



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MX2-32X32-DH-16DPI-A-R

FUNCTIONAL OVERVIEW

The MX2-32x32-DH-16DPi-A-R is a standalone matrix switcher providing 32x32 video routing with mixed input connectivity (DisplayPort and HDMI) and HDMI outputs. It supports HDMI 2.0 switching up to 4K UHD 60 Hz 4:4:4, HDCP 2.3, EDID management, and pixel accurate reclocking. The unit provides analog audio embedding and de-embedding for supported stereo LPCM workflows. Control is available from the front panel (LCD + jog dial and buttons), Ethernet, RS-232, and USB, including operation via built-in web interface and Lightware Device Controller software.

VIDEO INPUT AND OUTPUT

- Matrix size: 32 inputs x 32 outputs (video switching)
- Video input count and types:
 - 16x DisplayPort 1.2 inputs
 - 16x HDMI inputs (HDMI 2.0 / HDMI 1.x / DVI 1.0 compatible)
- Video output count and types:
 - 32x HDMI outputs (HDMI 2.0 / HDMI 1.x / DVI 1.0 compatible)
- Connectors:
 - HDMI: 19-pole HDMI Type A receptacle (I/O)
 - DisplayPort: 20-pole DisplayPort receptacle (input)
- HDCP compliance: HDCP 2.3
- Color space support: RGB, YCbCr
- Video delay: 0 frame
- Supported resolutions (HDMI I/O; also applies to DP inputs with bandwidth limitation):
 - Up to 5120x2160@30 Hz (4:4:4) or 5120x2160@60 Hz (4:2:0) at 12 bits/color
 - Up to 4096x2048@60 Hz (4:4:4) or 4096x2048@60 Hz (4:2:0) at 8 bits/color
 - Up to 3840x2160@60 Hz (4:4:4) or 3840x2160@60 Hz (4:2:0) at 8 bits/color
 - 1920x1080@60 Hz (4:4:4) up to 12 bits/color
- Reclocking on outputs: Pixel Accurate Reclocking

- HDMI cable length guidance (premium certified cable):
 - 1920x1080@60 Hz 4:4:4: 40 m
 - 3840x2160@30 Hz 4:4:4: 15 m
 - 3840x2160@60 Hz 4:4:4: 5 m

AUDIO CAPABILITIES

- Analog audio availability: “-A” (analog audio embedding/de-embedding supported)
- Analog audio connectors: 5-pole Phoenix (balanced / unbalanced line in/out)
- Analog audio format: 2-channel PCM; sampling frequency 48 kHz
- Analog audio input (typical controls/spec):
 - Gain: -12 dB to +35 dB
 - Balance: -100 to +100 (0 = center)
- Analog audio output (typical controls/spec):
 - Volume: -78 dB to 0 dB
 - Balance: -100 to +100 (0 = center)
- HDMI audio:
 - Audio embedding from video stream or from adjacent analog input (model dependent by port)
 - De-embedding note: only stereo LPCM can be de-embedded from the HDMI signal
- Port counts for this model (audio add-on):
 - Analog audio inputs: ports 9–12 and 17–24
 - Analog audio outputs: ports 1–16 and 33–40

POWERING

- Supported power source: 100–240 V AC, 50/60 Hz
- Redundant power supply: provided (model suffix “-R”)
 - Two AC inputs via Neutrik powerCON connectors
 - Can be connected to two different AC power lines for continuous operation
 - Power supplies can be switched on/off without interrupting video transmission
- Protective earth required (Class I apparatus construction)
- AC fuse: F 3.15 A

CONTROL

- Front panel control:
 - Color LCD menu + jog dial control knob
 - Front panel I/O buttons
- Ethernet/LAN control:
 - 10/100Base-T, full duplex with autodetect
 - LW2 over TCP port 10001; LW3 over TCP port 6107
 - HTTP control via built-in website (TCP port 80)
 - Secondary protocol via TCP port 23
- RS-232 control:
 - -R models: 9-pole D-SUB connector
 - Adjustable baud rate; factory default: 57600 baud, protocol LW3
- USB control:
 - USB mini-B (USB 2.0, HID) for local control (e.g., Lightware Device Controller)
- Software:
 - Lightware Device Controller (LDC)
 - Built-in web interface (browser control)

GENERAL

- Enclosure / rack:
 - Rack mountable (rack ears supplied)
 - Dimensions (8 RU models): 440.5 (483+2) W x 355 H x 280.2 D mm
- Mounting options:
 - Standard rack installation with supplied rack ears
 - Handles can be mounted (handles are supplied)
- Electrical safety / LVD-related standard:
 - EN 62368-1:2014 Second Edition
- Warranty period: 3 years
- Cooling:
 - Cooling fans; airflow from front to rear (front-to-back airflow design)



- Supplied accessories:
 - Safety and Warranty Info, Quick Start Guide
 - Neutrik powerCON power cable (2 pcs)
 - Serial data cable (male-female)
 - Phoenix Combicon 5-pole connectors (28 pcs)
 - Handle pair with 4 pcs M5 flat head screws

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-07-30	Initial version	Tamas Forgacs