



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MX2-4X4-HDMI20-CA

FUNCTIONAL OVERVIEW

The MX2-4x4-HDMI20-CA is a compact, standalone 4x4 HDMI 2.0 matrix switcher for routing UHD digital video and embedded audio between four sources and four displays. It supports up to 4K UHD at 60 Hz with 4:4:4 chroma, HDCP 2.3, advanced EDID management, and pixel-accurate reclocking for stable transmission. Control and configuration are available from the front-panel LCD/jog dial, built-in web interface, Lightware Device Controller, and external control via Ethernet and RS-232.

VIDEO INPUT AND OUTPUT

- HDMI inputs: 4x HDMI Type A (19-pin) receptacles
- HDMI outputs: 4x HDMI Type A (19-pin) receptacles
- AV standards: HDMI 2.0, HDMI 1.x compatible, DVI 1.0
- 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) / (4:2:0); up to 3840x2160@60Hz (4:4:4) / (4:2:0); 1920x1080@60Hz (4:4:4) up to 12 bits/color
- Max HDMI cable length (premium certified cable): 40 m @ 1920x1080@60Hz 4:4:4; 15 m @ 3840x2160@30Hz 4:4:4; 5 m @ 3840x2160@60Hz 4:4:4
- Reclocking: Pixel Accurate Reclocking
- 3D support: Yes
- Input cable equalization: Yes, +12 dB fixed

AUDIO CAPABILITIES

- Embedded HDMI audio formats: all formats in line with HDMI 2.0 standard; Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, Dolby Vision; DTS, DTS-HD Master Audio 7.1, WMA Pro
- Analog audio de-embedding limitation: only stereo LPCM can be de-embedded from the HDMI signal



- Analog audio output (balanced/unbalanced): 5-pole Phoenix connector; 2-channel PCM; 48 kHz sampling frequency
- Analog audio output controls/spec: Volume -78 dB to 0 dB; Balance -100 (-95 dB) to +100 (0 dB) (0 = center)
- Audio routing behavior: no independent audio layer (embedded audio is switched together with the video stream to HDMI/DP and corresponding analog audio output)

POWERING

- Power supply: built-in PSU
- Supported power source: 100–240 V AC, 50/60 Hz
- AC connector (non-redundant models): IEC C14 receptacle
- AC fuse: F 3.15A
- Powering behavior (1 RU-high models): immediately powered on when AC is connected (not supplied with a power switch)
- Safe disconnect: remove the power cord from the rear of the equipment or from the power source

CONTROL

- Front panel: color LCD menu + jog dial control knob
- USB: USB mini-B for local control (e.g., Lightware Device Controller)
- Ethernet/LAN: RJ45 connector for Ethernet/LAN control
- RS-232: 3-pole Phoenix
- Built-in web: control/configuration via web browser
- Software: Lightware Device Controller (LAN or USB)
- Ethernet control protocols/ports: LW2 (TCP 10001), LW3 (TCP 6107), HTTP (TCP 80)
- CEC: supports transmitting standard CEC commands to control source/sink devices

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 (2 pcs)

DOCUMENT REVISION HISTORY

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