



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: HDMI-OPTN-RX100A

FUNCTIONAL OVERVIEW

The HDMI-OPTN-RX100A is a fiber-based SDVoE receiver endpoint for AV-over-IP systems. It receives a 10Gbps SDVoE stream via an SFP+ optical interface (or DAC cable) and outputs HDMI 2.0 video and embedded audio to a display. 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: 1.4:1 (only when AV exceeds HDMI 1.4 bandwidth)
- 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
- Standards: 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

- Powered by external power adaptor
- Supported AC source: 100–240 V AC, 50/60 Hz
- Supplied DC power: 12V DC, 2A
- DC connector: 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

- Rack mountable using Lightware mounting accessories, including compatibility with:
 - 1U High Rack Shelf (up to 4x devices)
 - UD Mounting Kit (up to 1x device)



- UD Mounting Kit Double (up to 2x devices)
- UD Mounting Plate F110 (up to 1x device)
- UD Mounting Plate F120 (up to 2x devices)
- PRC-16-312 rackmount cage (up to 16x devices)
- Ventilation note: Top and side ventilation holes must not be covered

GENERAL

- Dimensions: 100.4 W × 151.8 D × 26 H mm
- Weight: 476 g (1.05 lbs)
- Enclosure material: 1 mm steel
- Mounting options: rack mountable with compatible Lightware mounting accessories (see Mounting section list)
- LVD / electrical safety compatibility: 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
- Warranty period: 3 years
- Cooling: Passive
- Operating environment: 0 to +50°C; humidity 10% to 90% non-condensing (storage: -40° to +85°C)
- 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
- Optional accessory: Singlemode / multimode SFP+ module
- Packaging: the product has full paper / green packaging

DOCUMENT REVISION HISTORY

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