



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: MX-4TPS2-4HDMI-IB-AP

FUNCTIONAL OVERVIEW

MX-4TPS2-4HDMI-IB-AP is an MX-FR series input board for Lightware modular matrix frames. It provides four TPS2 (HDBaseT-based) inputs and four HDMI inputs, enabling mixed-format source connectivity to the matrix. The “-AP” variant supports PoE-compatible remote powering for connected TPS extenders (using the supplied external PSU) and includes an additional analog audio port for embedding analog audio into the TPS video stream or de-embedding audio from an HDMI stream.

VIDEO INPUTS

- Input type / quantity (on one board):
 - 4 × TPS2 inputs (TPS ports; HDBaseT-based operation)
 - 4 × HDMI inputs
- TPS link modes (TPS/TPS2 port parameterization): supports configurable TPS port modes including HDBaseT mode and Longreach mode (and additional modes as provided by TPS port settings)
- HDMI/DVI mode indication & deep-color forwarding (signal status/indication):
 - DVI/HDMI mode indication including HDMI deep color modes (e.g., 24/30/36 bpp referenced in port signal info)
- HDCP status indication/control context: HDCP state is reported as part of HDMI-3D/TPS-related port status/parameters (HDCP enabled/disabled/state shown in signal info)
- Maximum extension distances (TPS/TPS2 ports; Auto / Longreach):
 - Example entries from the maximum cable length table: 1920×1080p@60 (24 bpp): up to 100 m / 130 m on CAT5e AWG24 (Auto/Longreach)
 - 3840×2160@30 (UHD): 70 m / NA on CAT5e AWG24 (Auto/Longreach)

AUDIO CAPABILITIES

- 8x Phoenix® Combicon 5-pole connector for analog audio embedding
- Audio routing modes: selectable behaviors include no audio, HDMI audio passthrough, embed from auxiliary audio, de-embed to auxiliary audio, and HDMI passthrough with de-embed to auxiliary audio.

POWERING

- Powered when installed in a compatible MX-FR modular matrix frame (board draws operating power from the frame).
- PoE-compatible remote powering is available for connected PoE-compatible TPS extenders when used with MX-TPS2 boards including MX-4TPS2-4HDMI-IB-AP.
- For PoE-compatible remote powering, an external PSU supplied with the board is required (48 V external PSU for PoE feature is listed as the default accessory for PoE-capable TPS2 boards).
- Compatibility warning: TPS-TX/RX90 and TPS-TX/RX95 devices are stated as not PoE-standard compliant and must not be powered this way (risk of damage).

GENERAL

- Compliance: CE, UKCA
- EMC (emission): EN 62368-1:2024
- EMC (immunity): EN 55035:2017+A11:2020
- RoHS: EN 63000:2018
- Electrical safety: EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011
- Laser safety: EN 60825-1:2014+A11:2021
- Warranty period: 3 years.

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-08-25	Initial version	Tamas Forgacs