

ZIGEN

COMPLETE HD/IP
CONNECTIVITY SOLUTIONS

Zigen ZIG-ADM

4K UHD+ Dolby Digital & DTS Stereo Decoder



4K 60 Hz 4:4:4
HDCP 2.2

ZIG-ADM USER MANUAL
REVISION 2017.10.24

Important Safety Instructions

1. Do not use this product near water.
2. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
3. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
4. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
5. Only use attachments/accessories specified by the manufacturer.
6. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
7. Unplug this apparatus during lightning storms or when unused for long periods of time.
8. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
9. Batteries that may be included with this product and/or accessories should never be exposed to open flame or excessive heat. Always dispose of used batteries according to the instructions.

Warranty Information

Powered Product Warranty

Zigen, Inc. warrants its powered products against any defects in materials and workmanship for a period of three years from the date of invoice. Touchscreen displays carry a one year parts and labor warranty. If a malfunction occurs during the warranty period, Zigen, Inc. will repair or replace a product to its original operating condition. A return authorization number must be obtained from Zigen, Inc. before products are returned for service.

Non-Powered and Cable Products - Lifetime Limited Performance Warranty

Zigen, Inc. warrants that its non-powered products and cable products will be free from defects in material and workmanship for as long as you or your customer owns the product. All Zigen non-powered products and cables are designed and engineered to meet and exceed performance specifications. If, at anytime, the product fails due to manufacturer defect, Zigen will repair or replace the product to ensure that it meets original performance specifications. Reduced performance due to normal wear and tear, or damages caused by misuse or negligence will not be covered. Zigen will test and evaluate all non-powered and cable products claimed defective. Products must be shipped to Zigen, prepaid along with proof of purchase only after obtaining a Return Merchandise Authorization (RMA) number from the Zigen. This statement of policy is in lieu of any other policy expressed or implied and no representative or person is authorized to assume any other liability or adopt any other policy for Zigen without our written consent.

Return Policy

If you would like to return a Zigen product, it can be done within 30 days of purchase for a full refund, less shipping and handling. Zigen will not be responsible for shipping and handling of product returns. Returns will only be accepted of products with proof of purchase, products in the original packaging with zero to minimal use and a Return Merchandise Authorization RMA number provided by Zigen.

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Features

- HDMI input and output with 18Gbps (600MHz) 4K UHD support
- DVI 1.0 compliant with the use of an HDMI-DVI adaptor
- HDCP 1.4 and 2.2 compliant
- Supports HD resolutions up to 3840x2160@60 Hz (YUV 4:4:4, 8-bit) & 4096x2160@60 Hz (YUV 4:4:4, 8-bit)
- Supports 48-bit Deep Color up to 1080p60
- Supports pass-through of LPCM 7.1, bitstream and HD bitstream audio formats over HDMI
- Embedded Dolby Digital Decoder technology
- Embedded DTS 2.0 + Digital Out Decoder technology
- Integrated digital interpolation filter and Digital-to-Analog Converter (DAC)
- Supports LPCM sampling rates up to 96kHz.
- Supports Dolby Digital sampling rates up to 48kHz.
- Supports DTS sampling rates up to 96kHz.
- Simultaneous audio output via HDMI, analog stereo, Coaxial and Optical.
- Supports coaxial and optical audio sampling rates up to 96kHz.
- Support extracting HDMI audio signal from HDTV's ARC connection.
- Provides EDID management with EDID bypass and 1 user modifiable EDID
- PC based EDID management tool supported
- Supports RS-232 style control via a Virtual COM port over USB

Packing List

The ZIG-ADM is packaged with the following items:

- 1 x 4K UHD+ Dolby Digital & DTS Stereo Decoder
- 1 x 5V/2.6A Power Adaptor
- Operational Manual

If any of these products are not present upon first opening of the package, please contact Zigen or your reseller.

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Zigen, Corp. reserves the right to make changes in the hardware, packaging, and any accompanying documentation without prior written notice.



This product uses UL-Listed power supplies



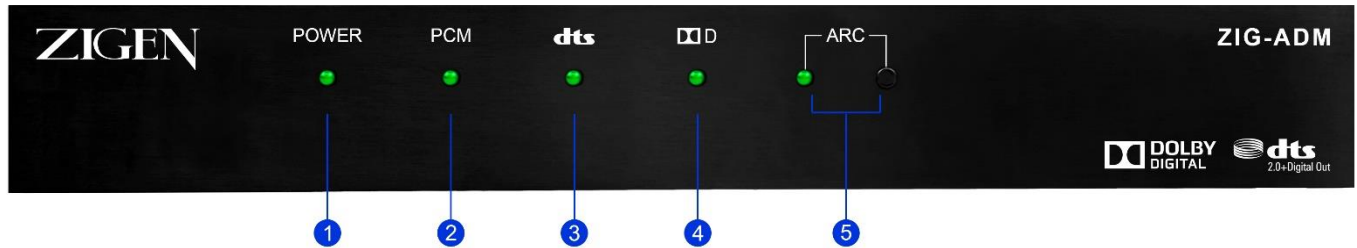
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ZIG-ADM Introduction

This 4K UHD HDMI unit with Dolby® Digital/DTS® Stereo Audio Decoder, supports the transmission of high bandwidth (18Gbps) video and allows the associated audio signal to be simultaneously extracted and split to both digital and analog audio outputs, providing high quality audio extraction and video performance. This unit can decode standard Dolby Digital & DTS formats up to 5.1 and output the audio as stereo (LPCM 2.0) over HDMI, S/PDIF (optical and coaxial) as well as analog RCA connections. It can also support the pass-through of HD and standard bitstream formats as well as LPCM 7.1 with audio sampling rates up to 192 kHz if needed. If the connected display supports ARC (Audio Return Channel), then this unit can extract the ARC audio and output via all available audio outputs. Both the input and output HDMI ports support 4K UHD resolutions up to 4K@60Hz (YUV 4:4:4, 8-bit). Built in EDID management support allows the user to select from multiple EDID's and, with the use of optional PC software, to edit, upload and download EDID files.

Front Panel



1 Power LED

This LED will illuminate to indicate the unit is ON and receiving power.

2 PCM LED

This LED will illuminate when LPCM audio is detected on the HDMI input. If the ARC function is active, this LED will also illuminate when LPCM is detected from the ARC source.

3 dts LED

This LED will illuminate when DTS 2.0+Digital audio is detected on the HDMI input. If the ARC function is active, this LED will also illuminate when DTS 2.0+Digital audio is detected from the ARC source.

4 Dolby LED

This LED will illuminate when Dolby Digital audio is detected on the HDMI input. If the ARC function is active, this LED will also illuminate when Dolby Digital audio is detected from the ARC source.

5 ARC LED

Pressing this button will enable/disable the unit's ARC (Audio Return Channel) functionality. When the ARC function is enabled, the LED will illuminate and ARC audio sent back from the connected display will output over all local audio outputs. When the ARC function is not enabled the LED will remain off.

Back Panel



1 HDMI IN

Connect to HDMI source equipment such as a media player, game console or set-top box.

2 HDMI OUT

Connect to an HDMI TV, monitor or amplifier for digital video and audio output.

3 L/R OUT

Connect to power amplifier for stereo analog audio output.

4 COAX OUT

Connect to A/V receiver for digital audio output using an appropriate coaxial cable.

5 OPTICAL

Connect to A/V receiver for digital audio output using an appropriate optical cable.

6 HDMI AUDIO BYPASS / 2CH

This switch controls the audio output format for the HDMI port. Sliding the switch to the left sets it to "BYPASS" which allows audio to pass unchanged from the HDMI input port. Sliding the switch to the right sets it to "2CH" which enables decoding Dolby Digital and DTS audio from the HDMI input and down-mixing it to LPCM 2.0.

7 SPDIF BYPASS / 2CH

This switch controls the audio output format for the S/PDIF audio output ports (Optical and Coaxial). Sliding the switch to the left sets it to "BYPASS" which allows audio to pass unchanged from the HDMI input port. Sliding the switch to the right sets it to "2CH" which enables decoding Dolby Digital and DTS audio from the HDMI input and down-mixing it to LPCM 2.0.

8 EDID

Connect to powered amplifier for stereo analog audio output.

9 SERVICE

This slot is for EDID management, control and firmware update use. Connect directly to your PC/laptop using a standard Mini-USB cable to connect using the PC software or to send commands (via virtual COM port).

10 DC 5V

Plug the 5V DC power adapter into the unit and connect it to an AC wall outlet for power.

Application Diagram (sample)



Specifications

Video Bandwidth	18Gbps (600Mhz)
Input Ports	1 x HDMI, 1 x Mini-USB (service & control only)
Output Ports	1 x HDMI 2x RCA (Analog Audio) 1 x Coaxial S/PDIF (Digital Audio) 1 x Optical S/PDIF (Digital Audio)
Power Supply	5V / 2.6A DC (US/EU standards, CE/FCC/ UL certified)
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Chassis Material :	Metal
Dimensions	180mm x 25mm x 104mm (W×H×D) [Case Only] 180mm x 25mm x 112.75mm (W×H×D) [All Inclusive]
Weight	358 g / 0.789 lb.
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 (non-condensing)
Power Consumption	4.8w

Video Supports Specification

DVI and HDMI Supported Resolutions (Hz)	INPUT	OUTPUT
640x480@60/72/75/85	✓	✓
720x400@85	✓	✓
800x600@56/60/72/75/85	✓	✓
1024x768@60/70/75/85	✓	✓
1280x720@60	✓	✓
1280x768@60/75/85	✓	✓
1280x800@60	✓	✓
1360x768@60	✓	✓
1440x900@60	✓	✓
1600x900@60	✓	✓
1600x1200@60	✓	✓
1920x1080@60	✓	✓
1920x1200@60	✓	✓
1440x576i@50	✓	✓
1440x480i@59.94/60	✓	✓
720x480p@59.94/60	✓	✓
720x576p@50	✓	✓
1280x720p@50/59.94/60	✓	✓
1920x1080i@50/59.94/60	✓	✓
1920x1080p@23.97/24/25/29.97/30/50/59.94/60	✓	✓
3840x2160@24/25/30/50/60 (YUV 4:4:4)	✓	✓
4096x2160@24/25/30/50/60 (YUV 4:4:4)	✓	✓
3840x2160@60 (YUV 4:2:0)	✓	✓
4096x2160@60 (YUV 4:2:0)	✓	✓

Video Supports Specification

Input Level/ Freq.	Output	Output Level Vrms/ dB±10%	THD+N (A-Weight)	Frequency Response	SNR >90dB	Crosstalk <-90dB
HDMI 0dB/1kHz 48~96kHz	Analog	2 Vrms	< 0.01%	±1 dBFS	>104dB	<-110dB
	Coaxial	0 dB	< 0.00001%	±1 dBFS	>141dB	<-164dB
	Optical	0 dB	< 0.00001%	±1 dBFS	>141dB	<-163dB
	HDMI	0 dB	< 0.00001%	±1 dBFS	>141dB	<-164dB

Audio Input	Input Format	AUDIO OUTPUT				
		Analog L/R	HDMI		SPDIF	
			Switch Status		Switch Status	
			BYPASS	2CH	BYPASS	2CH
HDMI	LPCM 2.0	Analog 2 Chan.	LPCM 2.0	LPCM 2.0	LPCM 2.0	LPCM 2.0
	Dolby Digital	Decoded Lt/Rt	Bitstream Pass-through	LPCM 2.0 (Lt/Rt)	Bitstream Pass-through	LPCM 2.0 (Lt/Rt)
	DTS	Decoded Lo/Ro	Bitstream Pass-through	LPCM 2.0 (Lo/Ro)	Bitstream Pass-through	LPCM 2.0 (Lo/Ro)
HDMI ARC	LPCM 2.0	Analog 2 Chan.	HDMI Pass-through ARC Bitstream Pass-through		LPCM 2.0	LPCM 2.0
	Dolby Digital	Decoded Lt/Rt			LPCM 2.0 (Lt/Rt)	
	DTS	Decoded Lo/Ro			LPCM 2.0 (Lo/Ro)	