geratech®

EGE-UHD-2DD-UHDAUD

HDMI Audio Converter with Dolby® Digital and DTS® 2.0+Digital Out Decoder

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE DD/MM/YY	SUMMARY OF CHANGE
VR0	03/06/15	Preliminary Release
VS1	12/06/15	Updated texts/diagrams

CONTENTS

1. INTRODUCTION

The HDMI Audio Converter with Dolby® Digital and DTS® 2.0+Digital Out Decoder allows the audio signal from an HDMI input to be deembedded, downmixed and simultaneously output to both digital (optical or coaxial) and analog audio outputs. This unit allows you to utilize an additional audio output such as an AV receiver or set of active speakers, or to further extend the audio signal pathway.

2. APPLICATIONS

- Home entertainment installation
- Audio extraction and extension
- Non-HDMI AV receivers or wider audio systems

3. PACKAGE CONTENTS

- HDMI Audio Converter with Dolby Digital and DTS 2.0+Digital Out Decoder
- 5 V/2.6 A Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

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

5. FEATURES

- Features Dolby Digital Decoder technology
- Features DTS 2.0+Digital Out Decoder technology
- Integrated digital interpolator filter and Digital-to-Analog Converter (DAC)
- Supports LPCM input sampling rates up to 96 kHz and 2CH output at 48 kHz
- Supports Dolby Digital/DTS sampling rates up to 48 kHz
- Supports simultaneous audio output on HDMI, analog L/R, Coaxial and Optical connections
- HDMI (with 3D & 4K2K support) and HDCP compliant
- Supports HDTV resolutions up to 4K2K (3840×2160@24/25/30, 50/60 with YUV420 and 4096×2160@24, 50/60 with YUV420)
- Supports HDMI data rate from 300 Mbps to 3 Gbps and 'Deep Color' up to 1080p/36-bit

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel
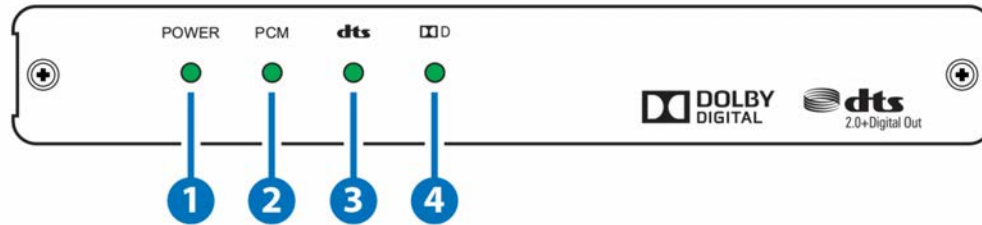
**❶ POWER LED:** This LED will illuminate when the device is connected to an active power supply.

❷ PCM LED: This LED will illuminate when the input audio source is PCM format

❸ DTS LED: This LED will illuminate when the input audio source is DTS 2.0+Digital Out encoded.

❹ Dolby LED: This LED will illuminate when the input audio source is Dolby Digital encoded.

6.2 Rear Panel
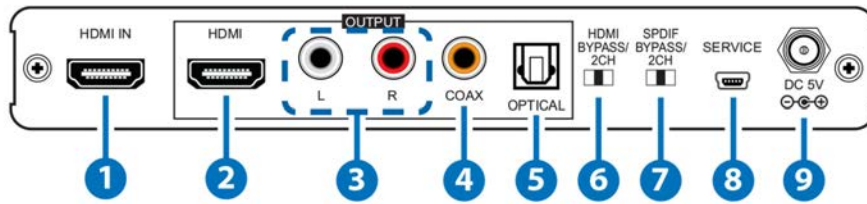
❶ **HDMI IN:** Connect to an HDMI source device such as a Blu-ray player, Set-top Box or any HDMI equipped source device.

❷ **HDMI OUTPUT:** Connect to an HDMI equipped TV/display or AV receiver for output image or audio display.

❸ **L/R OUTPUT:** These slots are to connect with audio equipment such as amplifier or speakers for audio signal output PCM 2CH that is synchronized with HDMI input audio signal.

❹ **COAX OUTPUT:** This slot is reserved for factory firmware update only.

❺ **OPTICAL OUTPUT:** Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet.

❻ **HDMI BYPASS/2CH:** For the HDMI output port, switch to 'BYPASS' to allow audio pass-through from HDMI input port; switch to '2CH' to enable audio decoding and 2-channel down-mixing for Dolby Digital or DTS audio signals from HDMI input port.

❼ **SPDIF BYPASS/2CH:** For the COAX and OPTICAL output ports, switch to 'BYPASS' to allow audio pass-through from HDMI input port; switch to '2CH' to enable audio decoding and 2-channel downmixing for Dolby Digital or DTS audio signals from HDMI input port.

❽ **SERVICE:** For manufacturer use only.

❾ **DC 5V:** Connect the adaptor included in the package to AC wall outlet for power supply.

7. CONNECTION DIAGRAM
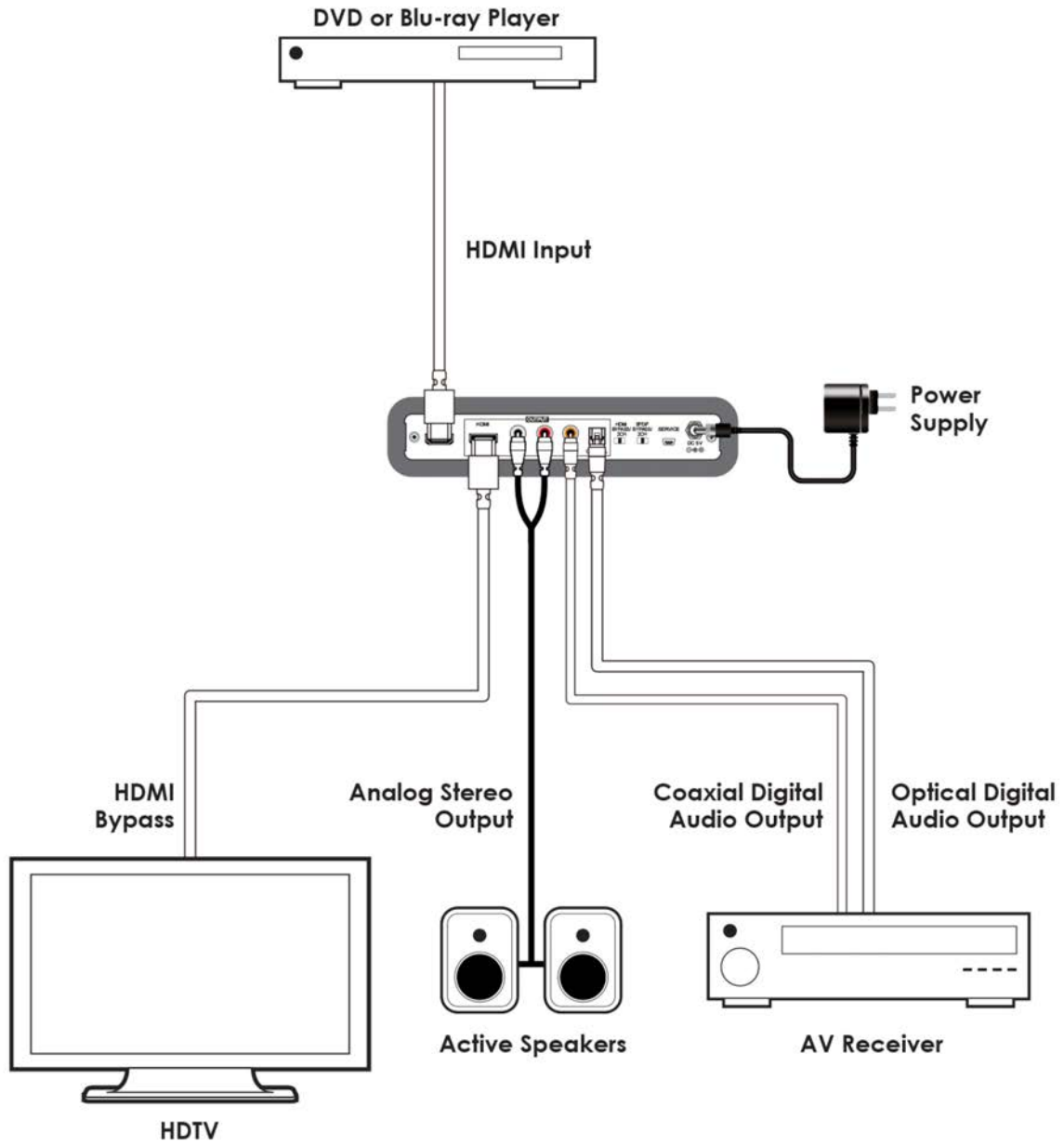
8. SPECIFICATIONS

8.1 Technical Specifications

VideoBandwidth	300 MHz/9 Gbps
Input Ports	1×HDMI, 1×USB (Service only)
Output ports	1×HDMI, 1×Coaxial, 1×Optical, 1×R/L (2 RCA)
HDMI Cable Length	Input: 10m@1080p, 5m@4K2K Output: 10m@1080p, 5m@4K2K
Power Supply	5 V/2.6 A DC(US/EU standards, CE/FCC/UL certified)
ESD Protection	Human body model: ±8 kV (air-gap discharge) ±4 kV (contact discharge)
Dimensions	180 mm (W)×104 mm (D)×25mm (H)/Jacks Excluded 180mm (W)×110.75 mm (D)×25 mm (H)/ Jacks Included
Weight	368 g
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 (no condensation)
Power Consumption	2.5W

8.2 Video Supports Specification

HDMI/DVI RESOLUTIONS	Input	Output
640×480@60/72/75/85	✓	✓
720x480p@60	✓	✓
720x576p@50	✓	✓
800x600@56/60/72/75/85	✓	✓
1024x768@60/70/75/85	✓	✓
1280x720p@50/60	✓	✓
1280x768@60/70/75/85	✓	✓
1280x800@60	✓	✓
1280x1024@60	✓	✓
1366x768@60	✓	✓
1600×1200@60	✓	✓
1920×1080i@50/60	✓	✓
1920×1080p@24/25/30/50/60	✓	✓
1920×1200@60 (RB)	✓	✓
3840×2160@24/25/30	✓	✓
3840×2160@50/60 (YUV420)	✓	✓
4096×2160@24/25/30	✓	✓
4096×2160@50/60 (YUV420)	✓	✓

8.3 Audio Specifications

OUT IN	Output	Output Level	THD+N	Frequence Response	SNR	Crosstalk
HDMI 0dBFS	HDMI	0 dBFS	<0.00001%	±1dBFS	>140dB	<-160dB
	Optical	0 dBFS	<0.00001%	±1dBFS	>140dB	<-160dB
	Coaxial	0 dBFS	<0.00001%	±1dBFS	>140dB	<-160dB
	Line-Out	2Vrms +-0.1	<0.006%	±1dB	>140dB	<-160dB

8.4 Input to Output Audio Formats

Audio Input	Input Format	Audio Output					
		Analog L/R	HDMI		S/PDIF (Optical, Coaxial)		
			Switch Status		Switch Status		
			BYPASS	2CH	BYPASS	2CH	
HDMI	LPCM 2CH	Analog 2CH	LPCM 2CH	LPCM 2CH	LPCM 2CH	LPCM 2CH	
	Dolby Digital	Decoding Lt/Rt	Bitstream Pass-through	LPCM Lt/Rt	Bitstream Pass-through	LPCM Lt/Rt	
	DTS	Decoding Lo/Ro	Bitstream Pass-through	LPCM Lo/Ro	Bitstream Pass-through	LPCM Lo/Ro	

9. ACRONYMS

ACRONYM	COMPLETE TERM
DTS	Digital Theater System
DVI	Digital Visual Interface
EDID	Extended Display Identification Data
HDCP	High-bandwidth Digital Content Protectionl
HDMI	High-Definition Multimedia Interface
HDTV	High-Definition Television
LCM	Liquid Crystal Monitor
USB	Universal Serial Bus
VGA	Video Graphics Array
WUXGA	Wide Ultra Extended Graphics Array