

Series **Modular HDMI 2.0** Matrix Switcher

MX2M-FR24R-FP

Part No.: 9111 0025

MX2M-FR24R-FP is a member of the Lightware MX2 modular matrix switcher series, supporting uncompromised 4K UHD resolution at 60Hz with RGB 4:4:4 colorspace. Equipped with **one single PSU** to provide power supply for the frame as well as **remote power via PoE**.

MX2M-FR24R-FP is a member of the **Lightware MX2 modular matrix switcher series**, supporting uncompromised **4K UHD resolution at 60Hz with 4:4:4** sampling pattern and with downconversion capabilities to 4:2:2, supporting **HDCP 2.3 and 1.x, 3D, Dolby TrueHD and DTS-HD Master Audio**. The non-blocking matrix architecture distributes and switches 24 video signals to 24 outputs, distributed along six 4-port boards respectively per direction.

This versatile and **customizable device is suitable for various types of applications**, the actual application determining the choice of input and output boards to be included in the frame. It is a perfect choice for installations where a huge number of HDMI 2.0 compliant and other types of input and output video ports are required, **including HDMI 2.0, DisplayPort 1.2, HDBaseT™ and compressed AV-Over-IP standards**, as well as extension through fibre.

Besides the six 4-port input and six 4-port output video boards, there are four low speed **installable slots for Dante, ADC and DAC audio input and output boards, GPIO, USB and other connectivity options**.

Control for connected extenders is served **by Ethernet layer**. The Ethernet layer can also be used for IP extension, as well as for command injection for IR and serial control by third party devices.

For operation **safety power redundancy is available**, and PSU drawers are field-exchangeable for ease of maintenance. The device also supports various **IT security standards**.

Upon installing a second power supply unit for the MX2M-FR24R-FP matrix frame, in order to unlock the possibility for **redundant operation** users need to **upgrade the device's firmware by purchasing** the Redundancy Upgrade.

For users who purchased their device with two PSU drawers and only looking to get additional PSU drawers as a spare or backup **do not need to perform the firmware upgrade** as their device is fully power redundancy capable by default.



Features

- Non-blocking matrix architecture to distribute and switch 24 uncompressed 4K@60Hz 4:4:4 input video signals to 24 outputs
- HDCP 1.4 and 2.3 support
- Flexible design with support for hot-swappable I/O boards
- Six slots for 4-port video input boards, six slots for 4-port video output boards and additional four slots for I/O boards audio and GPIO connectors
- Audio layer for independent audio routing of uncompressed (e.g. 7.1 LPCM) and compressed audio
- Audio signals received and extracted by the video I/O boards or via audio I/O boards
- Ethernet layer for IP extension to extenders
- Command injection for IR and serial control of third-party devices
- Low-speed I/O boards can be placed in video input and output slots
- Front to back cooling
- LCD, jog dial, and push buttons for front panel operation
- Internal power distribution system for video I/O boards with PoE PSE feature and for future high power consumption I/O boards
- Optional AC line redundancy for protection against AC line power outage
- Field replaceable PSU drawers for ease of maintenance
- IT security features e.g. LDAP and AD integration, SSH, HTTPS for control, etc.
- Embedded web and Lightware Device Controller support for control
- Open LW3 control API for integration with third-party controller systems
- Connectivity for breakout boxes that can accommodate additional low-speed I/O boards



Specifications

| | | | | |
|--------------------------------|--|---|---|---|
| Video | Number of input slots | | 6 | |
| | Number of output slots | | 6 | |
| | Crosspoint | | 24 x 24 non-blocking | |
| | Maximum data rate per video channel | | 18 Gbps | |
| | Maximum pixel clock | | 597 MHz | |
| Audio | Number of dedicated IO slots | | 4 | |
| | Crosspoint | | 88 x 88 non-blocking | |
| | Maximum net data rate per audio stream | | 36.86 Mbps | |
| Control | Ethernet | Control | 1x 100Base-T via EtherCON for direct control | |
| | | User Data | 1x 1000Base-T via EtherCON for user data pass-through | |
| | | Mixed | 1x 1000Base-T via EtherCON for control or user data passthrough | |
| | RS-232 | Connector | | 1x Dsub 9 |
| | | Symbol rate | | between 200 and 115200 baud |
| | | Configuration | | 8N1 |
| | USB | Connector | | 1x mini USB Type B for LDC control |
| Front panel crosspoint control | | | 24 + 24 + 2 + 3 keys for crosspoint and preset control | |
| Front panel LCD | | | 2.2" 240x320 TFT LCD Display with rotary switch | |
| General | PSU drawer | Standrad configuration | 1x PSU drawer with IEC connector (90-240 VAC, 50-60 Hz, max 13,5 A) | |
| | | Redundant configuration | 2x PSU drawers with 1x IEC connector per drawer (90-240 VAC, 50-60 Hz, max 13,5 A) | |
| | AC line power redundancy | | 1+1 up to 500 W frame powering, 1+1 up to 600 W PoE powering | |
| | Power consumption (max) | | 500 W | |
| | PoE powering | Standard configuration | | up to 600 W |
| | | Redundant configuration | | up to 1200 W (with redundant operation up to 600 W) |
| | Maximum PoE powering per endpoint | | 100 W | |
| | Thermal dissipation (max) | Without PoE | | 1706 BTU per hour |
| | | With PoE in a Redundant configuration and maximum PoE powering | | 2730 BTU per hour |
| | Cooling | | front-to-back | |
| | Mounting | Rack mounting | | Yes |
| | Dimensions | Without protruding parts (Chassis handle, PSU drawer handle, mountic bracket) | | 354.8 mm H x 447 mm W x 400 mm D |
| | | With protruding parts (Chassis handle, PSU drawer handle, mountic bracket) | | 354.8 mm H x 483 mm W x 473 mm D |
| | Weight | | | TBD |
| | Operating conditions | Ambient temperature | | 0-50°C |
| Relative humidity | | | 0-90% (non-condensing) | |
| Transportation conditions | Ambient temperature | | -20-70°C | |
| | Relative humidity | | 0-95% (non-condensing) | |
| Compliance | | | EN 55032:2015 IEC 61000-3-3:2013+AMD1:2017 IEC 61000-3-2:2018 FCC CFR Title 47, Part 15, Subpart B UL | |
| Warranty | | | 3 years | |