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ARCHITECTURAL AND ENGINEERING SPECIFICATION
PRODUCT: HDMI-TPN-RX107D-SR

FUNCTIONAL OVERVIEW

HDMI-TPN-RX107D-SR is a networked SDVoE receiver for extending HDMI 2.0 video/audio over a 10G Ethernet (TPN) network to an HDMI display with ultra-low latency. It receives the stream via a 10GBase-T RJ45 TPN input and outputs HDMI 2.0. As an "-SR" model, it includes an integrated scaler and supports seamless switching (clean cut) during stream changes. The unit also de-embeds HDMI audio to a dedicated Dante®/AES67 output and supports centralized configuration and routing when used with a TPN-MMU matrix management unit.

VIDEO INPUT AND OUTPUT

- Video input (TPN / SDVoE)
  - 1x RJ45 female, 10GBase-T, PoE+ PD (IEEE802.3at)
  - 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)
  - Integrated scaler: built-in scaler function; output is always RGB 8 bit/channel when scaler is enabled
  - Seamless switching: -SR series provides seamless switching (clean cut)
  - 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 802.3at) 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	2026-07-23	Initial version	Tamas Forgacs
v2	2026-08-06	Updated remote powering to PoE+ (IEEE 802.3at)	Tamas Forgacs