



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: HDMI-TPN-RX107D

FUNCTIONAL OVERVIEW

HDMI-TPN-RX107D is a networked SDVoE HDMI receiver for AV-over-IP distribution over 10G Ethernet (TPN). It receives an HDMI 2.0 video/audio stream via a 10GBase-T RJ45 TPN input and outputs HDMI 2.0 to a display with ultra-low latency. The unit supports HDCP 2.2, transparent CEC, and provides de-embedded 2-channel Dante®/AES67 audio on a dedicated RJ45 port. Device management, routing, and configuration are typically centralized via a Lightware TPN-MMU matrix management unit.

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

- HDMI embedded audio passthrough: supports 8-channel PCM; Dolby Digital / Dolby Digital Plus / Dolby TrueHD / Dolby Atmos; DTS / DTS-HD Master Audio 7.1 / WMA Pro
- De-embedded digital audio: 1x Dante®/AES67 output on RJ45
- Dante/AES67 channels: 2-channel stereo

- Supported Dante/AES67 sampling rates: 44.1, 48, 88.2, 96 kHz
- Dante/AES67 limitations: 2-ch LPCM supported; multichannel and DTS/Dolby encoded formats not supported for de-embedding
- AES67 mode: selectable in Dante® Controller software

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 x D x H): 138 mm x 151.8 mm x 26 mm
- Weight: 604 g
- Mounting options (compatibility):
 - 1U High Rack Shelf: up to 3 same-size devices
 - UD Mounting Plate F120: 1 device
- LVD / electrical safety compatibility: EN 62368-1:2024
- Other compliance (selected): CE, UKCA; EMC EN 55032 / EN 55035; RoHS EN 63000; Laser safety EN 60825-1
- Supplied accessories (in the box):
 - Safety & Warranty Info
 - Quick Start Guide
 - 12V DC adaptor with interchangeable plugs
 - Phoenix® Combicon 3-pole connector



- Warranty period: 3 years
- Cooling: Passive
- 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