

# MMX2-4x3-H20



### HDMI 2.0 Switcher with breakout Audio, Occupancy Sensor input and various control features

Lightware's HDMI2.0 switcher allows users to switch between in-room computers and BYOD devices with video and audio signals up to 4k@60Hz 4:4:4.





### **Bring Collaboration Spaces to the Next Level**

MMX2-4x1-H20 and MMX-4x3-H20 are unique, compact size matrix switchers. They have four HDMI inputs and either one or three independent HDMI outputs. Audio can be de-embedded from the HDMI signal to a balanced 5-pole Phoenix (Euroblock) port. The volume of the audio signal can be modified at the output. The devices are capable to transfer video signal with resolutions up to 4K60 and are HDCP2.2 compliant.

Occupancy sensor input, **GPIO** and **RS-232** ports can be used to integrate other devices into the system. The device is configurable via the Lightware Device Controller software.

**Automated room control features** are also included through GPIO ports, besides of RS-232 and occupancy sensor connectivity. The switcher also thrives when it comes to audio capabilities, offering analog audio de-embedding feature.

### **Additional Features and Capabilities**

Security is always a key concern in the corporate world, therefore our engineers ensured that the MMX2-4x1-H20 & MMX-4x3-H20 adheres to the strictest security standards. A secure corporate Ethernet interface ensures secure device control and configuration **under the SSH, SSL and HTTPS standards**.

#### **Features**

- Dedicated secure corporate and room utility Ethernet connectivity
- Occupancy sensor connection (with 24V power supply)
- Configurable Autoselect on video inputs
- RS-232 ports for device control
- Passive, noiseless cooling
- Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps)
- SSH, SSL, HTTPS for IT security
- Audio de-embedding
- Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance)
- GPIO control ports
- Device control via Ethernet (TCP/IP)
- Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock)















## **Specifications**

| -       |  |                     |   |
|---------|--|---------------------|---|
| Video   | Resolution                               |                     | Up to UHD/4k@60Hz 4:4:4                                       |
|         | Signal Type                              |                     | HDMI 2.0, HDMI 1.x, DVI                                       |
|         | Maximum data rate                        |                     | 18 Gbps   |
|         | Maximum pixel clock                      |                     | 600 MHz   |
|         | Content protections                      |                     | HDCP 1.x, HDCP 2.2  |
|         | Connector type (IN)                      |                     | 4x HDMI receptacle type A with screw locking option           |
|         | Connector type (OUT)                     |                     | 3x HDMI receptacle type A with screw locking option           |
|         | Video processing                         |                     | Signal parameter measurement                                  |
| Audio   | Audio mode                               |                     | Simultaneous pass-through and de-embedding to the Audio layer |
|         | Supported audio formats for pass-through |                     | All HDMI 2.0 audio formats                                    |
|         | Supported audio formats for de-embedding | Uncompressed        | LPCM (up to 8 channels, 192 kHz, 24 bits per sample)          |
|         |  | Compressed          | Dolby Digtal, DTS   |
|         |  | Compressed HBR      | Dolby TrueHD, DTS-HD  |
| Control | Ethernet                                 | Control             | 1x 100Base-T via RJ-45 for Secure Control                     |
|         |  | User Data           | 1x 100Base-T via RJ-45 for Utility AV                         |
|         |  |                     | 1x 100Base-T via RJ-45 for Configurable Ethernet              |
|         |  | Audio               | 1x 100Base-T via RJ-45 for Dante audio (output)               |
|         | RS232                                    | Connector           | 2x 3Pol Phoenix   |
|         |  | Symbol rate         | between 9600 and 115200 baud                                  |
|         |  | Configuration       | Parity: none, odd or ever                                     |
|         |  |                     | Stopbits: 1 or 2  |
|         | USB                                      | Connectors          | 1x mini USB Type B (reserved for service)                     |
|         |  |                     | 1x USB Type A (reserved for furure developments)              |
|         | Room Occupancy Sensor                    | Connector           | 3Pol Phoenix  |
|         | GPI0                                     | Connector           | 8Pol Phoenix  |
| General | Powering                                 |                     | External 5V/3A wall adaptor                                   |
|         | Dimensions                               | Width               | 221 mm  |
|         |  | Height              | 26 mm   |
|         |  | Depth               | 68 mm   |
|         | 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)  |
|         | Complience                               |                     | EN 55032:2015   |
|         |  |                     | IEC 61000-3-3:2013+AMD1:2017                                  |
|         |  |                     | FCC CFR Title 47, Part 15, Subpart B                          |
|         | Warranty                                 |                     | 3 years   |



