



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MMX8X8-HT440

FUNCTIONAL OVERVIEW

MMX8x8-HT440 is a standalone multimedia matrix switcher for collaboration room environments. It provides eight video inputs and eight video outputs, combining HDMI and TPS interfaces with support for 4K/UHD, 3D and HDCP. The unit supports analog audio embedding and de-embedding through configurable AUX analog audio I/O ports. TPS ports carry video, audio, RS-232 and Ethernet and are PoE-compatible. Control is available from the front panel, USB, Ethernet and RS-232, with additional GPIO, relay, IR and serial control interfaces.

VIDEO INPUT AND OUTPUT

- 8 video inputs total:
 - 4x TPS inputs on RJ45
 - 4x HDMI inputs on 19-pole HDMI Type A receptacles
- 8 video outputs total:
 - 4x TPS outputs on RJ45
 - 4x HDMI outputs on 19-pole HDMI Type A receptacles
- HDMI A/V standard: DVI 1.0, HDMI 1.4
- TPS compliance: HDBaseT™
- HDCP compliance: HDCP 1.4
- Supported color spaces: RGB, YCbCr
- Supported resolutions at 8 bits/color:
 - 3840x2160@30Hz RGB 4:4:4
 - 3840x2160@60Hz YCbCr 4:2:0
 - 1920x1080@120 Hz, 24 bit RGB 4:4:4
- All standard VESA, CEA and other custom resolutions up to 300 MHz are supported
- Video delay: 0 frame
- Reclocking: Pixel Accurate Reclocking
- 3D support: yes
- HDMI input cable equalization: Yes, +12 dB fixed

- TPS transmitted signals:
 - Video
 - Audio
 - RS-232
 - Infrared
 - Ethernet
- Maximum TPS extension distances:
 - up to 100 m over CAT5e AWG24 in Auto mode at 1920x1080p@60Hz / 24 bpp
 - up to 130 m over CAT5e AWG24 in Longreach mode at resolutions up to 148.5 MHz pixel clock
 - up to 120 m over CAT7 AWG23 in Auto mode at 1920x1080p@60Hz / 24 bpp
 - up to 170 m over CAT7 AWG23 in Longreach mode at resolutions up to 148.5 MHz pixel clock
 - up to 70 m over CAT5e AWG24 and up to 100 m over CAT7 AWG23 at 3840x2160@30Hz UHD or 4096x2160@30Hz 4K

AUDIO CAPABILITIES

- Audio inputs:
 - 4x HDMI embedded audio
 - 4x TPS embedded audio
 - 6x AUX analog audio I/O configurable as input or output
- Audio outputs:
 - 4x HDMI embedded audio
 - 4x TPS embedded audio
 - 6x AUX analog audio I/O configurable as input or output
- AUX analog audio I/O can be configured as input or output; sum of the analog audio inputs and outputs is six
- AUX analog audio I/O configured as input can embed audio into the HDMI stream of the port beside it
- AUX analog audio I/O configured as output can de-embed audio from the HDMI stream of the port beside it
- Analog audio connector type: 5-pole Phoenix connector
- Audio formats: 2-ch PCM
- Sampling frequency: 48 kHz
- Maximum analog audio input level: +0 dBu, 0.77 Vrms, 2.19 Vpp

- Signal transmission: balanced / unbalanced signal
- Analog audio input gain: 0 dB - 6 dB
- Analog audio input balance: 0 - 100 (50 = center)
- Analog audio output volume: -78 dB - 0 dB
- Analog audio output balance: 0 - 100 (50 = center)
- TPS audio formats:
 - 8 channel PCM
 - Dolby TrueHD
 - DTS-HD Master Audio 7.1

POWERING

- Built-in PSU
- Powered locally through a standard IEC AC connector
- Supported power source: 100-240 V AC; 50~60 Hz
- The device powers on immediately when the power cord is connected to the AC input connector
- Maximum power consumption: 122 W
- Maximum heat dissipation: 417 BTU/h
- TPS input and output ports are PoE-compatible
- Each TPS port can remote power one 20 W PoE device
- Ethernet ports do not support PoE; only TPS ports have PoE function

CONTROL

- Front-panel control via color LCD display and rotary jog dial knob
- USB mini-B front-panel connection for local control
- Control Ethernet port on RJ45 for LAN control
- 2x bi-directional RS-232 ports on 3-pole Phoenix connectors
- 2x Serial/Infra output ports on 2-pole Phoenix connectors for IR output or TTL output serial signal
- 4x IR output ports on 3.5 mm jack connectors
- GPIO control port: 6 configurable GPIO pins on 8-pole Phoenix connector
- Relay control: 4 relays on 8-pole Phoenix connector
- Control is supported via RS-232, Ethernet or USB

- Supported control protocols:
 - LW2
 - LW3
- Lightware Device Controller software is supported
- Supports Event Manager
- Supports Miniweb
- Supports Infra code sending
- Supports CEC
- Supports RS-232 Recognizer
- Advanced Control Pack v3 features supported: Basic IT Security, Batch Commands, Event Manager+, TCP Recognizer

GENERAL

- Dimensions: 442 W x 87.8 H x 300 D mm; 482 mm width with rack-mounting ears
- Enclosure material: 1 mm steel
- Rack mountable: yes
- Mounting height: 2U
- Mounting option: standard rack installation using the supplied two rack ears
- Cooling: by cooling fans; air flows from front to rear
- Compliance: CE, UKCA, UL
- Electrical safety: EN 62368-1:2020
- RoHS: EN 63000:2018
- Supplied accessories:
 - Matrix switcher
 - Safety and Warranty Info
 - Quick Start Guide
 - IEC power cable
 - 2x Infrared emitter unit Phoenix® Combicon 2-pole connector
 - 1x LAN straight-through cable, CAT5e type, 0.25m length
 - 4x Phoenix® Combicon 2-pole connector
 - 3x Phoenix® Combicon 3-pole connector
 - 4x Phoenix® Combicon 5-pole connector
 - 2x Phoenix® Combicon 8-pole connector
- Warranty period: 3 years



DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-08-18	Initial version	Tamas Forgacs