

ARCHITECTURAL AND ENGINEERING SPECIFICATION

DA2-HDMI-4K-Plus-A

HDMI Distribution Amplifier with Audio Embedder, De-Embedder and HDCP.

Functional Overview

The DA2HDMI-4K-Plus-A is a two-output HDMI 1.4 distribution amplifier with Advanced EDID management and Lightware Pixel Accurate Reclocking for jitter-free signals. It supports HDCP 1.4, 3D and 4K content (up to 4096x2160), can embed/de-embed audio (analog I/O), and offers multiple powering and control options (external DC adapter, USB, HDMI power / LDC software). Designed for professional AV installations requiring mirrored HDMI outputs and reliable audio interfacing.

Video – input and output specifications

- HDMI input: 19-pin HDMI Type A; 1 port; DVI 1.0 / HDMI 1.4; HDCP 1.4; RGB and YCbCr color spaces; 0 frame video delay.
- Supported input resolutions (8-bit color): up to 4096×2160@30Hz (4:4:4) or up to 4096×2160@60Hz (4:2:0); all standard VESA/CEA/custom up to 300 MHz (HDMI 1.4).
- Input cable equalization: +12 dB fixed; maximum recommended cable length: 20 m for 4Kp30, 30 m for 1080p60.
- HDMI outputs: 19-pin HDMI Type A; 2 mirrored HDMI outputs for DA2HDMI-4K-Plus-A; same standards and resolution support as input; Pixel Accurate Reclocking on outputs.
- HDMI audio formats supported: up to 8-channel PCM, Dolby TrueHD, DTS-HD Master Audio (7.1).
- HDMI CEC behavior: HDMI OUT1 — no CEC control; HDMI OUT2 — transparent CEC passthrough.

Audio capabilities

- HDMI embedded audio: supports multichannel HDMI audio up to formats listed above (PCM, Dolby TrueHD, DTS-HD).

- Analog audio input (DA2HDMI-4K-Plus-A specific): 3.5 mm TRS jack, single port, 2-channel PCM, 48 kHz sampling, balanced/unbalanced, maximum input level +0 dBu (0.77 Vrms / 2.19 Vpp); gain 0 to +6 dB; volume range -95 to 0 dB; balance control 0–100.
- Analog audio outputs (DA2HDMI-4K-Plus-A specific): Phoenix® 5-pole balanced/unbalanced output (1 port) and 3.5 mm jack output; 2-channel PCM, 48 kHz; volume -57 to +6 dB; nominal differential output +4 dBu @0 dB gain (+7 dBu @ +3 dB).
- Audio embedding/de-embedding: analog input can be embedded into HDMI; unit provides de-embedded analog outputs for integration with pro audio systems.
- Audio wiring and pinout guidance provided for balanced/unbalanced interconnection (Phoenix pinout).

Powering – how the device can be powered

- External DC adapter (supplied): 5 V DC, 3 A (interchangeable AC plugs: EU, UK, JP/US, AUS/NZ).
- USB port (USB mini-B): device can be powered via USB (also used for control/firmware).
- HDMI input port: can supply power to the device when source supports powering via the HDMI 5 V line (depends on source capabilities).
- DC input connector: standard DC barrel (specs documented); power consumption approx. 1.8 W; heat dissipation ~6.14 BTU/h.

Control – how the device can be controlled

- Front-panel controls: LEARN/Audio-select button (EDID learn, audio toggle, bootloader entry), hidden restart button, rotary EDID address switches (tens/ones) and status LEDs.
- USB control: USB mini-B port for Lightware Device Controller (LDC) software connection, firmware update and device configuration.
- Software: Full control and Advanced EDID management via Lightware Device Controller (LDC) — EDID read/learn/import/export, user EDID memory, EDID editor.
- HDMI CEC passthrough: supported on outputs (behavior per output as noted in Video section).



- EDID memory: factory EDID presets and user-programmable EDID slots (factory and user counts documented in manual).

General

- Dimensions: 100.4 mm W × 67.6 mm D × 26 mm H (4.0" × 2.7" × 1.0").
- Weight: ~250 g (0.55 lb).
- Enclosure: 1 mm steel; passive cooling.
- Mounting options: rack-mountable with mounting accessories (see Mounting Options/Compatibility Table in manual) — small form factor for tabletop, integration or rack with supplied/optional accessories.
- Electrical safety / LVD compatibility: compliant with EN 62368-1:2024; CE and UKCA marked; EMC standards referenced in manual.
- Operating environment (summary): operating temp 0 to +50 °C; storage -40 to +85 °C; operating humidity 10%–90% non-condensing.
- Supplied accessories (box contents): 5 V DC power adapter with interchangeable plugs, USB-A to USB mini-B cable, Phoenix 5-pole connector (for analog audio), Safety & Warranty Info / Quick Start Guide.
- Warranty period: 3 years (standard).

Document revision history

Document	Release Date	Changes	Checked by
Rev. 1.0	29 April 2026	Initial version	László Zsedényi