



User Manual

TL-AD-HD

HDMI Audio Decoder



All Rights Reserved

Version: TL-AD-HD_160627

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.

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 TL-AD-HD

The TL-AD-HD is an audio converter used to extract the encoded multi-channel LPCM, Dolby Digital 5.1 and DTS-HD 5.1 audio from HDMI sources to optical audio output and decode to analog stereo audio via RCA (L/R) and COAX outputs without any other external equipment.

Content from multi-channel sources such as Blu-ray players, set-top boxes and game consoles can be distributed to multi-channel and two-channel-capable zones simultaneously, ensuring compatibility, reducing system complexity and eliminating the expense of separate dedicated sources for each zone and you can listen to digital audio sources such as DVD and CD players or digital computer audio on your legacy analog sound system, preserving your current investment.

1.2 Features

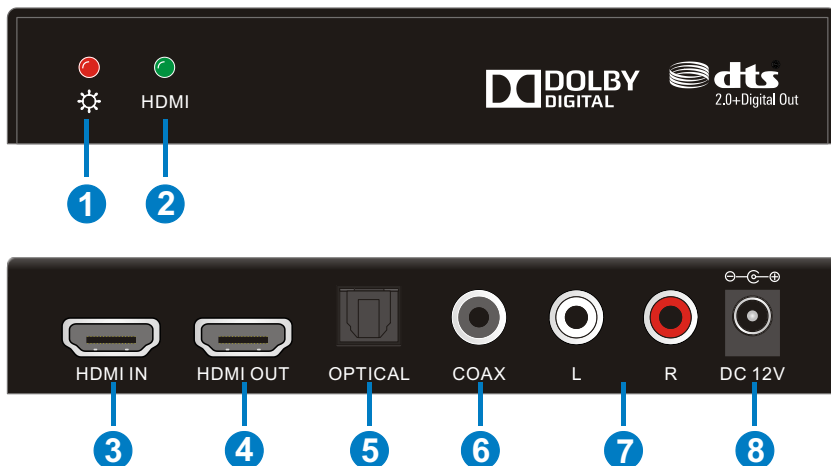
- Ultra-thin design.
- Supports 4K HDMI video source
- HDCP2.2 compliant.
- Any input HD source can audio extract by the OPTICAL, RCA (L/R) and COAX.
- Optical, Digital Coaxial and analog stereo audio outputs for connection to legacy AVRs and systems without HDMI support.
- Comprehensive audio format signal compatibility: LPCM, Dolby Digital 5.1, DTS-HD 5.1.
- Plug and play functionality and simplicity eliminates the need for any setup, programming or configuration.
- Transmit 4Kx2K signal for 15m via AWG24 HDMI cable
- LED indicators show status.

1.3 Packing List

- 1 x TL-AD-HD
- 2 x Mounting ears (with 4 Screws)
- 1 x Power adapter (DC 12V 1A)
- 1 x User manual

Notes: If you find any defective or missing parts, please contact your local dealer.

2. Panel Description



- | | |
|----------------------------------|-------------------------------|
| ① Power LED | ② HDMI Activity LED |
| ③ HDMI Input Status LED | ④ HDMI Output (Multi-Channel) |
| ⑤ Optical Output (Multi-Channel) | ⑥ Coaxial Output (Stereo) |
| ⑦ RCA(L/R) Output (Stereo) | ⑧ 12V DC Input |

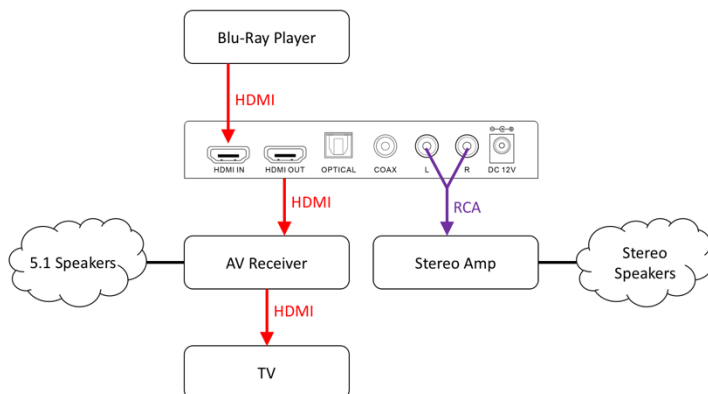
 Pictures shown in this manual are only for reference.

3. System Connection

3.1 Usage Precautions

- 1) System should be installed in a clean environment with proper temperature and humidity.
- 2) All of the power switches, plugs, sockets and power cords should be insulated and checked for safety.
- 3) All devices should be connected before being powered on.
- 4) System Diagram shown in this manual is for reference only, more specific schemes depend on real-time applications.

3.2 System Diagram



3.3 Connection Procedure

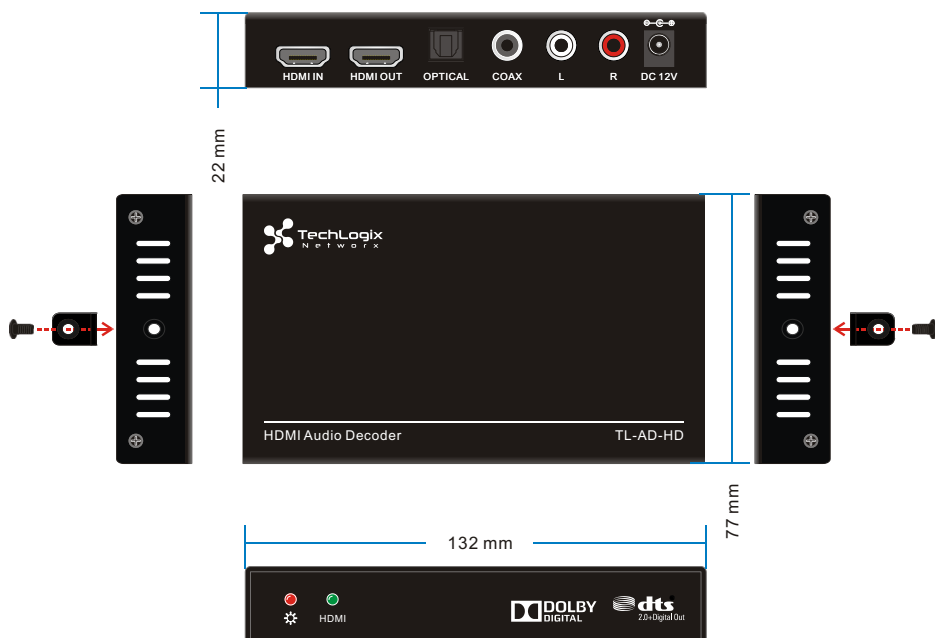
- Step1.** Connect an HDMI source (Blu-ray, cable box) to the 'HDMI IN' port of the TL-AD-HD.
- Step2.** Connect a stereo RCA, optical, or coaxial audio cable between the TL-AD-HD and stereo amplifier.
- Step3.** Connect an HDMI sink (AV receiver or TV) to the 'HDMI OUT' port of the TL-AD-HD.
- Step4.** Apply power to the TL-AD-HD.
- Step5.** Apply power to the HDMI sink (AV receiver or TV) and HDMI source (Blu-ray, cable box).

4. Specification

Input Signal	1 × HDMI (Type A Receptacle)
Output Signal	1 × HDMI (Type A Receptacle) 1 × OPTICAL (Toslink Receptacle) 1 × COAX (Black RCA Receptacle) 1 × L/R (Red & White RCA Receptacle)
Maximum Video Compatibility	Deep Color 8/10/12/16 Bit at 1080p and 2160p/60
HDMI Resolution	Up to 4Kx2K@60Hz
HDMI Embedded Audio	PCM ,Dolby Digital, Dolby TrueHD, DTS,DTS-HD
Decoded Audio	PCM2.0
HDMI Cable	≤15m AWG24 HDMI standard cable
Power Supply	Input: AC (50HZ, 60HZ) 100V-240V; Output: DC12V/1A
Maximum Power Consumption	4.5W
Operating Temperature	-10 ~ +55℃
Storage Temperature	-20 ~ 70℃
Operating Humidity	10 ~ 90%
Storage Humidity	10 ~90%
Dimensions (W x H x D)	132mmX22mmX77mm
Weight	172g

NOTE: All nominal levels are at ±10%.

5. Panel Drawing



6. Troubleshooting & Maintenance

Problems	Causes	Solutions
Image ghosting or bad color	Incorrect setting on the display	Check the display's setting
	A cable of poor quality	Try another high quality connection cable
No output image	No signal at the input / output end	Check with oscilloscope or multimeter if there is any signal at the input / output end.
	Fail or loose connection	Reset or replace the input and output cables
Noise or static on analog audio	Bad grounding	Check the grounding and make sure it is connected well.

If your problem persists after following the above troubleshooting steps, seek further help from authorized dealer or our technical support.

7. After-sales Service

If there appear some problems when running the device, please check and deal with the problems reference to this user manual. Any transport costs are borne by the users during the warranty.

- 1) **Product Limited Warranty:** We warrant that our products will be free from defects in materials and workmanship for **three years**. Please see warranty page posted on www.tlnetworx.com for more info.
- 2) **What the warranty does not cover:**
 - Warranty expiration.
 - Factory applied serial number has been altered or removed from the product.
 - Damage, deterioration or malfunction caused by:
 - Normal wear and tear
 - Use of supplies or parts not meeting our specifications
 - 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.
 - Servicing not authorized
 - Any other causes which does not relate to a product defect
 - Delivery, installation or labor charges for installation or setup of the product
- 3) **Technical Support:** Email to our after-sales department or make a call, please inform us the following information about your cases.
 - Product version and name.
 - Detailed failure situations.
 - The formation of the cases.

Remarks: For any questions or problems, please try to get help from your local distributor.