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Portta N2CVHHA-U

Portta HDMI Audio Extractor Converter N2CVHHA-U User Manual

Model: N2CVHHA-U

1. INTRODUCTION

The Portta HDMI Audio Extractor Converter N2CVHHA-U is designed to extract audio signals from an HDMI source. This device allows you to separate the audio from an HDMI signal and output it to a digital optical (Toslink SPDIF) or analog 3.5mm stereo audio system. It is particularly useful for connecting HDMI devices to audio systems that do not support HDMI audio input, or for displays without built-in speakers.

This converter supports high-resolution video up to 4K@60Hz RGB 4:4:4, HDMI 2.0b, HDCP 2.2, ARC, 3D, and an 18Gbps bandwidth, ensuring compatibility with modern audio and video equipment.

2. FEATURES

- Extracts digital HDMI audio signal to digital Toslink SPDIF (Optical) and analog 3.5mm stereo audio.
- Supports video resolutions up to 4K@60Hz RGB 4:4:4.
- Compliant with HDMI 2.0b and HDCP 2.2 standards.
- Supports ARC (Audio Return Channel) functionality.
- Supports 3D video formats and HDR10/Dolby Vision.
- 18Gbps bandwidth for high-speed data transmission.
- Audio EDID settings: Pass Mode, 2.0CH Mode, 5.1CH Mode.
- Wide compatibility with various HDMI input and audio output devices.

3. PACKAGE CONTENTS

Please verify that all items are included in your package:

- Porta HDMI Audio Extractor Converter N2CVHHA-U
- 5V DC Power Adapter
- User Manual

4. PRODUCT OVERVIEW

Familiarize yourself with the ports and indicators on the device.

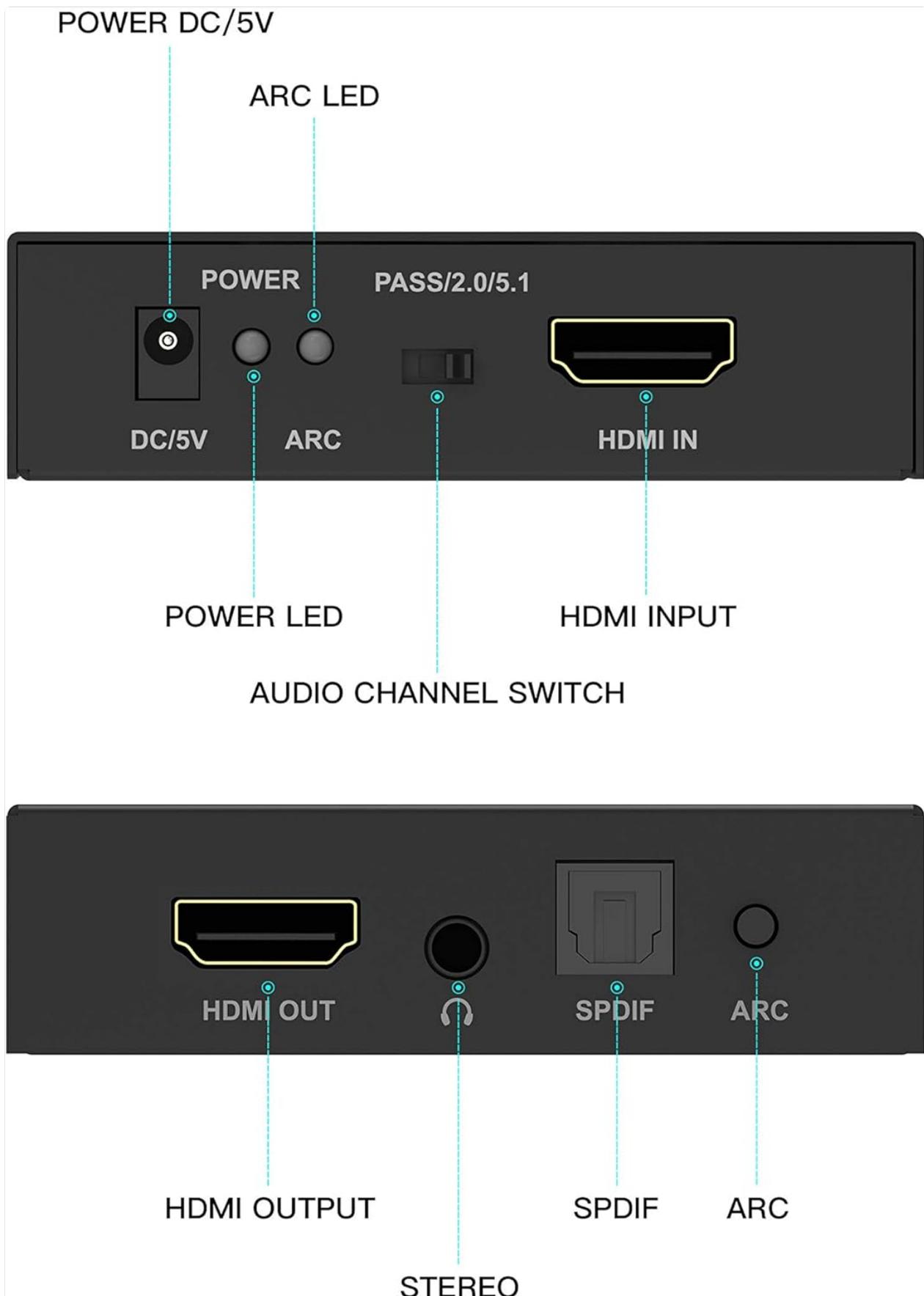


Image 4.1: Front and Rear Panel Layout of the Portta HDMI Audio Extractor Converter.

This image displays the top and bottom views of the converter. The top view shows the DC/5V power input, POWER LED, ARC LED, AUDIO CHANNEL SWITCH (PASS/2.0/5.1), and HDMI IN port. The bottom view shows the HDMI OUT port, 3.5mm STEREO audio output, SPDIF (Optical) output, and ARC switch.

Front Panel:

- **DC/5V:** Power input port for connecting the 5V DC power adapter.

- **POWER LED:** Illuminates when the device is powered on.
- **ARC LED:** Illuminates when ARC function is active.
- **AUDIO CHANNEL SWITCH (PASS/2.0/5.1):** Selects the audio output mode.
- **HDMI IN:** Connects to your HDMI source device (e.g., PS5, Blu-Ray player, Apple TV).

Rear Panel:

- **HDMI OUT:** Connects to your HDMI display device (e.g., HDTV, Projector, Monitor).
- **3.5mm STEREO:** Analog audio output for stereo headphones or speakers.
- **SPDIF:** Digital optical audio output for soundbars or AV receivers.
- **ARC:** Switch to enable or disable the Audio Return Channel function.

5. SETUP INSTRUCTIONS

Follow these steps to connect your Portta HDMI Audio Extractor Converter:

1. Ensure all devices (HDMI source, display, audio system) are powered off before making connections.
2. Connect an HDMI cable from your HDMI source device (e.g., PS5, Blu-Ray player) to the **HDMI IN** port on the converter.
3. Connect another HDMI cable from the **HDMI OUT** port on the converter to the HDMI input of your display device (e.g., TV, projector).
4. Connect your audio system to the converter:
 - For digital audio: Connect an optical Toslink cable from the **SPDIF** port on the converter to the optical input of your soundbar or AV receiver.
 - For analog stereo audio: Connect a 3.5mm audio cable from the **3.5mm STEREO** port on the converter to the audio input of your stereo speakers or headphones.
5. Connect the provided 5V DC power adapter to the **DC/5V** port on the converter, then plug the adapter into a power outlet. The POWER LED will illuminate.
6. Power on your HDMI source device, display device, and audio system.
7. Select the appropriate input on your display and audio system.

BUILT-IN 3.5mm/SPDIF AUDIO EXTRACTOR



Image 5.1: Example setup showing the Porta HDMI Audio Extractor connected to a television and external speakers. This image illustrates a typical home theater setup where the audio extractor is used to route audio from a source device (not fully visible) to a sound system, while the video is displayed on a large screen television.



Image 5.2: Portta HDMI Audio Extractor integrated into a gaming console setup.

This image shows the audio extractor positioned near a gaming console (PS4) and connected to a television and external speakers, demonstrating its use in a gaming environment to enhance audio experience.

6. OPERATING INSTRUCTIONS

6.1 Audio EDID Settings

The AUDIO CHANNEL SWITCH on the front panel allows you to select the desired audio output mode:

- **PASS Mode:** In this mode, the audio EDID (Extended Display Identification Data) is automatically detected from the connected display device (TV). The audio output will match the capabilities of your display.
- **2.0CH Mode:** This mode forces the audio output to 2.0 channel PCM/LPCM stereo audio. This is suitable for 3.5mm stereo output and for SPDIF output when connecting to a stereo audio system.
- **5.1CH Mode:** This mode enables 5.1 channel audio output via the SPDIF port, supporting formats such as Dolby Digital, Dolby TrueHD, DTS-HD, and DTS. This mode is ideal for connecting to a 5.1 channel AV receiver or soundbar. The 3.5mm output will not produce 5.1 channel audio.

6.2 ARC (Audio Return Channel) Function

The ARC function allows audio from your TV's built-in tuner or smart apps to be sent back to your audio system via the HDMI cable. To use ARC:

1. Ensure your TV's HDMI port supports ARC and that the ARC function is enabled in your TV's settings.
2. Connect the HDMI OUT port of the converter to the ARC-enabled HDMI input on your TV.
3. Set the **ARC switch** on the rear panel of the converter to the ON position. The ARC LED on the front panel will illuminate.
4. Connect your audio system to the SPDIF output of the converter.
5. The audio from your TV will now be routed through the converter's SPDIF output to your audio system.

Note: The 3.5mm stereo output does not support ARC audio. ARC audio is only available via the SPDIF output.

7. TROUBLESHOOTING

If you encounter issues with your Portta HDMI Audio Extractor Converter, please refer to the following common problems and solutions:

- **No Picture or Flickering Picture:**

- Ensure all HDMI cables are securely connected.
- Try using different HDMI cables, as faulty cables can cause issues.
- Verify that the power adapter is correctly connected and the POWER LED is on.
- Test the HDMI source and display directly without the converter to rule out issues with those devices.
- Ensure your display supports the resolution and refresh rate output by your source device.

- **No Audio Output:**

- Check all audio cable connections (optical, 3.5mm).
- Verify that your audio system is powered on and set to the correct input.
- Adjust the **AUDIO CHANNEL SWITCH** on the converter. Try "2.0CH" mode for stereo audio or "5.1CH" for surround sound via SPDIF.
- Ensure the audio format from your HDMI source is compatible with the selected audio mode and your audio system. For example, some older sound systems may not support certain Dolby/DTS formats.
- If using ARC, ensure the ARC switch is ON and your TV's ARC function is enabled and connected to the correct HDMI port. Remember, ARC audio is only via SPDIF.
- Check the volume levels on your audio system and HDMI source.

- **ARC Function Not Working:**

- Confirm your TV's HDMI port is ARC-enabled and the ARC feature is activated in your TV's settings.
- Ensure the HDMI cable is connected from the converter's HDMI OUT to the TV's ARC-enabled HDMI IN.
- Toggle the ARC switch on the converter to ensure it's engaged.
- Only the SPDIF output supports ARC audio.

8. SPECIFICATIONS

Model Number	N2CVHHA-U
HDMI Version	HDMI 2.0b
HDCP Version	HDCP 2.2
Max Resolution	4K@60Hz RGB 4:4:4
Bandwidth	18Gbps
Supported Audio Formats (SPDIF)	PCM 2.0CH, Dolby Digital, Dolby TrueHD, DTS-HD, DTS (5.1CH Mode)
Supported Audio Formats (3.5mm)	PCM/LPCM 2.0CH Stereo
ARC Support	Yes (SPDIF output only)
Input Ports	1x HDMI Type A
Output Ports	1x HDMI Type A, 1x SPDIF (Optical), 1x 3.5mm Stereo
Power Supply	DC 5V
Product Dimensions	7 x 6 x 2.1 cm
Product Weight	123 g



Image 8.1: Physical dimensions of the Portta HDMI Audio Extractor Converter.

This image provides a diagram showing the length (70mm), width (60mm), and height (21mm) of the device.

9. WARRANTY AND SUPPORT

Portta offers a one-year warranty for this product, along with long-term after-sales support. If you have any questions or concerns regarding your Portta HDMI Audio Extractor Converter, please contact the Portta customer support team for assistance.

For warranty claims or technical support, please refer to the contact information provided with your purchase or visit the official Portta website.

