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ARCHITECTURAL AND ENGINEERING SPECIFICATION
PRODUCT: HDMI-TPN-RX107AU2K-SR

FUNCTIONAL OVERVIEW

HDMI-TPN-RX107AU2K-SR is a scaling TPN (SDVoE) receiver endpoint for extending HDMI 2.0 AV over a 10GbE network on CATx cabling. It receives an SDVoE stream via its TPN input and outputs HDMI 2.0 to a display with extra-low latency. The -SR model includes an integrated scaler and seamless switching (clean cut) functionality. It supports HDCP 2.2, de-embeds HDMI audio to balanced analog audio output, and provides USB KVM connectivity (USB 2.0 and USB HID) as part of a centrally managed TPN matrix.

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)
  - CEC support: Transparent

AUDIO CAPABILITIES

- Audio carried on TPN/SDVoE stream supports: 8 channel PCM, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS, DTS-HD Master Audio 7.1, WMA Pro
- HDMI output audio formats support: 8 channel PCM, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS, DTS-HD Master Audio 7.1, WMA Pro
- Analog audio de-embedding output (balanced)
  - Connector: 5-pole Phoenix
  - Formats: 2-channel PCM
  - Signal transmission: Balanced
  - Sampling frequency: 48 kHz

POWERING

- Local power: external adaptor, 12V DC, 2A via locking DC connector (2.1 mm pin)
- Remote power: PoE+ PD (IEEE802.3at) via the TPN input port (powered from a compatible network switch)

CONTROL

- Centrally managed and configured via a TPN-MMU (built-in web control)
- Controllable via Lightware REST API (HTTP/HTTPS requests) through the MMU
- Controllable via LW3 protocol through the MMU
- Endpoint interfaces available for integration/command injection within the system:
  - RS-232 via 3-pole Phoenix connector
  - User Ethernet via 1GBase-T RJ45 connectivity

GENERAL

- Dimensions (W x D x H): 138 mm x 151.8 mm x 26 mm
- Weight: 646 g
- Mounting options (compatible):
  - 1U High Rack Shelf (3x)
  - UD Mounting Plate F120 (1x)
- LVD compatibility (electrical safety): EN 62368-1:2024

- Supplied accessories (in the box):
  - Safety & Warranty Info; Quick Start Guide
  - 12V DC adaptor with interchangeable plugs
  - Phoenix® Combicon 3-pole connector
  - Phoenix® Combicon 5-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