



# HDMI 2.1 48Gbps Audio De-Embedder

## User Manual

### 500514



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## 1 Safety Precautions

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

- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product 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 the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

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## 2 Introduction

The HDMI 2.1 48Gbps Audio De-Embedder (model: 500514) can extract audio signals from an HDMI source or ARC-compatible TV and send them to an analog stereo audio output and an S/PDIF digital audio output. It supports data rates up to 48Gbps to comply with HDMI 2.1 and HDCP 2.3 requirements. In addition, the unit allows the HDMI source to be looped out and extended to a local display; it also includes several features to facilitate integration such as EDID management and cable equalization providing an easy solution for HDMI installations to send audio signals to a stereo audio or surround sound system.

## 3 Features

- HDMI 2.1 and HDCP 2.3 compliant
- Supports 48Gbps FRL and 18Gbps TMDS video bandwidth
- Supports video resolution up to 8K/60Hz 4:2:0 12bit, 4K/120Hz 4:4:4 12bit
- HDMI 2.1 protocols: VRR, ALLM, QMS, QFT, SBTM are supported
- Support HDR, HDR 10, HDR 10+, Dolby Vision, HLG pass-through
- LPCM 7.1CH, Dolby True HD, Atmos and DTS-HD Master, DTS:X Audio pass-through
- HDMI input audio or TV ARC audio de-embedded to S/PDIF and L/R audio output
- Support CEC control from output devices to input sources
- Advanced EDID management
- Compact design for easy and flexible installation

## 4 Package Contents

- One (1) 48Gbps HDMI Audio De-embedder
- One (1) 5VDC/1A Multinational Power Supply
- One (1) User manual (available via download)

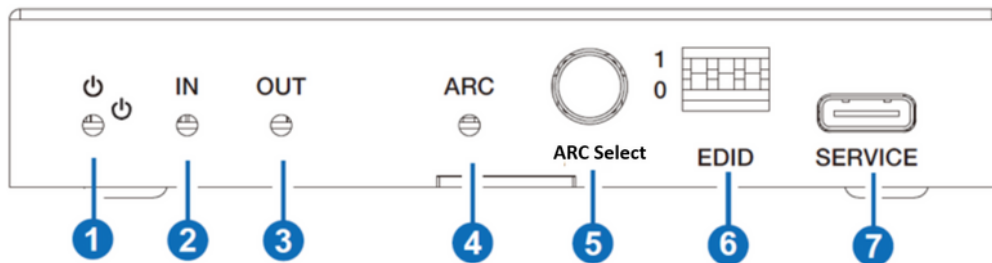
**Notes:** Confirm that the product and accessories are all included. If not, please contact the supplier from which you purchased the unit.

## 5 Specifications

Technical	
HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	48Gbps FRL and 18Gbps TMDS
Video Resolution	Up to 8K/60Hz 4:2:0 12bit, 4K/120Hz 4:4:4 12bit
Color Depth	8/10/12 - bit
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
Audio Formats	<b>HDMI IN/OUT:</b> LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD <b>AUDIO BREAKOUT:</b> OPTICAL OUT: PCM 2.0CH, Dolby, DTS 5.1CH L/R OUT: PCM 2.0CH
HDR	HDR, HDR 10, HDR 10+, Dolby Vision, HLG
ESD Protection	Human body model — $\pm 8\text{kV}$ (Air-gap discharge) & $\pm 4\text{kV}$ (Contact discharge)
Connection	
Input	1 × Source IN [HDMI Type A, 19-pin female]
Output	1 × TV(ARC) OUT [HDMI Type A, 19-pin female] 1 × L/R [3.5mm Stereo mini-jack] 1 × OPTICAL [S/PDIF, female]
Control	1 × SERVICE [USB Type C, Update port]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	95mm [W] × 68mm [D] × 18mm [H]
Weight	178g
Power Supply	Input: 100-240VAC 50/60Hz, Output: 5VDC/1A
Power Consumption	4W (Max)
Operation 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)
Generic Specification	
Warranty	2 years
Order Information	500514 HDMI 2.1 48Gbps 1x4 Splitter (UPC: 627699005149)

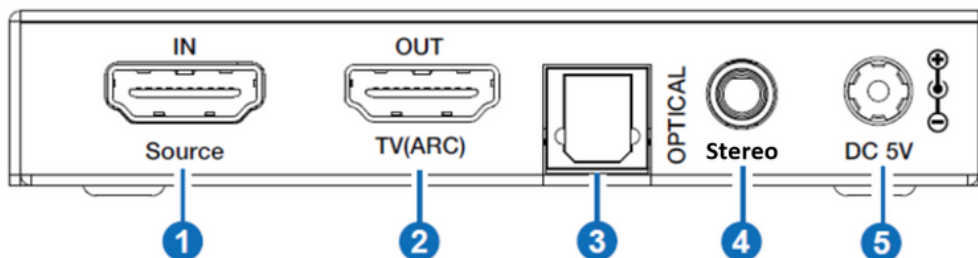
## 6 Operation Controls and Functions

### 6.1 Front Panel



No	Name	Function Description
1	Power LED	When the device is powered on, the red LED will be on.
2	IN LED	When the IN port connects to an active source device, the green LED will be on.
3	OUT LED	When the OUT port connects to a display device and outputs signal, the corresponding green LED will be on.
4	ARC LED	<ul style="list-style-type: none"> <li>Light on: The ARC is enabled with a normal CEC communication. The audio is returned to output via the optical port.</li> <li>Light flashing: The ARC is enabled with an abnormal CEC communication. The audio is failed to return to the output optical port.</li> <li>Light off: The ARC is disabled.</li> </ul>
5	ARC Button	Press this button to enable or disable the ARC function.
6	EDID DIP switch	Use the DIP switch to set EDID. [DIP]=111: Copy OUT port sink video and audio EDID [DIP]=110: Copy OUT port sink video EDID, Audio 2.0CH [DIP]=101: Copy OUT port sink video EDID, Audio 5.1CH [DIP]=100: FRL12G_8K_HDR, 2.0CH [DIP]=011: FRL12G_8K_HDR, 5.1CH [DIP]=010: FRL10G_8K_HDR, 2.0CH [DIP]=001: FRL10G_8K_HDR, 5.1CH [DIP]=000: 1080P,2.0CH
7	Service	Firmware update and debug port.

### 6.2 Rear Panel



No	Name	Function Description
1	IN port	HDMI signal input port, connected to HDMI source device such as DVD or PS5 with an HDMI cable.
2	OUT port	HDMI signal output port, connected to HDMI display device such as TV or Monitor with an HDMI cable. It can be used as the ARC audio channel when the ARC function is enabled.
3	OPTICAL	Optical audio output port.
4	L/R	Analog audio output port.
5	DC 5V	5VDC / 1A power input port.

## 7 Application Example

