



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MX2-16X16-DH-8DPI-A-R

FUNCTIONAL OVERVIEW

The MX2-16x16-DH-8DPi-A-R is a standalone 16x16 matrix switcher providing HDMI 2.0 and DisplayPort 1.2 input switching with uncompromised 4K UHD routing and integrated analog audio embedding/de-embedding. It offers advanced EDID and HDCP management, pixel-accurate reclocking, signal analysis (including frame detector), and multi-interface control via front panel, USB, Ethernet, and RS-232. The "-R" variant includes redundant power supplies for higher availability installations.

VIDEO INPUT AND OUTPUT

- Matrix size: 16 inputs x 16 outputs
- Video inputs (this model): 8x HDMI + 8x DisplayPort
- Video outputs (this model): 16x HDMI
- HDMI input / output
 - AV standard: DVI 1.0, HDMI 2.0
 - HDCP compliance: HDCP 2.3
 - Color space: RGB, YCbCr
 - Supported resolutions (12 bits/color): up to 5120x2160@30Hz (4:4:4) or 5120x2160@60Hz (4:2:0)
 - Supported resolutions (8 bits/color): up to 4096x2048@60Hz (4:4:4) or 4096x2048@60Hz(4:2:0);upto3840x2160@60Hz(4:4:4)or3840x2160@60Hz (4:2:0); 1920x1080@60Hz (4:4:4) up to 12 bits/color
 - Video delay: 0 frame
 - Reclocking: Pixel Accurate Reclocking
 - 3D support: Yes
 - Input cable equalization: Yes, +12dB fixed
 - Max HDMI cable length (premium certified cable): 40m at 1920x1080@60Hz 4:4:4; 15m at 3840x2160@30Hz 4:4:4; 5m at 3840x2160@60Hz 4:4:4
- DisplayPort input
 - AV standard: DVI 1.0, HDMI 2.0, DP 1.2 (with 18 Gbps bandwidth limitation)
 - HDCP compliance: HDCP 2.3
 - Color space: RGB, YCbCr
 - Video delay: 0 frame

- Supported resolutions (12 bits/color): up to 5120x2160@30Hz (4:4:4) or 5120x2160@60Hz (4:2:0)
- Supported resolutions (8 bits/color): up to 4096x2048@60Hz (4:4:4) or 4096x2048@60Hz(4:2:0);upto3840x2160@60Hz(4:4:4)or3840x2160@60Hz (4:2:0); 1920x1080@60Hz (4:4:4) up to 12 bits/color
- 3D support: Yes

AUDIO CAPABILITIES

- Analog audio embedding and de-embedding supported (stereo)
- Only stereo LPCM can be de-embedded from the HDMI signal
- No independent audio layer (embedded audio follows the routed AV stream)
- Analog audio input
 - Connector: 5-pole Phoenix
 - Audio formats: 2-channel PCM
 - Sampling frequency: 48 kHz
 - Maximum input level: +0 dBu, 0.77 Vrms, 2.19 Vpp
 - Balanced / unbalanced audio supported
 - Balance: -100 (-95 dB) to +100 (0 dB), 0 = center
 - Gain: -12 dB to +35 dB
- Analog audio output
 - Connector: 5-pole Phoenix
 - Audio formats: 2-channel PCM
 - Sampling frequency: 48 kHz
 - Balanced / unbalanced audio supported
 - Volume: -78 dB to 0 dB
 - Balance: -100 (-95 dB) to +100 (0 dB), 0 = center
 - Nominal differential output level @ 0 dB Gain: +4 dBu
 - Nominal differential output level @ 3 dB Gain: +7 dBu

POWERING

- Built-in PSU
- Supported power source: 100–240V AC, 50–60Hz
- Redundant PSUs (model suffix “-R”)
- AC power connector: Neutrik powerCON

CONTROL

- Front panel control with color LCD and jog dial control knob
- Front panel buttons: sources/destinations selection, Take/Autotake switching, output lock, control lock, preset operations, reset
- Built-in website (web browser control)
- Ethernet/LAN control
- RS-232 serial control
- USB control (USB mini-B)
- Control protocols supported: LW2, LW3, P#2

GENERAL

- Compliance: CE, UKCA, UL
- Electrical safety: EN 62368-1:2014 Second Edition
- Warranty: 3 years
- Cooling: cooling fans, air flows from front to rear
- Enclosure
 - Rack mountable: Yes (rack ears supplied)
 - Material: 1 mm steel
 - Dimensions (16x16 family): 441 (483 with rack-mounting ears) W x 132.6 H x 280.2 D mm
- Mounting options
 - Standard rack installation using supplied rack ears
 - Wall mounting method is the same as rack ear mounting
 - Mounting with front and rear rack ears requires two additional rear ears (not supplied)
- Supplied accessories (for MX2-16x16-DH-8DPi-A-R)
 - Safety and Warranty Info, Quick Start Guide
 - Neutrik powerCON power cable: 2x
 - Phoenix Combicon 5-pole connector: 16x

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-07-28	Initial version	Tamas Forgacs