



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MX2-8X8-DH-4DPPIO-A

FUNCTIONAL OVERVIEW

The MX2-8x8-DH-4DPio-A standalone multimedia matrix switcher for routing mixed HDMI 2.0 and DisplayPort 1.2 signals in an 8x8 matrix. Provides EDID emulation and storage, HDCP management, pixel accurate reclocking, and detailed port/signal diagnostics (including DisplayPort link information and Restart Link Training). Local configuration is available via the front-panel color LCD and jog dial; full configuration and control are available via built-in web interface and Lightware Device Controller, as well as via Ethernet/RS-232/USB with LW2 and LW3 ASCII control protocols.

VIDEO INPUT AND OUTPUT

- Matrix size / routing: 8 inputs x 8 outputs (video crosspoint switching)
- Input connectors (model port set):
 - 4x HDMI inputs (HDMI input ports 1–4)
 - 4x DisplayPort inputs (DP input ports 5–8)
- Output connectors (model port set):
 - 4x HDMI outputs (HDMI output ports 1–4)
 - 4x DisplayPort outputs (DP output ports 5–8)
- HDMI input (electrical / format):
 - 19-pole HDMI Type A receptacle; DVI 1.0, HDMI 2.0
 - HDCP compliance: HDCP 2.3
 - Color space: RGB, YCbCr
 - Video delay: 0 frame
 - Reclocking: Pixel Accurate Reclocking
 - 3D support: Yes
- DisplayPort input (electrical / format):
 - 20-pole DisplayPort receptacle; DP 1.2 (with 18 Gbps bandwidth limitation), DVI 1.0, HDMI 2.0
 - HDCP compliance: HDCP 2.3
 - Color space: RGB, YCbCr
 - Video delay: 0 frame
 - 3D support: Yes
 - Restart Link Training supported

- HDMI output (electrical / format):
 - 19-pole HDMI Type A receptacle; DVI 1.0, HDMI 2.0
 - HDCP compliance: HDCP 2.3
 - Color space: RGB, YCbCr
 - Video delay: 0 frame
 - Reclocking: Pixel Accurate Reclocking
 - 3D support: Yes
- Max. input/output HDMI cable length (premium certified cable):
 - 1920x1080@60Hz 4:4:4 – 40 m
 - 3840x2160@30Hz 4:4:4 – 15 m
 - 3840x2160@60Hz 4:4:4 – 5 m
- DisplayPort output (electrical / format):
 - 20-pole DisplayPort receptacle; DP 1.2 (with 18 Gbps bandwidth limitation), DVI 1.0, HDMI 2.0
 - HDCP compliance: HDCP 2.3
 - Color space: RGB, YCbCr
 - Video delay: 0 frame
 - 3D support: Yes
 - DP power capability: provides about 1.5 W (500 mA @ 3.3V) on DP_PWR pin

AUDIO CAPABILITIES

- Embedded audio (HDMI / DP):
 - HDMI audio formats: all formats in line with HDMI 2.0 standard (as specified, including Dolby/DTS family formats)
- Analog audio (model capability / port set):
 - Analog audio input ports: 8 (audio input ports 1–8)
 - Analog audio output ports: 8 (audio output ports 1–8)
 - Analog audio connectors: 5-pole Phoenix (balanced / unbalanced)
- Analog audio input characteristics (as specified):
 - Audio formats: 2-channel PCM; sampling frequency: 48 kHz
 - Gain: -12 dB to +35 dB
 - Balance: -100 to +100 (0 = center)

- Analog audio output characteristics (as specified):
 - Audio formats: 2-channel PCM; sampling frequency: 48 kHz
 - Volume: -78 dB to 0 dB
 - Balance: -100 to +100 (0 = center)
- De-embedding limitation:
 - Only stereo LPCM can be de-embedded from the HDMI signal
- DisplayPort output embedded audio limitation:
 - DP output ports cannot transmit embedded audio stream with more than 2 channels; accepted audio signals are 2-channel PCM between 48 and 192 kHz

POWERING

- Supported power source: 100–240V AC, 50/60 Hz
- AC power connector (non-redundant models): standard IEC connector (IEC C14 receptacle)
- 1 RU-high models: powered on immediately when AC power is connected (no front-panel power switch)
- AC fuse: F 3.15A

CONTROL

- Front panel control via color LCD menu and jog dial control knob
- Front panel buttons: sources/destinations selection, Take/Autotake switching, output lock, control lock, preset operations, reset
- Ethernet/LAN control via RJ45 connector
- RS-232 control: 3-pole Phoenix connector
- USB control via USB mini-B receptacle
- Built-in website (web browser control)
- Lightware Device Controller (LDC) via LAN or USB
- TCP/IP control protocols supported:
 - LW2 protocol via TCP port 10001
 - LW3 protocol via TCP port 6107

GENERAL

- Dimensions (same size category as compact 1RU models): 442 (482 with rack ears) W x 43.7 H x 277.4 D mm
- Rack mounting: rack-mountable; rack ears supplied
- Mounting options: standard rack installation; under-desk mounting available for 1U-high models (requires two additional rear rack ears, not supplied)
- Electrical safety / LVD-related compliance: EN 62368-1:2014 Second Edition
- Other compliance: CE, UKCA, UL; EMC EN 55032:2015+A1:2020 (emission), EN 55035:2017+A11:2020 (immunity); RoHS EN 63000:2018
- Warranty: 3 years
- Cooling: cooling fans; airflow from front to rear
- Supplied accessories:
 - Safety and Warranty Info
 - Quick Start Guide
 - IEC power cable
 - Phoenix Combicon 3-pole connector
 - Phoenix Combicon 5-pole connector (16 pcs)

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-07-31	Initial version	Tamas Forgacs