

HDMI DAC



INTRODUCTION

Although 4K UltraHD has arrived, not every client will immediately abandon their existing HD screens, so the ability to support a combination of 4K and 1080p HD displays within the same distribution is critical, especially when resolution conflicts that affect systems, including screens of varying capabilities, are taken into account.

The P8-HDMI DAC video scaler and digital audio converter (DAC) is intended to be used in conjunction with a display and a source device. It scales the output to a level compatible with its display capabilities after adjusting the resolution and audio from an incoming HDMI source.

This product is ideal for integrating HD and 4K sources and displays into a multi-zone residential or commercial distribution system.

FEATURES

- In-line scaling solution for installations that use both 4K and HD displays without compromising source resolution
- Supports resolutions up to 3840x2160p @24/25/30Hz
- Full 3D support up to 1080p/24hz
- Up to 6 channels of input support (up to 5.1 surround) of audio encoded in Dolby Digital
- Low-latency digital filtering
- Accepts uncompressed digital audio input signals
- Includes digital interpolation filter
- Auto-samples at frequencies of 32, 44.1 and 48KHz
- Supports audio signals up to 24bit with sampling rates up to 192KHz
- THD+N (Total harmonic distortion plus noise) rating: a-93db
- Switchable input selection for video/audio scaling or signal pass-through
- Equalizes and boosts HDMI signal for longer distance transmissions
- Compact design
- LED power indication

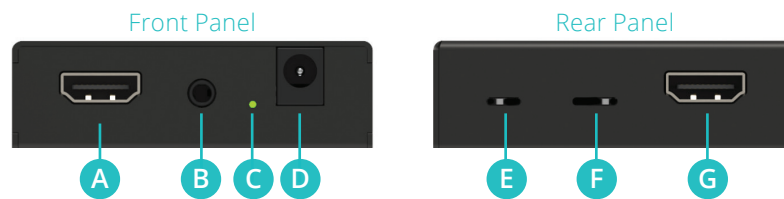
INSIDE THE BOX (KIT)

- 1 x HDMI DAC
- 1 x Power Cable
- 1 x Quick Start Guide

SPECIFICATIONS

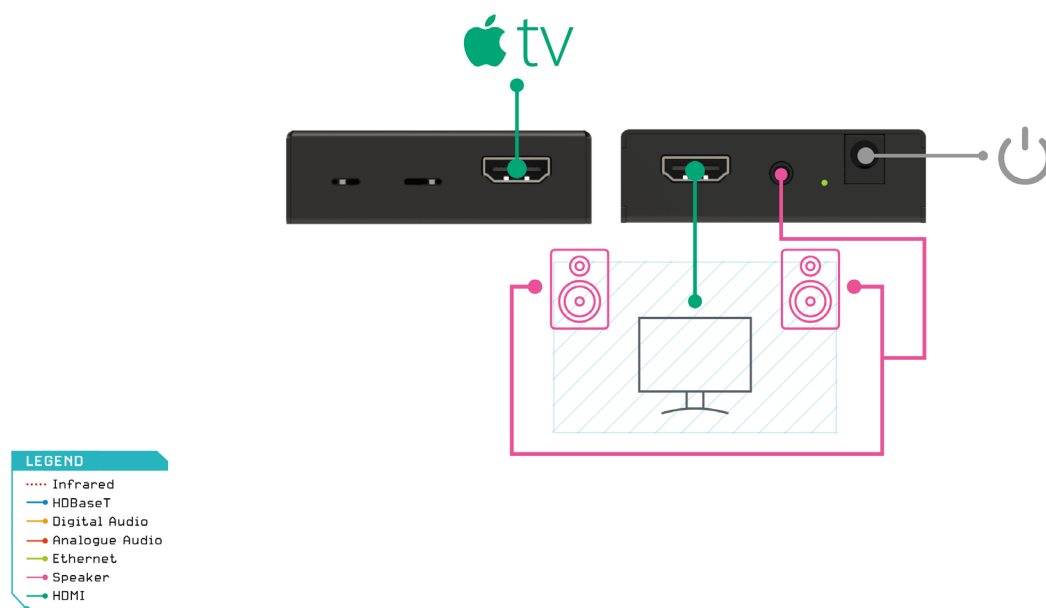
SKU:	P8-HDMIDAC
Input	HDMI V1.4a
Outputs:	HDMI V1.4a
Audio Input Format:	5.1 Dolby Digital or 2ch Stereo PCM
Audio Output Format:	Passthrough or 2ch PCM with Downmix selected
Maximum Single Link Range:	2160/30 @ 24bit True Colour - 1080/24p @ 36bit Deep Colour
Transmission Distance	Input - 7m/22ft (4K), 10m/33ft (1080p), Output - 7m/22ft (4K), 10m/33ft (1080p)
Colour Supported	4K/24bit, 1080p/36bit
Max Video Clock Speed	Input: 300Mhz, Output: 300Mhz
Video Amplifier Bandwidth	10.2Gbps
3D Supported	Up to 1080/24p - Frame packing/sequential (Blu-ray), Interlaced stereoscopic (satellite/cable broadcasts)
Max In/Out Resolution Supported	Up to 3840 x 2160p @ 24/25/30Hz
Scale Video Up from:	1920x1080p @ 24/25/30Hz to 3840x2160p @ 24/25/30Hz
Scale Video Down from:	3840x2160p @24/25/30Hz to 1920x1080p @ 24/25/30Hz
Video Impedance	100Ω
Input Video Signal:	0.5 - 1.2V p-p
Input DDC Signal:	5 volts p-p (TTL)
Additional:	HDMI 2.0a 3840 x 2160p 60Hz YCC 4:2:0 format pass-through
Electrical Fast Transient/Burst:	Data communication cord:1 kV, Power cord : 2 kV
Power Supply:	5v DC / 5W power supply (CE/FCC certified)
Power Consumption:	Max 1Amp @ 5V 5 Watts
ESD Protection:	± 8kV (Air-gap discharge) ± 4 kV (Contact discharge)
Surge Protection:	IEC 61000-4-4 (EFT) 40A (5/50ns) IEC 61000-4-5 (Lightning) 25A (8/20µs)
Product Dimensions:	65 x 23 x 77mm / 2.55 x 0.9 x 3.03"
Product Weight:	105g
Operating Temp Range:	0 to +35°C (32 to +95°F)
Operating Humidity Range:	5 to 90 % RH (no condensation)
Certification:	CE, FCC, RoHS, Dolby Digital

PANEL DESCRIPTIONS



- A HDMI Out** - Use Connect to HDMI sink device (i.e TV) to this port using an HDMI cable.
- B Stereo Out** - 3.5mm audio breakout.
- C Power Status LED light**
- D DC 5V** - Use the supplied mains power cable and connect to the chassis. Do not use any other power cables with this product.
- E Audio Selection Switch** - Select between bypass or downmix of the audio.
- F Video Selection Switch** - Select between upscale or downscale bypass of the video.
- G HDMI In** - Connect to an HDMI source device (i.e Blu-Ray player) to this port using an HDMI cable.

INSTALLATION



1. Connect HDMI cables from your video sources (e.g. Blu-Ray player) to the 'HDMI In' port using an HDMI cable.
2. Connect the 'HDMI Out' port to the sink device (i.e. TV) using an HDMI cable.
3. Switch the video and audio selector.
 - Upscale - 1080p to 4K resolution.
 - Downscale - 4K to 1080p.
 - Bypass - No alteration of the audio.
 - Downmix - Downmixing a 5.1 surround mix into stereo.
4. The audio signal will be transmitted via HDMI. However, the HDMI DAC includes the ability to output sound to a Soundbar or another audio output if you prefer to route your audio directly from the DAC rather than through the display.
5. Use the supplied power supply and connect to the DC 5V port.

Note: HDMI DAC does not support downscaling for Sky Q 2TB or Virgin V6 4K content - please use the HDMI UHD 18Gbps Downscaler (P8-HDMI2-4KDS)

TROUBLESHOOTING

Should you encounter installation difficulties or issues with device communication, the following checklist of common issues and causes should help resolve your issues. If you still continue to experience issues, please contact your local representative for further assistance.

No Video

- Connected and powered? Double check that all HDMI, and power cables are firmly connected to the correct ports and all devices are correctly powered.
- Cable quality and condition - HDMI cable/connectors can easily be damaged and the quality of material can vary. Always use good quality leads and cables and try swapping cables that are known to be working into the solution to see if this improves your image.

No Audio

- Check the source, and if the output is channeled into optical or coax.
- Switch the source to the other if possible. (For example, if switching from optical to S/PDIF or TOSLINK to coax).
- If possible, try different RCA sources at the output.
- If you still do not receive a response, please contact a Pulse-Eight representative or your Installer.

MANUAL VERSION HISTORY

V2.0 - 21st July 2022. Update existing manual to new format

V2.1- 1st March 2024. Further updates and Included Revision History section.

WARRANTY PROCEDURE

The following policies covers all Pulse-Eight products.

Unless otherwise instructed, please do not open any of our products. Doing so will invalidate your warranty. As part of the troubleshooting procedure, you may be instructed to open the device, but you can only proceed with this once consent has been given.

To open a support ticket, please visit: www.pulse-eight.com/support.

Please Note: Warranty cover for ALL products starts from date of receipt of goods NOT date of installation. Should we find that your product does need replacing, we will send your replacement directly to the distributor you purchased from, if not purchased directly from Pulse-Eight.

From 1st April any products purchased will have new warranty lengths. The length of warranty is determined by the type of product purchased. Our cover can be broken down into 3 categories:

Gold, Silver and Bronze.

GOLD: Pulse-Eight Audio and Video Matrices

- 5-year warranty as standard
 - 2-year advanced replacements
 - 3-year return to base for repair

SILVER: Pulse-Eight Amps, Extender Sets and Accessories

- 3-year warranty as standard
 - 1-year advanced replacements
 - 2-year return to base for repair

BRONZE: IR, Cables, Brackets and our Tech Tools

- 1-year advanced replacements

Pulse-Eight Current Product—Within the advanced replacement warranty year(s)

1. Contact support via phone or a support ticket. Pulse-Eight will try to help troubleshoot and resolve the issue remotely.
2. If unable to resolve the fault remotely and the unit needs replacing an advanced replacement will be raised with the installer who purchased it. If you purchased from a distributor you will need to return to your distributor and they will contact Pulse-Eight to get the RMA raised. All distributor advanced replacements will be sent to the distributor and cannot be sent direct to their installer.

Pulse-Eight Current Product—Within return to base warranty

1. Contact support via phone or a support ticket. Pulse-Eight will try to help troubleshoot and resolve the issue remotely.
2. If unable to resolve the fault remotely and the unit needs to be repaired, an RMA will be raised with the installer if purchased direct from Pulse-Eight. Or if purchased from a distributor, the installer will be directed back to their distributor who will raise an RMA.

Pulse-Eight Products Purchased Before 1st April, 2022.

Please visit: [Warranty Page](#). Or Contact support via phone, opening a support ticket or emailing support@pulse-eight.com.

WARRANTY TERMS & CONDITIONS

IMPORTANT INFORMATION ABOUT YOUR RIGHTS AND OBLIGATIONS, AS WELL AS LIMITATIONS AND EXCLUSIONS THAT MAY APPLY TO YOU. YOUR RIGHTS AND THIS LIMITED WARRANTY

This Limited Warranty gives you specific legal rights. You may also have other legal rights that vary by state, province, or jurisdiction. The disclaimers, exclusions, and limitations of liability under this Limited Warranty will not apply to the extent prohibited by applicable law. For a full description of your legal rights, you should refer to the laws applicable in your jurisdiction and you may wish to contact a relevant consumer advisory service.

1. WHAT THIS LIMITED WARRANTY COVERS; PERIOD OF COVERAGE

Pulse-Eight Limited ("Pulse-Eight"), 8-12 Alder Hills, Poole, BH12 4AL, UK, warrants to the owner of the enclosed product that the product contained in this box ("Product") will be free from defects in materials and workmanship for a period of three years from the date of delivery following the original purchase (the "Warranty Period"), or if this product has been professionally installed, the warranty start date is from the date your installer purchased the item, not your system commissioning date. Please check with your installer for their purchase date. If the Product fails to conform to this Limited Warranty during the Warranty Period, Pulse-Eight will, at its sole discretion, either (a) repair or replace any defective Product or component; or (b) accept the return of the Product and refund within 45 days of return the money actually paid by the original purchaser for the Product. Repair or replacement may be made with a new or refurbished product or components, at Pulse-Eight's sole discretion.

If the Product or a component incorporated within it is no longer available, Pulse-Eight may replace the Product with a similar product of similar function, at Pulse-Eight's sole discretion. This is your sole and exclusive remedy for breach of this Limited Warranty. Any Product that has either been repaired or replaced under this Limited Warranty will be covered by the terms of this Limited Warranty for the longer of ninety (90) days from the date of delivery or the remaining Warranty Period. This Limited Warranty is transferable from the original purchaser to subsequent owners, but the Warranty Period will not be extended in duration or expanded in coverage for any such transfer.

2. TOTAL SATISFACTION RETURN POLICY

If you are the original purchaser of the Product and you are not satisfied with this product for any reason, you may return it in its original condition within thirty (30) days of the original purchase and receive a full refund. If this is a professionally installed product, you must check with your installer regarding their own returns policy.

3. WARRANTY CONDITIONS; HOW TO GET SERVICE IF YOU WANT TO CLAIM UNDER THIS LIMITED WARRANTY

Before being able to claim under this Limited Warranty, the owner of the Product must (a) notify Pulse-Eight of the intention to claim by emailing support@pulse-eight.com during the Warranty Period and providing a description of the alleged failure, and (b) comply with Pulse-Eight's return shipping instructions, and (c) ship the Product at owner's cost (except where prohibited by applicable law) to Pulse-Eight for repair or replacement. Pulse-Eight will have no warranty obligations with respect to a returned Product if it determines, in its reasonable discretion after examination of the returned Product that the Product is an Ineligible Product (defined below). Pulse-Eight will bear all costs of return shipping to the owner, except with respect to any Ineligible Product, for which the owner will bear all shipping costs.

4. WHAT THIS LIMITED WARRANTY DOES NOT COVER

This warranty does not cover the following (collectively "Ineligible Products"): Products marked as "sample" or sold "AS IS"; or Products that have been subject to: (a) modifications, alterations, tampering, or improper maintenance or repairs; (b) handling, storage, installation, testing, or use not in accordance with the Installation Guide or other instructions provided by Pulse-Eight; (c) abuse or misuse of the Product; (d) breakdowns, fluctuations, or interruptions in electric power or the telecommunications network; or (e) Acts of God, including lightning, fire, flood, tornado, earthquake, or hurricane. This warranty does not cover consumable parts, including batteries unless damage is due to defects in materials or workmanship of the Product, or software (even if packaged or sold with the product). Pulse-Eight recommends that you use only authorized service providers for maintenance or repair. Unauthorized use of the Product or software can impair the Product's performance and may invalidate this Limited Warranty. Pulse-Eight does not warrant that operation of the Product will be error-free or uninterrupted or that the Product will in every case process all data correctly.

5. DISCLAIMER OF WARRANTIES

Except as stated above in this limited warranty, and to the maximum extent permitted by applicable law, Pulse-Eight disclaims all express, implied, and statutory warranties and conditions with respect to the product, including the implied warranties of merchantability, fitness for a particular purpose. To the maximum extent permitted by applicable law, also limits the duration of any implied warranties or conditions to the duration of this limited warranty.

6. LIMITATION OF DAMAGES

In addition to the above warranty disclaimers, in no event will Pulse-Eight be liable for any consequential, incidental, exemplary, or special damages, including any damages for lost data or lost profits, arising from or relating to this limited warranty or the product, and Pulse-Eight's total cumulative liability arising from or related to this limited warranty or the product will not exceed the amount actually paid for the product by the original purchaser.

7. LIMITATION OF LIABILITY

Pulse-Eight disclaims all liability of any kind of Pulse-Eight's suppliers. The Pulse-Eight online services ("services") may provide you with information ("product information") regarding your product's performance and/or peripherals connected to your product ("product peripherals"). The type of product peripherals that may be connected to your product may change from time to time. Without limiting the generality of the disclaimers above, all product information is provided for your convenience, "as is", and "as available". Pulse-eight does not represent, warrant, or guarantee that product information will be available, accurate, or reliable. You use all product information, the services, and the product at your own discretion and at risk. You will be solely responsible for (and Pulse-Eight disclaims) any and all loss, liability, or damages, including to your HVAC system, plumbing, home, product, product peripherals, computer, mobile device, and all other items and pets in your home, resulting from your use of the product information, services, or product. The product information provided by the services is not intended as a substitute for direct means of obtaining the information.

8. VARIATIONS THAT MIGHT APPLY TO THIS LIMITED WARRANTY

Some jurisdictions do not allow limitations on how long an implied warranty lasts or exclusions/limitations on incidental or consequential damages, so some of the limitations set out above may not apply to you.

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