

HDMI 2.0 Audio Converter with Dolby Digital Functionality - # 15419



Operation Manual

Introduction

With support for the transmission of 6G video (resolutions up to 4K2K@60Hz Ultra HD, and HDCP 2.2) through High Speed HDMI cables, this HDMI Audio Converter with Dolby® Digital/DTS® 2.0+Digital Out Decoder allows an HDMI audio signal to be de-embedded and simultaneously split to both digital and analog audio outputs providing high quality audio and video performance.

This unit allows you to make the most out of your audio signal when relaying it to external speakers or to further extend the audio pathway to another location.

Applications

- Home entertainment installation
- Audio extraction and extension.
- Connect to non-HDMI AV receivers or wider audio systems

Features

- HDMI 6G video (resolutions up to 4K2K@60Hz with YUV444) and HDCP2.2 compliant
- HDMI 1080p video with 12-bit 'Deep Color', 3D video, and HDCP1.4 compliant
- Dolby Digital Decoder technology embedded
- DTS 2.0+Digital Out Decoder technology embedded
- Integrated digital interpolator filter and Digital-to-Analog Converter (DAC)
- Supports HDTV resolutions up to 4K2K (3840×2160@24/25/30, 4096×2160@24/25/30, 3840×2160@50/60 with YUV444 & 4096×2160@50/60 with YUV444)
- Supports simultaneous audio output on HDMI, analog L/R, Coaxial and Optical outputs
- Supports Dolby Digital sampling rates up to 48kHz
- Supports DTS sampling rates up to 96kHz
- Supports LPCM input sampling rates up to 96kHz
- Supports coaxial and optical output audio sampling rates up to 96kHz
- Supports de-embedding the audio signal from an HDTV's ARC (Audio Return Channel) connection

System

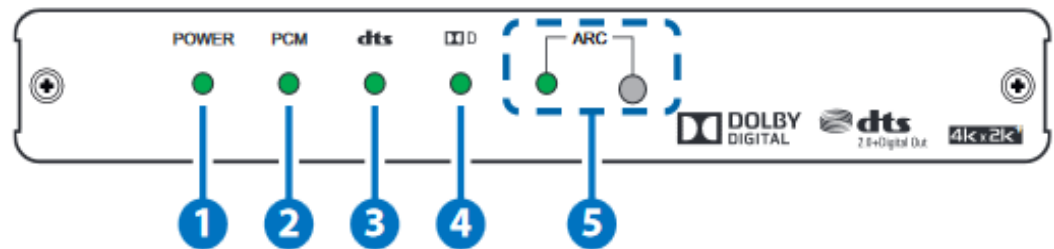
Requirements

HDMI equipped source device and display (TV/monitor) and/or amplifier/active speakers with analog or digital audio connection cables.



Operation Controls and Functions

Front Panel



1. POWER:

This LED will illuminate when the unit is connected to an active power supply.

2. PCM LED:

This LED will illuminate when the audio source is encoded in LPCM 2CH audio format.

3. DTS LED:

This LED will illuminate when the audio source is encoded in DTS 2.0+Digital Out audio format.

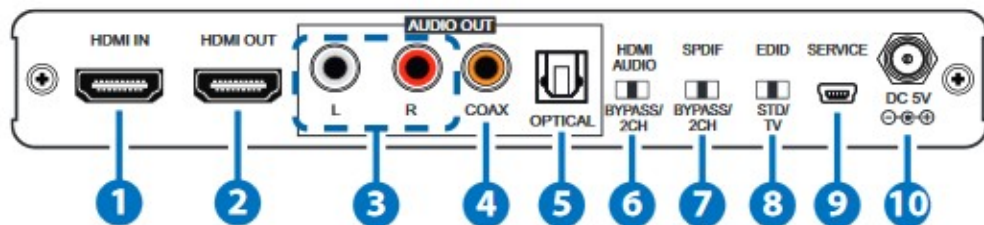
4. Dolby LED:

This LED will illuminate when the audio source is encoded in Dolby Digital audio format.

5. ARC Button & LED:

Use this button to select the HDMI ARC (Audio Return Channel) function. Push this button to enable the HDMI ARC function, the LED will turn on; push this button again to disable the HDMI ARC function, the LED will turn off. When no ARC source is detected, the unit will automatically switch back to the HDMI input.

Rear Panel



1. HDMI IN:

Connect to an HDMI source device such as a blu-ray player, set-top box or any HDMI equipped source device.

2. HDMI OUTPUT:

Connect to an HDMI Ultra HD display (TV/monitor) or UHD AV receiver for video and audio output.

3. L/R OUTPUT:

Connect to the analog line-level input of an amplifier or active speakers for audio output.

4. COAX OUTPUT:

Connect to the digital optical input of an AV receiver for audio output.

5. OPTICAL OUTPUT:

Connect to the digital coaxial input of an AV receiver for audio output.

6. HDMI AUDIO BYPASS/2CH:

Use this switch to select the audio format of the HDMI output. Switch to 'BYPASS' to allow the audio to pass-through from the HDMI input port; switch to '2CH' to enable audio decoding and LPCM 2CH down-mixing of Dolby Digital or DTS audio signals from the HDMI audio source.

7. SPDIF BYPASS/2CH:

Use this switch to select the audio format of the Coaxial and Optical outputs. Switch to 'BYPASS' to allow the audio to pass-through from the HDMI input port; switch to '2CH' to enable audio decoding and LPCM 2CH down-mixing of Dolby Digital or DTS audio signals from the HDMI audio source.

8. EDID STD/TV:

Use this switch to select the EDID mode, 'STD (Standard) mode' or 'TV mode'. When in 'TV mode', the unit will automatically detect and store the EDID settings of the display connected to the HDMI output. If there is no picture or a distorted image, please switch to 'STD mode' which will use video up to 1080p at 60Hz and audio up to LPCM 2CH at 48kHz, Dolby Digital 5.1CH and DTS 5.1CH.

9. SERVICE:

Manufacturer use only.

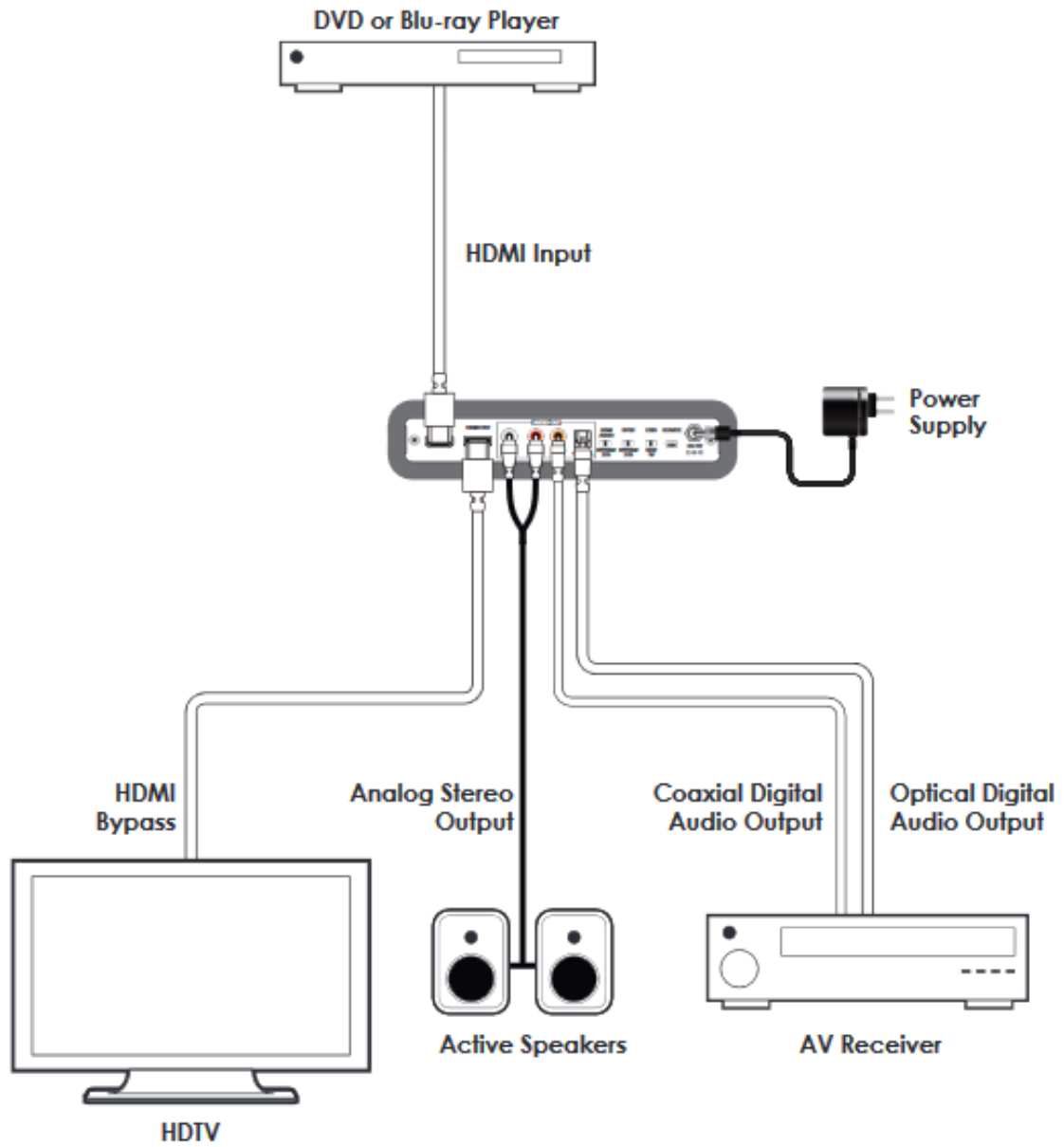
10. DC 5V:

Connect the adaptor included in the package to an AC wall outlet for power supply.

Specifications

| | |
|------------------------------|---|
| Video Bandwidth | 600 MHz/6 Gbps |
| Input Ports | 1×HDMI, 1×USB (Service only) |
| Output Ports | 1×HDMI, 1×Coaxial, 1×Optical, 1×L/R (2 RCA) |
| HDMI Cable Length | Input: 10m@1080p, 3m@4K2K Output: 10m@1080p, 3m@4K2K |
| Power Supply | 5 V/2.6 A DC(US/EU standards, CE/FCC/UL certified) |
| ESD Protection | Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge) |
| Dimensions | 180mm(W)×112.75mm (D)×25mm (H) |
| Weight | 374g |
| Chassis Material | Metal |
| Silkscreen Color | Black |
| Operating Temperature | 0 °C~40 °C / 32 °F ~104 °F |
| Storage Temperature | -20 °C~60 °C / -4 °F~140 °F |
| Relative Humidity | 20~90 % RH (non-condensing) |
| Power Consumption | 5.06W |





Video Resolutions

| HDMI/DVI Resolutions | Input | Output |
|---|-------|--------|
| 640×480@60/72/75/85 | √ | √ |
| 720×400@85 | √ | √ |
| 800×600@56/60/72/75/85 | √ | √ |
| 1024×768@60/70/75/85 | √ | √ |
| 1280×720@60 | √ | √ |
| 1280×768@60/75/85 | √ | √ |
| 1280×800@60 | √ | √ |
| 1360×768@60 | √ | √ |
| 1440×900@60 | √ | √ |
| 1600×900@60 | √ | √ |
| 1600×1200@60 | √ | √ |
| 1920×1080@60 | √ | √ |
| 1920×1200@60 | √ | √ |
| 1440×576i@50 | √ | √ |
| 1440×480i@59.94/60 | √ | √ |
| 720×480p@59.94/60 | √ | √ |
| 720×576p@50 | √ | √ |
| 1280×720p@50/59.94/60 | √ | √ |
| 1920×1080i@50/59.94/60 | √ | √ |
| 1920×1080p@23.97/24/25/29.97/30/50/59.94/60 | √ | √ |
| 3840×2160@24/25/30/50/60 (YUV444) | √ | √ |
| 4096×2160@24/25/30/50/60 (YUV444) | √ | √ |
| 3840×2160@60 (YUV420) | √ | √ |
| 4096×2160@60 (YUV420) | √ | √ |

Audio Support Specification

| Input Level/ Freq. | Output | Output Level Vrms/db±10% | THD+N | Frequency Response | SNR >90db | Crosstalk <-90dB |
|------------------------------|---------|-----------------------------|---------------|-----------------------|--------------|---------------------|
| HDMI 0dB/1kHz 48~96kHz | Analog | 2 Vrms | < 0.01% | ±1 dBFS | >104dB | <-110dB |
| | Coaxial | 0 dB | < 0.00001% | ±1 dBFS | >141dB | <-164dB |
| | Optical | 0 dB | < 0.00001% | ±1 dBFS | >141dB | <-163dB |
| | HDMI | 0 dB | < 0.00001% | ±1 dBFS | >141dB | <-164dB |

Input to Output Audio Format

| Audio Input | Input Format | Audio Output | | | | |
|---------------------|------------------|------------------|---------------------------|---------------|----------------------------------|---------------|
| | | Analog L/R | HDMI | | S/PDIF | |
| | | | Switch Status | | Switch Status | |
| | | | BYPASS | 2CH | BYPASS | 2CH |
| HDMI | LPCM 2CH | Analog 2CH | LPCM 2CH | LPCM 2CH | LPCM 2CH | LPCM 2CH |
| | Dolby Digital | Decoded Lt/Rt | Bitstream Pass-through | LPCM Lt/Rt | Bitstream Pass-through | LPCM Lt/Rt |
| | DTS | Decoded Lo/Ro | Bitstream Pass-through | LPCM Lo/Ro | Bitstream Pass-through | LPCM Lo/Ro |
| HDMI ARC | LPCM 2CH | Analog 2CH | HDMI Pass-through | | LPCM 2CH | LPCM 2CH |
| | Dolby Digital | Decoded Lt/Rt | | | ARC Bitstream Pass-through | LPCM Lt/Rt |
| | DTS | Decoded Lo/Ro | | | | LPCM Lo/Ro |