48Gbps HDMI Audio De-embedder

User Manual

VER 1.1

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Table of Contents

1. Introduction

The 48Gbps HDMI audio de-embedder can extract audio signals from an HDMI source or ARC-compatible TV to output analog stereo and digital S/PDIF audio, with a buffered HDMI video output. It supports data rates up to 48Gbps to comply with HDMI 2.1 and HDCP 2.3 requirements. It is compatible with UHDTV 8K@60Hz. It includes several features for ease of integration, such as EDID management and cable equalization. It provides an easy solution for HDMI installations to send audio signals to a stereo audio or surround sound system.

2. Features

☆ HDMI 2.1 and HDCP 2.3 compliant
☆ Support 48Gbps FRL and 18Gbps TMDS video bandwidth
☆ Support 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
☆ HDR, HDR 10, HDR 10+, Dolby Vision, HLG pass-through
☆ LPCM 7.1CH, Dolby TrueHD, 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

3. Package Contents

① 1 × 48Gbps HDMI Audio De-embedder
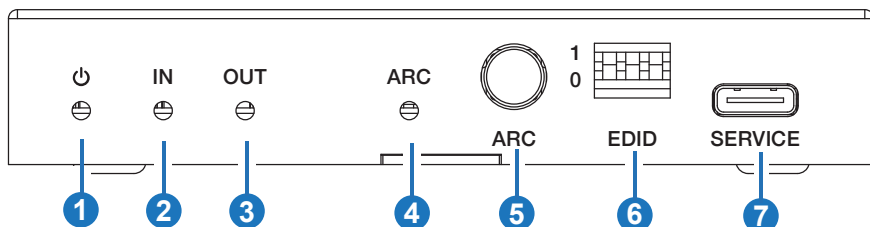② 1 × 5V/1A Multinational Power Supply
③ 1 × User Manual

4. 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	**HDMI IN/OUT:** LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD **AUDIO BREAKOUT:** 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 — ±8kV (Air-gap discharge) & ±4kV (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: AC 100-240V 50/60Hz, Output: DC 5V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	4W (Max)

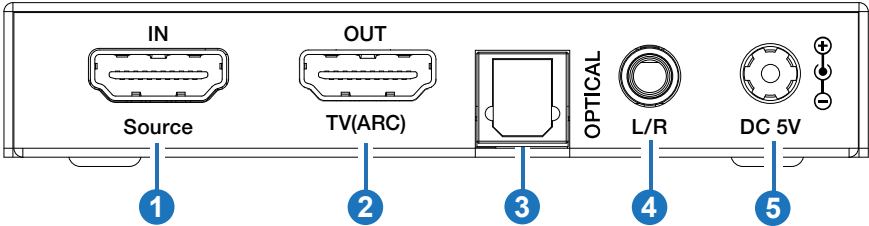| Operation Temperature	0°C ~ 40°C / 32°F ~ 104°F		
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F		
Relative Humidity	20~90% RH (non-condensing)		
Recommended HDMI Cable			
Video Resolution	8K60	4K60	1080P
HDMI Cable Type	Ultra HDMI 2.1 cable	HDMI 2.0 cable	HDMI cable
HDMI Cable Length (HDMI IN / OUT)	2m/6.6ft ~ 3m/10ft	10m/33ft	15m/49ft
The use of "Premium High Speed HDMI" cable is highly recommended.			

5. Operation Controls and Functions

Front Panel

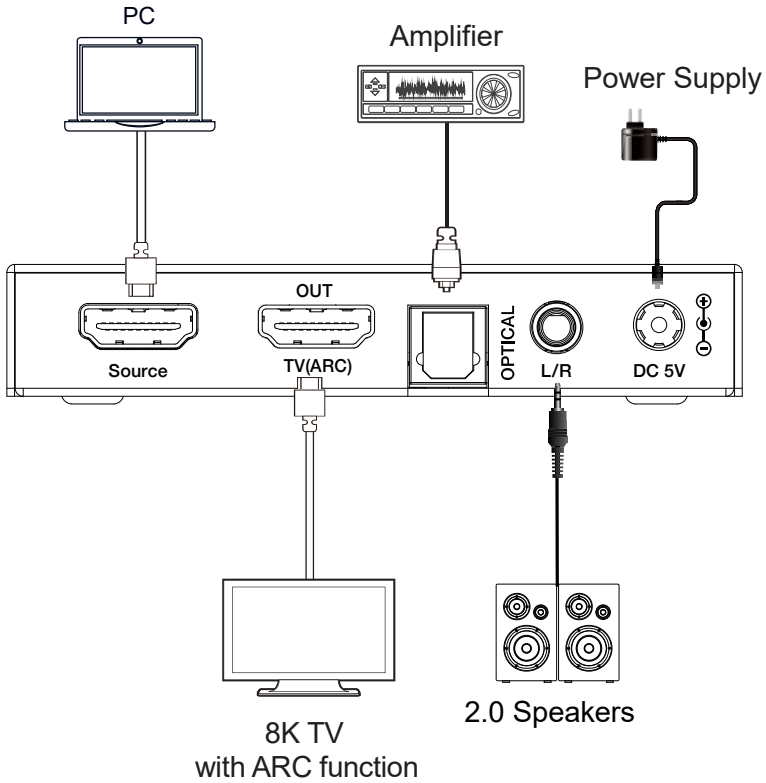| No.	Name	Function Description
1	Power LED	When the device is powered on, the red LED will be on.
2	IN LED	When the IN port connects to an active source device, the green LED will be on.
3	OUT LED	When the OUT port connects to a display device and outputs signal, the corresponding green LED will be on.
4	ARC LED	▪ Light on: The ARC is enabled with a normal CEC communication. The audio is returned to output via the optical port. ▪ Light flashing: The ARC is enabled with an abnormal CEC communication. The audio is failed to return to the output optical port. ▪ Light off: The ARC is disabled.

No.	Name	Function Description
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.

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	DC 5V/1A power input port.

6. Application Example

PC

Amplifier

Power Supply

OUT

Source   TV(ARC)   OPTICAL   L/R   DC 5V

8K TV
with ARC function

2.0 Speakers

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HIGH-DEFINITION MULTIMEDIA INTERFACE

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