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ARCHITECTURAL AND ENGINEERING SPECIFICATION
PRODUCT: HDMI-TPN-RX107DU2K-SR

FUNCTIONAL OVERVIEW

HDMI-TPN-RX107DU2K-SR is a networked SDVoE receiver designed to decode an HDMI 2.0 AV-over-IP stream delivered over 10G Ethernet (TPN) and output HDMI to a display with ultra-low latency. As an "-SR" model it provides an integrated scaler and seamless switching (clean cut) behavior for uninterrupted output during stream changes. As a "-D" model it provides Dante®/AES67 audio de-embedding on a dedicated RJ45 port. USB KVM (Icron) and RS-232 command injection are supported within a centrally managed TPN-MMU system.

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 formats (transported and output on HDMI):
  - 8 channel PCM
  - Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos
  - DTS, DTS-HD Master Audio 7.1, WMA Pro
- Dante®/AES67 de-embedding:
  - 1x RJ45 Dante®/AES67 output
  - 2-channel Dante®/AES67 source
  - Supported sampling rates: 44.1 / 48 / 88.2 / 96 kHz
  - De-embedding supports 2-ch LPCM; multichannel and compressed DTS/ Dolby are not supported
  - AES67 mode supported (set 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
- Routing layers supported in MMU environment: video, audio, USB 2.0 (Icron), USB HID crosspoint control (with follow-video options)

GENERAL

- Dimensions (W x D x H): 138 mm x 151.8 mm x 26 mm
- Weight: 646 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
v2	2026-08-06	Updated remote powering to PoE+ (IEEE 802.3at)	Tamas Forgacs