



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MMX4X2-HDMI

FUNCTIONAL OVERVIEW

The MMX4x2-HDMI is a compact 4x2 HDMI matrix switcher with two independent HDMI outputs. It supports 4K/UHD and 3D video, HDCP compliance, and Pixel Accurate Reclocking. The unit provides analog audio embedding into HDMI outputs and analog audio de-embedding from HDMI to a balanced analog audio output; analog audio gain and output volume/balance are adjustable. Control is available via Ethernet, USB, RS-232, and infrared, with configuration and automation supported by Lightware Device Controller software and the built-in Event Manager.

VIDEO INPUT AND OUTPUT

- Video inputs: 4x HDMI input ports
- Video outputs: 2x HDMI output ports (independent)
- Connector type (HDMI I/O): 19-pole HDMI Type A receptacle
- AV standard: DVI 1.0, HDMI 1.4
- HDCP compliance: HDCP 1.4
- Color space: RGB, YCbCr
- Video delay: 0 frame
- Supported resolutions at 8 bits/color: up to 4096x2048@30Hz (4:4:4) or 4096x2048@60Hz (4:2:0); up to 3840x2160@30Hz (4:4:4) or 3840x2160@60Hz (4:2:0); up to 1920x1080@60Hz (4:4:4)
- Deep color: up to 12 bits/color
- Reclocking: Pixel Accurate Reclocking
- 3D support: yes

AUDIO CAPABILITIES

- HDMI embedded audio support: 8 channel PCM; Dolby TrueHD, DTS-HD Master Audio 7.1
- Analog audio input: balanced / unbalanced stereo via 5-pole Phoenix connector; 2-ch PCM; 48 kHz sampling frequency; gain -12 dB to +6 dB
- Analog audio output: balanced / unbalanced stereo via 5-pole Phoenix connector; 2-ch PCM; 48 kHz sampling frequency; volume -57 dB to 0 dB; balance 0-100 (50 = center)

- Audio embedding: analog audio input can be embedded into HDMI outputs
- Audio de-embedding: HDMI audio can be de-embedded to analog audio output (supports 2 channel PCM audio signals only)

POWERING

- External power adaptor (supplied)
- Supported power source (adaptor input): 100–240 V AC; 50/60 Hz
- Supplied power (adaptor output): 12 V 2 A DC
- DC power plug: locking DC connector (2.1/5.5 mm pin)
- MMX4x2-HDMI power consumption (min/max): 2 W / 4.6 W

CONTROL

- Ethernet control: multiple simultaneous TCP/IP connections; supports LW2 and LW3 protocols
- USB control (front panel mini-B): LW3 protocol; connection to Lightware Device Controller (LDC)
- RS-232 control: 3-pole Phoenix connector; configurable serial parameters; control and integration options
- Infrared control: IR IN and IR OUT via 3.5 mm connector; pronto HEX support via control/features
- Front panel control: OUT 1 / OUT 2 video select buttons; reset; Set Audio Config button; control lock
- Lightware Device Controller (LDC) software: crosspoint control, EDID management, diagnostics, Event Manager configuration, settings/backup/restore
- Built-in Event Manager: automated actions based on device conditions
- Advanced Control Pack (from FW package v1.3.1 / v1.6.0b19 as applicable):
 - Consumer Electronics Control (CEC) interface and command sending
 - RS-232 Recognizer
 - TCP Recognizer
 - Basic IT security features including cleartext login, TCP/IP port blocking, MAC address filtering
 - Batch commands (command salvo) and macro capability
 - Dark Mode
 - Event Manager+ functions (AND operator for conditions, variables, condition triggering)

GENERAL

- Compliance: CE, UKCA
- Safety: EN 62368-1:2020
- EMC compliance (emission): EN 55032:2015+A1:2020
- EMC compliance (immunity): EN 55035:2017+A11:2020
- RoHS compliance: EN 63000:2018
- Warranty: 3 years
- Cooling: passive
- Enclosure material: 1 mm steel
- Dimensions: 221 W x 100.4 D x 26 H mm (8.7 W x 3.95 D x 1.02 H inch)
- Weight: 625 g
- Mounting options:
 - 1U high rack shelf; under-desk double mounting kit
 - UD Mounting Plate F120
 - UD Mounting Pro P140
- Supplied accessories:
 - 12V DC adaptor with interchangeable plugs
 - UTP patch cable (3 m)
 - Phoenix® Combicon 3-pole connector
 - Phoenix® Combicon 5-pole connector (2x)
 - Safety & warranty info; Quick Start Guide
- Packaging: product has a full paper / green packaging

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-08-19	Initial version	Tamas Forgacs