



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MX2-16X16-HDMI20-R

FUNCTIONAL OVERVIEW

The MX2-16x16-HDMI20-R is a standalone HDMI 2.0 matrix switcher for routing digital video and embedded audio between up to 16 HDMI sources and 16 HDMI sinks. It supports 4K UHD switching up to 60 Hz with 4:4:4 capability, HDCP 2.3 compliance, advanced EDID management, and pixel-accurate reclocking. The unit provides redundant power inputs and ruggedized control connectivity in “-R” variants, and can be configured and controlled via front panel LCD/jog dial, built-in web, Lightware Device Controller, and LAN/RS-232/USB.

VIDEO INPUT AND OUTPUT

- Matrix size: 16 inputs x 16 outputs
- HDMI input connector: 19-pole HDMI Type A receptacle
- HDMI output connector: 19-pole HDMI Type A receptacle
- AV standards: 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
- 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); up to 3840x2160@60Hz (4:4:4) or 3840x2160@60Hz (4:2:0); 1920x1080@60Hz (4:4:4) up to 12 bits/color
- Max HDMI cable length (premium certified cable), input and output:
 - 1920x1080@60Hz 4:4:4: 40 m
 - 3840x2160@30Hz 4:4:4: 15 m
 - 3840x2160@60Hz 4:4:4: 5 m
- Input cable equalization: Yes, +12 dB fixed
- HDMI output +5V on DDC (pin 18): outputs are able to supply 500 mA

AUDIO CAPABILITIES

- Embedded HDMI audio support: 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

POWERING

- Power supply option: built-in PSU
- Supported power source: 100–240V AC, 50/60 Hz
- -R model AC connector: two Neutrik powerCON connectors accepting 100–240 V, 50 or 60 Hz
- Redundant power supplies (-R): can be switched on/off without interrupting the video transmission; using only one or both PSUs at the same time is possible; allows connection to two different AC power lines
- AC fuse: F 3.15A
- Power consumption (MX2-16x16-HDMI20, no signal / max. signal): 47 W / 83 W
- Heat dissipation (MX2-16x16-HDMI20, no signal / max. signal): 160.3 BTU/h / 283.1 BTU/h

CONTROL

- Front panel: color LCD + 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)
- Lightware Device Controller (LDC) via LAN or USB
- Ethernet/LAN:
 - 10/100Base-T, full duplex with autodetect
 - LW2 protocol: TCP 10001
 - LW3 protocol: TCP 6107
 - Secondary protocol: TCP 23
 - HTTP: TCP 80
- RS-232 (-R model): 9-pole D-SUB connector; factory default settings: RS-232 enabled; 57600 baud; protocol LW3
- USB: USB mini-B receptacle; USB 2.0; device class HID

GENERAL

- Compliance: CE, UKCA, UL
- EMC (emission): EN 55032:2015+A1:2020
- EMC (immunity): EN 55035:2017+A1:2020
- RoHS: EN 63000:2018
- Electrical safety: EN 62368-1:2014 Second Edition
- Warranty: 3 years
- Cooling: cooling fans; air flows from front to rear
- Rack mountable: Yes (rack ears supplied)
- Enclosure material: 1 mm steel
- Dimensions: 441 (483 + 2) W x 132.6 H x 280.2 D mm
- Mounting options:
 - Standard rack installation using supplied rack ears (M4x8 is the longest allowed screw for fixing the ears to the housing)
- Supplied accessories:
 - Safety and Warranty Info
 - Quick Start Guide
 - 2x Neutrik powerCON power cable
 - Serial data cable (male-female)

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-07-29	Initial version	Tamas Forgacs