



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: HDMI-TPN-RX107-V2

FUNCTIONAL OVERVIEW

The HDMI-TPN-RX107-V2 is a networked SDVoE receiver endpoint for extending HDMI 2.0 signals over a 10GbE copper (CATx) AV network. It receives a compressed SDVoE audio/video stream from a TPN transmitter (via a 10G network switch in a matrix system) and outputs HDMI to a local display with extra-low latency. The unit also supports transport of embedded audio, user Ethernet, and bidirectional RS-232 for device integration within a centralized TPN system.

VIDEO INPUT AND OUTPUT

- Video input (TPN / SDVoE)
 - 1x RJ45 female, 10GBase-T, PoE PD (IEEE802.3af)
 - Compliance: SDVoE, HDCP 2.2
 - Transferred signals: Video, Audio, RS-232, Infrared, Ethernet, CEC
 - Color space: RGB, YCbCr
 - Video latency: 0 frame (five lines / under 8 ms)
 - Compression ratio: 1.4:1 (applied only when AV signal exceeds HDMI 1.4 bandwidth)
 - Supported resolutions (8 bits/color): up to 4096x2160@60 (4:4:4) or up to 3840x2160@60 (4:4:4)
- Video output (HDMI)
 - 1x 19-pole HDMI Type A receptacle
 - Standard: DVI 1.0, HDMI 1.4, HDMI 2.0
 - Supported resolutions (8 bits/color): up to 4096x2160@60 (4:4:4) or up to 3840x2160@60 (4:4:4)
 - CEC support: Transparent

AUDIO CAPABILITIES

- Embedded HDMI audio is carried within the SDVoE stream and output on HDMI.
- HDMI audio formats supported:
 - 8-channel PCM
 - Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos
 - DTS, DTS-HD Master Audio 7.1, WMA Pro

POWERING

- Local power: external 12V DC, 2A power adaptor (locking DC connector)
- Remote power: PoE PD (IEEE 802.3af) via the TPN input from a compatible network switch
- Note: endpoint devices cannot send remote power to each other

CONTROL

- Centralized management/control: via TPN-MMU-X100 series Matrix Management Unit
- Configuration and routing interfaces (via MMU): built-in web interface; Lightware REST API over HTTP(S); LW3 protocol (TCP / WS / WSS as applicable to MMU)
- Ethernet-based control concept: MMU and endpoints are controlled over Ethernet within the TPN system architecture
- RS-232: bi-directional serial interface on Phoenix connector; supports serial configuration and command injection through the MMU

GENERAL

- Dimensions (W × D × H): 100.4 × 151.8 × 26 mm (3.95 × 5.97 × 1 in)
- Weight: 538 g (1.19 lbs)
- Mounting options (compatibility)
 - 1U High Rack Shelf (up to 4x)
 - UD Mounting Kit (1x)
 - UD Mounting Kit Double (2x)
 - UD Mounting Plate F110 (1x)
 - UD Mounting Plate F120 (2x)
 - PRC-16-312 rackmount cage (16x)
- LVD / electrical safety compatibility: EN 62368-1:2024



- Cooling: Passive
- Warranty period: 3 years
- Supplied accessories
 - Safety & Warranty Info
 - Quick Start Guide
 - 12V DC adaptor with interchangeable plugs
 - Phoenix® Combicon 3-pole connector
- Packaging: the product has full paper / green packaging

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-07-27	Initial version	Tamas Forgacs