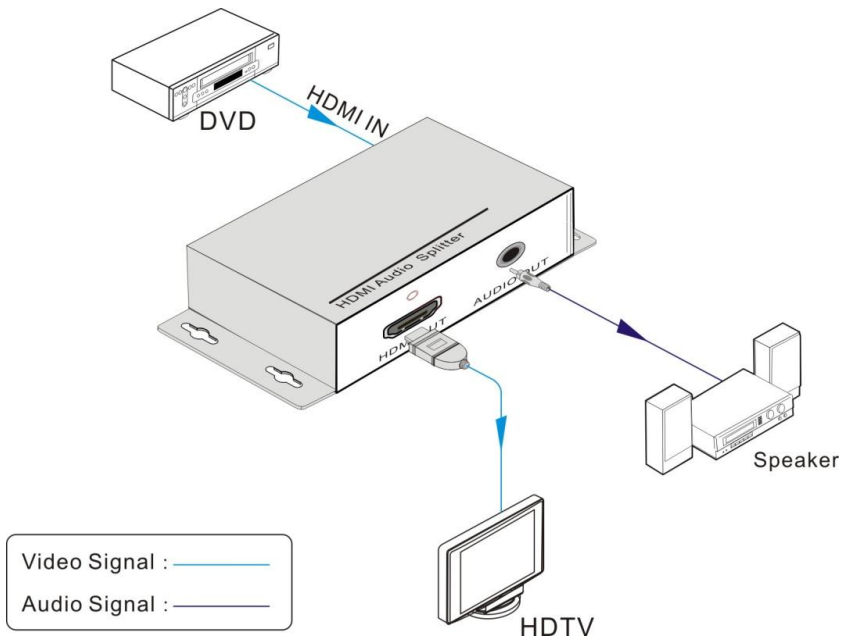
- ① **HDMI IN:** HDMI input port, used to connect to an HD video source device, such as a DVD player, a computer etc.
- ② **5V:** Used to access with a DC 5V power adapter.
- ③ **Power Indicator:** It turns red when power on.
- ④ **HDMI OUT:** HDMI output port, used to connect to a display device, such as HDTV.
- ⑤ **AUDIO OUT:** Stereo audio output port, used to connect with an audio amplifier, such as a speaker.

3. System Connection

3.1. Usage Precautions

- 1) System should be installed in a clean environment and has a prop temperature and humidity.
- 2) All of the power switches, plugs, sockets and power cords should be insulated and safety.
- 3) All devices should be connected before power on.

3.2. System Diagram



3.3. Connection Procedure

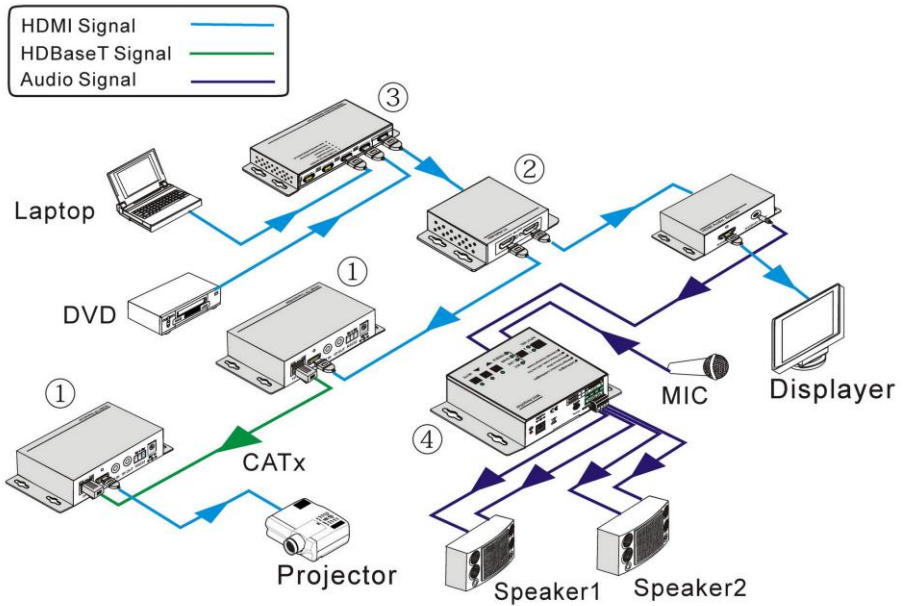
- 1) Connect HDMI IN port of CVHA2 with HDMI source device, such as a DVD player.
- 2) Connect HDMI OUT port of CVHA2 with display device, such as an HDTV.
- 3) Connect AUDIO OUT port of CVHA2 with a speaker or earphone etc.
- 4) Connect 5V DC port of CVHA2 with a DC 5V power adapter.

3.4. System Applications

As its good performance in control and transmission, CVHA2 can be widely used in computer realm, monitoring, large screen displaying, conference system, television education and bank securities institutions etc.

4. Application Solution

4.1. System Diagram



4.2. Product Assortment

① HDMI twisted pair extender

- 70m transmission distance in max over single CAT5e/CAT6 cable.
- Support 1080P@60Hz,48b/pixels,3D & 4Kx2K.
- Bi-directional and simultaneous RS232 & IR control.

② HDMI splitter 1x2

- HDCP compliant, support 3D.
- Supports Extended Display Identification Data (EDID) and Display Data Channel (DDC).
- HDTV compatible with High Definition Transmission resolution up to 1920*1200@60Hz (max), support 1080P.
- Built-in gain compensation technique and synchronous signal proofread technology.

③ HDMI selection switcher 4x1

- 4 HDMI inputs and 1 HDMI output.
- Supports Extended Display Identification Data (EDID) and Display Data Channel (DDC).
- HDTV compatible with High Definition Transmission resolution up to 1920*1200@60Hz (max).
- Built-in gain compensation and synchronous signal proofread technology.

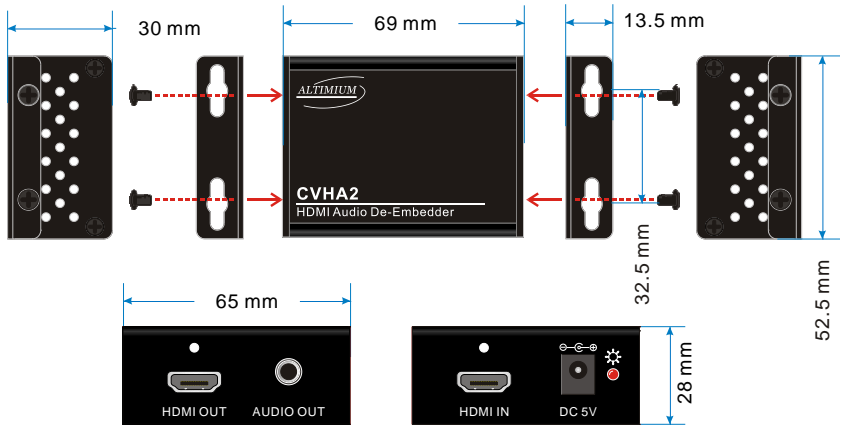
④ Digital amplifier

- 2x20Watt@4Ohm power as default output power.
- Bridge connection to double the output power at 1x40Watt@8Ohm.
- 48V phantom power to support condenser microphone.
- MIC port can support balance/unbalance signal, suppress the external noise effectively.

5. Specification

Video Input		Video Output	
Input	1 HDMI	Output	1 HDMI 1 Stereo Audio
Input Connector	HDMI 1.3	Output Connector	HDMI 1.3 3.5mm jack
Input Level	T.M.D.S. 2.9V/3.3V	Output Level	T.M.D.S. 2.9V/3.3V
Input Impedance	50Ω	Output Impedance	50Ω
Video General			
Gain	0 dB	Bandwidth	6.75 Gbit/s
Video Signal	T.M.D.S signal HDMI 1.3	Maximum Pixel Clock	165MHz
Resolution Range	Up to 1920 x 1200 or 1080P@60Hz	Delay Time	5nS (±1nS)
CMRR	>90dB @20Hz~20K Hz		
Consumer Electronics Control	Supports CEC wired infrared data pass-through using the HDMI 1.3 standard.		
HDCP Management	Compliant with High-bandwidth Digital Content Protection (HDCP) using DVI and HDMI 1.3 standards.		
Audio General			
Frequency Response	20Hz ~ 20KHz	CMRR	>70dB@20Hz~20KHz
SNR	80dB (max)	Bandwidth	20Hz ~ 25KHz
Stereo Channel Separation	>75dB@20Hz ~ 20KHz	THD + Noise	1%@1KHz, 0.3%@20KHz
General			
Power Supply	Input: 100VAC ~ 240VAC, 50/60Hz; Output: 5VDC, 1A	Power Consumption	3W
Temperature	-20 ~ +70°C	Humidity	10% ~ 90%
Case Dimension	W69 x H28 x D52.5 mm	Product Weight	0.1Kg

6. Panel Drawing



7. Troubleshooting & Maintenance

- 1) If the **POWER** indicator doesn't work or no respond to any operation:
 - The power adapter is not connected with alternating current power.
 - The power switch is not on.
- 2) When there is no output signal:
 - Check if the audio/video connector is broken (check with multimeter or oscilloscope).
 - Check if the audio/video connector is well connected.
 - Check if the source device/display device is powered on and turned on.
- 3) When the output image is blurred:
 - Check if the video cables are in bad connection.
 - Maybe the video cables are in bad quality.
- 4) If the static becomes stronger when connecting the audio or video connectors, it probably due to bad grounding, please check the grounding and make sure it connected well, otherwise it would damage the converter.

8. Safety Operation Guide

In order to guarantee the reliable operation of the equipments and safety of the staff, please abide by the following proceeding in installation, using and maintenance:

- 1) The system must be earthed properly. Do not use two blades plugs and ensure the alternating power supply ranged from 100v to 240v and from 50Hz to 60Hz.
- 2) Do not put the device in a place of too hot or too cold.
- 3) As the power generating heat when running, the working environment should be maintained fine ventilation, in case of damage caused by overheat.
- 4) Cut off the general power switch in humid weather or left unused for long time.
- 5) Before following operation, ensure that the alternating current wire is pull out of the power supply:
 - Take off or reship any components of the equipment.
 - Take off or rejoin any pin or other link of the equipment.
- 6) As to non-professional or without permission, please DO NOT try to open the casing of the equipment, DO NOT repair it on your own, in case of accident or increasing the damage of the equipment.
- 7) DO NOT splash any chemistry substance or liquid in the equipment or around.

9. After-sales Service

- 1) If there appear some problems when running the CVHA2, please check and deal with the problems reference to this user manual. Any transport costs are borne by the users during the warranty.
- 2) You can email to our after-sales department or make a call, please tell us the following information about your cases.
 - Product version and name.
 - Detailed failure situations.
 - The formation of the cases.
- 3) We offer products for all three-year warranty, which starts from the first day you buy this product (The purchase invoice shall prevail).
- 4) Any problem is same with one of the following cases listed, we will not offer warranty service but offer for charge.
 - Beyond the warranty.
 - Damage due to incorrectly usage, keeping or repairing.
 - Damage due to device assembly operations by the maintenance company non-assigned.
 - No certificate or invoice as the proof of warranty.
 - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
 - Damage caused by force majeure.
- 5) This document is just a user manual released with the product, not a quality guarantee. Any corrections or new function introductions added, we will update this document without further notice



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