



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MX2-24X24-DH-12DPI-R

FUNCTIONAL OVERVIEW

The MX2-24x24-DH-12DPi-R is a standalone digital matrix switcher providing 24x24 video routing with mixed DisplayPort and HDMI inputs and HDMI outputs. It supports HDMI 2.0 switching up to 4K UHD 60 Hz 4:4:4 (18 Gbps class), HDCP 2.3, EDID emulation/management, and pixel-accurate reclocking for signal integrity. Control is available from the front panel LCD/jog dial (and buttons), built-in web interface, Lightware Device Controller software, Ethernet, USB, and RS-232 using Lightware control protocols.

VIDEO INPUT AND OUTPUT

- Crosspoint size: 24x24
- Video input port types:
 - DisplayPort input ports: 1–12
 - HDMI input ports: 13–24
- Video output port types:
 - HDMI output ports: 1–24
- HDMI input
 - Connector type: 19-pole HDMI type A receptacle
 - AV standard: 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
 - Input cable equalization: Yes, +12dB fixed
 - Supported resolutions at 12 bits/color: up to 5120x2160@30Hz (4:4:4) or 5120x2160@60Hz (4:2:0)
 - Supported resolutions at 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

- DisplayPort input
 - Connector type: 20-pole DisplayPort receptacle
 - 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 at 12 bits/color: up to 5120x2160@30Hz (4:4:4) or 5120x2160@60Hz (4:2:0)
 - Supported resolutions at 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
- HDMI output
 - Connector type: 19-pole HDMI type A receptacle
 - AV standard: 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 at 12 bits/color: up to 5120x2160@30Hz (4:4:4) or 5120x2160@60Hz (4:2:0)
 - Supported resolutions at 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
- HDMI output +5V capability: outputs are able to supply 500 mA current on DDC +5V output (pin 18)
- Max. input/output HDMI cable length (premium certified cable):
 - 1920x1080@60Hz 4:4:4: 40m
 - 3840x2160@30Hz 4:4:4: 15m
 - 3840x2160@60Hz 4:4:4: 5m
- EDID management
 - EDID emulation: Yes
 - EDID memory: 144 factory presets, 100 user-programmable

AUDIO CAPABILITIES

- Embedded audio switching: Audio is switched together with video (no independent audio layer)
- HDMI audio formats (series): “all formats in line with HDMI 2.0 standard”, including Dolby Digital / Dolby Digital Plus / Dolby TrueHD / Dolby Atmos / DTS / DTS-HD Master Audio / WMA Pro (as listed in the series specifications)
- DisplayPort input audio formats (series): “all formats in line with HDMI 2.0 standard”

POWERING

- AC mains input: 100–240 V AC, 50/60 Hz
- Redundant power supplies: Yes (model suffix -R)
 - Two AC inputs via Neutrik powerCON connectors (redundant PSU operation)
 - Redundant PSUs can be used one or both at the same time to ensure continuous operation

CONTROL

- Front panel control: color display (LCD) + jog dial control knob
- Front panel buttons: sources/destinations selection, Take/Autotake switching, output lock, control lock, preset operations, reset
- USB control: USB mini-B receptacle; USB 2.0; device class HID
- LAN control (-R suffixed models): Neutrik etherCON connector for Ethernet/LAN connection
- RS-232 control (-R suffixed models): 9-pole D-SUB connector (female)
- Built-in website (web browser control)
- Lightware Device Controller (LDC) control via LAN or USB
- Ethernet services / ports
 - LW2 protocol: TCP 10001
 - LW3 protocol: TCP 6107
 - Secondary protocol: TCP 23
 - HTTP port: TCP 80
- RS-232 factory default settings: RS-232 enabled; 57600 Baud; Protocol: LW3



GENERAL

- Dimensions (MX2-24x24 family): 440.5 (483 with rack ears) W x 177 H x 280.2 D mm; 17.3 (19 with rack ears) W x 6.9 H x 11 D in
- Mounting options
 - Standard rack installation (rack ears supplied)
- LVD compatibility (Electrical safety): EN 62368-1:2014 Second Edition
- Compliance: CE, UKCA, UL
- Warranty: 3 years
- Cooling: by cooling fans, air flows from front to rear
- 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