

ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MMX4X2-HT200

FUNCTIONAL OVERVIEW

MMX4x2-HT200 is a compact 4x2 matrix switcher with three HDMI inputs and one HDBaseT™ compatible TPS input, and two independent HDMI outputs. It supports 4K/UHD/3D video, HDCP compliance, and Pixel Accurate Reclocking. The device provides analog audio embedding into HDMI outputs and analog audio de-embedding from HDMI to a balanced analog audio output, with adjustable analog gain and output volume/balance. Control is available via Ethernet, USB, RS-232, and infrared, with automation via the built-in Event Manager configurable in Lightware Device Controller.

VIDEO INPUT AND OUTPUT

- Video inputs: 1x TPS input port (HDBaseT™ compatible, RJ45) and 3x HDMI input ports
- Video outputs: 2x HDMI output ports (independent)
- HDMI connector type (I/O): 19-pole HDMI Type A receptacle
- HDMI AV standard: DVI 1.0, HDMI 1.4
- HDMI HDCP compliance: HDCP 1.4
- HDMI color space: RGB, YCbCr
- HDMI video delay: 0 frame
- HDMI 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)
- HDMI deep color: up to 12 bits/color
- HDMI reclocking: Pixel Accurate Reclocking
- HDMI 3D support: yes
- TPS input: Compliance HDBaseT™; HDCP 1.4; transferred signals Video, Audio, RS-232, Infrared, Ethernet; 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); 1920x1080@60Hz (4:4:4) up to 12 bits/color

AUDIO CAPABILITIES

- HDMI/TPS 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)
- Power consumption (min/max): 3.6 W / 9.6 W

CONTROL

- Ethernet control: supports LW2 and LW3 protocols; firmware update support
- USB control interface (front panel mini-B): supports LW3 protocol; connection to Lightware Device Controller (LDC)
- RS-232 control: 3-pole Phoenix connector; also RS-232 over TPS link (link serial)
- Infrared control: IR IN and IR OUT via 3.5 mm TRS connector; IR also available via TPS interface
- Front panel control: OUT 1 / OUT 2 video select buttons; reset; Set Audio Config button; control lock
- Lightware Device Controller (LDC): crosspoint control, EDID management, diagnostics (Frame Detector; Cable Diagnostics for TPS), Event Manager, 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