



# J-TECH DIGITAL®

## USER MANUAL <sup>V1.0</sup>



### 4K 60Hz Audio Extractor with Audio Downmix

JTD-3146 | JTECH-EXD-ARC

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Scan the QR code below or visit <https://resource.jtechdigital.com/products/3146> to view and access detailed digital resources regarding this unit.



## Safety Instructions:

- Before using this product, please carefully read the following safety instructions to ensure its proper use and keep this manual for future reference.
- To prevent electric shock, do not attempt to open the product.
- Only qualified personnel should perform any repairs or maintenance.
- Always place the product on a stable, flat surface to prevent it from falling.
- Do not expose the product to water, moisture, or high-humidity environments to avoid the risk of damage.
- To prevent damage from direct sunlight or high temperatures, do not expose the product to such environments.
- Do not place the product near heat sources like radiators, heat registers, stove, or other heat-producing apparatus.
- Do not place any objects on top of the product to avoid damage.
- Use only the attachments and accessories specified by the manufacturer.
- During lightning storms or prolonged periods of disuse, unplug the power supply to prevent damage.

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## 1. Introduction

The HDMI 18Gbps Audio Extractor could extract audio signals from any HDMI source or TV ARC to digital optical or analog stereo L/R audio outputs. For maximum flexibility, this audio extractor also supports bit-stream audio down-mix to analog stereo output and keeps optical and HDMI out audio passthrough. Further, both input and output HDMI support video resolution up to 4K2K@50/60Hz (YUV444). It supports 10bits HDR (High Dynamic Range) passthrough and HDMI high resolution digital audio formats bypass. HDCP 2.2 and CEC bypass are supported.

### Dolby Audio

Manufactured under license from Dolby Laboratories.  
Dolby and the double-D symbol are trademarks of Dolby Laboratories.

### DTS

For DTS patents, see <http://patents.dts.com>.  
Manufactured under license from DTS Licensing Limited.  
DTS, the Symbol, DTS and the Symbol together, and Digital Surround are registered trademarks or trademarks of DTS, Inc. in the United States and/or other countries. © DTS, Inc.  
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## 2. Features

- ☆ HDCP 2.2/1.x compliant
- ☆ Support 18Gbps video bandwidth
- ☆ Video resolution is up to 4K2K@50/60Hz (YUV444), as specified in HDMI 2.0b
- ☆ HDR, HDR10, HDR10+, Dolby Vision, HLG pass through
- ☆ Extract HDMI source and TV ARC audio to multi-channel optical (SPDIF)
- ☆ Downmix Dolby 5.1, DTS 5.1 bitstream audio to analog stereo output
- ☆ CEC passthrough from TV to HDMI source
- ☆ CEC control stereo analog audio volume by TV remote control

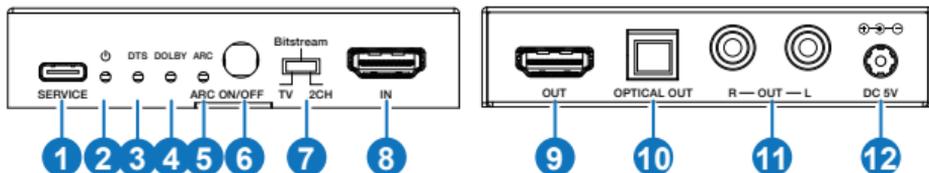
## 3. Package Contents

- ① 1× HDMI 18Gbps Audio Extractor
- ② 1× 5V/1A Power Adapter
- ③ 1× User Manual

## 4. Specifications

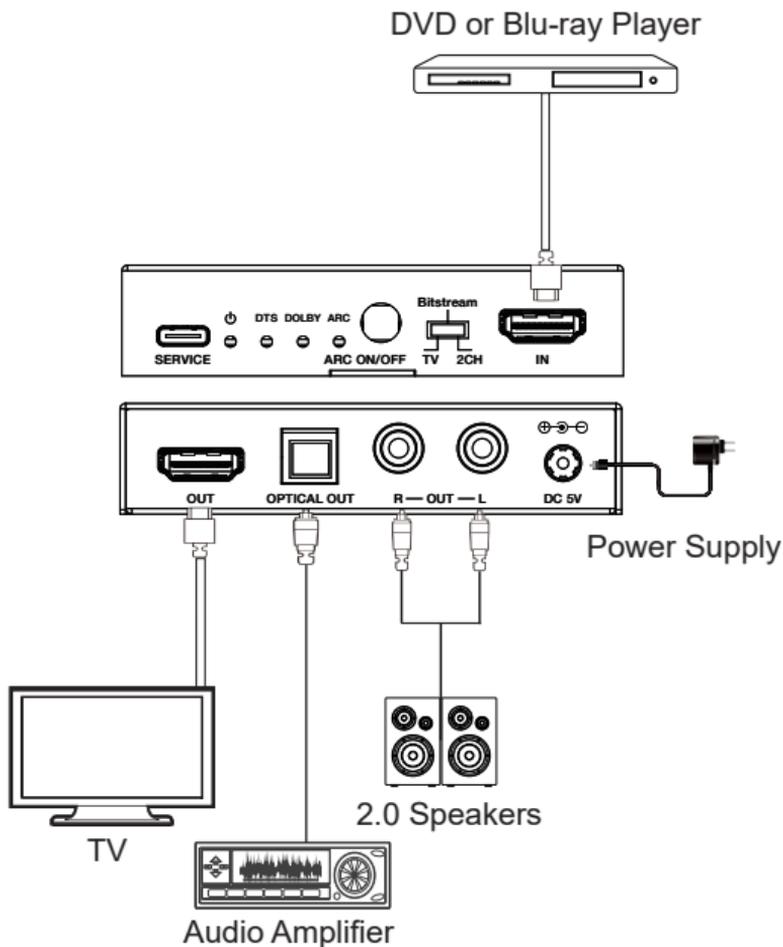
Technical		
HDMI Compliance	HDMI 2.0b	
HDCP Compliance	HDCP 2.2/1.x	
Video Bandwidth	18Gbps	
Video Resolution	Up to 4K2K@50/60Hz (YUV444)	
Audio Formats	<b>HDMI OUT:</b> PCM 2.0/5.1/7.1, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS, DTS-HD Master, DTS:X <b>Optical (S/PDIF):</b> PCM 2.0, Dolby 5.1, DTS 5.1 <b>Stereo(L/R):</b> PCM 2.0	
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0	
Color Depth	8/10/12bit	
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG	
ESD Protection	IEC 61000-4-2: ± 8kV (Air-gap discharge) & ±4kV (Contact discharge)	
Connection		
Input	1 x HDMI IN [Type A, 19-pin female] 1 x SERVICE [USB Type C]	
Output	1 x HDMI OUT [Type A, 19-pin female] 1 x L/R AUDIO OUT [RCA] 1 x OPTICAL OUT [S/PDIF]	
Mechanical		
Housing	Metal Enclosure	
Silkscreen Color	Black	
Dimensions	90mm [W] × 72mm [D] × 20mm [H]	
Weight	182g	
Power Supply	DC 5V/1A (US/EU standard, CE/FCC/UL certified)	
Power Consumption	2.6W (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	4K60	1080P
HDMI Cable Length (HDMI IN / OUT)	5m/16ft	10m/33ft
The use of "Premium High Speed HDMI" cable is highly recommended.		

## 5. Operation Controls and Functions



No.	Name	Function Description
1	SERVICE	USB-C port for software upgrade.
2	Power LED	The green power LED is on when the unit is powered on.
3	DTS LED	When the audio format is detected as DTS 2.0/5.1, the green DTS LED is on, otherwise it goes off.
4	DOLBY LED	When the audio format is detected as DOLBY 2.0/5.1, the green DOLBY LED is on, otherwise it goes off.
5	ARC LED	Light on: The ARC function is enabled. Light flashing: The ARC function is enabled but abnormal. Light off: The ARC function is disabled.
6	ARC button	Press the ARC button to enable/disable the ARC function. When the ARC function is enabled, the ARC audio returned from TV will be output through the OPTICAL OUT port and R-OUT-L port (supporting downmix to 2CH); When the ARC function is disabled, the audio de-embedded from HDMI IN will be output through the OPTICAL OUT port and R-OUT-L port (supporting downmix to 2CH).
7	TV/Bitstream/2CH switch	Use the switch to select audio format. <b>TV:</b> Copy EDID from TV. <b>Bitstream:</b> Copy TV video EDID + 5.1CH audio EDID. <b>2CH:</b> Copy TV video EDID + 2.0CH audio EDID. <i>Note: 8K EDID data is not supported.</i>
8	HDMI IN	HDMI signal input port, connected to HDMI source device such as DVD or Set-top box with an HDMI cable.
9	HDMI OUT	HDMI signal output port, connected to the HDMI display device such as TV or Monitor with an HDMI cable.
10	OPTICAL OUT	Optical fiber audio output port, connected to audio device such as Amplify.
11	R-OUT-L	RCA analog audio output port, connected to audio device such as Speaker.
12	DC 5V	DC 5V/1A power input port. Plug the DC 5V/1A power supply into the unit and connect the adapter to an AC outlet.

## 6. Application Example



**HDMI**<sup>™</sup>  
HIGH-DEFINITION MULTIMEDIA INTERFACE

The terms HDMI and HDMI High-Definition Multimedia interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

## 7. Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner, or benzine to clean.

## 8. Warranty

If your product does not work properly because of a defect in materials of workmanship, our company (referred to as “the warrantor”) will, for the length of the period indicated as below, “Parts and Labor (1) Year”, which starts with the date of original purchase (“Limited Warranty period”), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the “Labor” limited warranty period, there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers products purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

## 9. Mail-In Service

When shipping the unit, carefully pack and send it prepaid, adequately insured, and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

## 10. Limited Warranty Limits and Exclusions

This Limited Warranty ONLY COVERS failures due to defects in material or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, mis-adjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributed to acts of God.

There are no express warranties except as listed under “Limited Warranty Coverage”. The warrantor is not liable for incidental or consequential damages resulting from the use of this product or arising out of any breach of this warranty. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive but are for illustration only). Parts and service, which are not covered by this limited warranty, are your responsibility.



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