



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: HDMI-OPTN-RX100A-SR

FUNCTIONAL OVERVIEW

The HDMI-OPTN-RX100A-SR is an SDVoE-based fiber AV-over-IP receiver endpoint with an integrated scaler for adapting the output image to the connected display. It receives an SDVoE stream over a 10Gbps SFP+ optical interface (or DAC) and outputs HDMI 2.0 video/audio. The -SR series supports seamless switching (clean cut) and scaling functionality at the receiver, enabling fast, uninterrupted switching between streams while maintaining a stable video output on the sink device. It also provides analog audio de-embedding and supports extension of control and utility signals (e.g., RS-232 and Ethernet) through the SDVoE link when used in a TPN/OPTN system managed by a Matrix Management Unit (MMU).

VIDEO INPUT (OPTN / SDVOE)

- Connector: SFP+ port slot
- Data rate: Up to 10Gbps
- Accepted interfaces: 10G SFP+ optical transceiver modules; 10G DAC cables
- Compliance: SDVoE
- HDCP compliance: HDCP 2.2
- Transferred signals over the OPTN link: Video, Audio, RS-232, Infrared, Ethernet, CEC
- Color space: RGB, YCbCr
- Video latency: 0 frame (five lines / under 8 ms)
- Compression ratio: 1.4 to 1
- Supported resolutions (8-bit color): up to 4096×2160@60Hz (4:4:4) or up to 3840×2160@60Hz (4:4:4)

VIDEO OUTPUT (HDMI)

- Connector: 19-pole HDMI Type A receptacle
- Standard: DVI 1.0, HDMI 1.4, HDMI 2.0
- Supported resolutions (8-bit color): up to 4096×2160@60Hz (4:4:4) or up to 3840×2160@60Hz (4:4:4)
- CEC support: Transparent

AUDIO CAPABILITIES

- Embedded HDMI audio supported (via SDVoE stream and HDMI output):
 - 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:
 - Connector: 5-pole Phoenix
 - Format: 2-channel PCM
 - Signal transmission: Balanced
 - Sampling frequency: 48 kHz

POWERING

- External power adaptor
- 100–240 V AC; 50/60 Hz (supported power source)
- 12V DC, 2A (supplied power)
- Locking DC connector (2.1 mm pin)

CONTROL

- Ethernet control connectivity
 - RJ45 Ethernet connectors, 1GBase-T, full duplex with autodetect (2 connectors per unit)
- Centralized system management/control when used with a TPN-MMU-X100 series Matrix Management Unit (MMU)
- Control methods available in the MMU environment
 - Built-in web control
 - REST API over HTTP(S)
 - LW3 protocol (including WS/WSS capability on the MMU)
- RS-232 port (3-pole Phoenix) available on the endpoint for serial connectivity in the system

MOUNTING OPTIONS

- Compatible mounting accessories:
 - 1U High Rack Shelf (up to 3x devices)
 - UD Mounting Plate F120 (up to 1x device)
- Ventilation note: Top and side ventilation holes must not be covered

GENERAL

- Dimensions: 138 W × 151.8 D × 26 H mm
- Mounting options: 1U High Rack Shelf (3x); UD Mounting Plate F120 (1x)
- LVD compatibility (electrical safety): EN 62368-1:2024
- Other compliance: CE, UKCA; EMC EN 55032:2015+A1:2020 (emission), EN 55035:2017+A11:2020 (immunity); RoHS EN 63000:2018; laser safety EN 60825-1:2014+A11:2021
- Supplied accessories list:
 - 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
- the product has full paper / green packaging

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-07-20	Initial version	Tamas Forgacs