



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: HDMI-OPTN-TX100A

FUNCTIONAL OVERVIEW

The HDMI-OPTN-TX100A is an SDVoE-based AV-over-IP transmitter endpoint for extending a single HDMI 2.0 source over a 10Gbps optical network. It accepts up to 4K60 4:4:4 video and transmits video, audio, and control data via an OPTN SFP+ interface using standard 10G SFP+ optical transceiver modules or 10G DAC cabling. The unit supports ultra-low latency transport, HDCP 2.2 and analog audio de-embedding output. 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 AND OUTPUT

- HDMI input
 - Connector type: 19-pole HDMI Type A receptacle
 - Standard: DVI 1.0, HDMI 1.4, HDMI 2.0
 - Supported resolutions at 8 bits/color: up to 4096x2160@60Hz (4:4:4) or up to 3840x2160@60Hz (4:4:4)
 - Audio formats on HDMI input: 8 channel PCM; Dolby Digital; Dolby Digital Plus; Dolby TrueHD; Dolby Atmos; DTS; DTS-HD Master Audio 7.1; WMA Pro
 - CEC support: Transparent
- OPTN output (SDVoE)
 - Connector type: 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: Video, Audio, RS-232, Infrared, Ethernet, CEC
 - Color space: RGB, YCbCr
 - Video latency: 0 frame (five lines/ under 8ms)
 - Compression ratio: 1.4 to 1
 - Supported resolutions at 8 bits/color: up to 4096x2160@60Hz (4:4:4) or up to 3840x2160@60Hz (4:4:4)

AUDIO CAPABILITIES

- Audio transported in the SDVoE stream (OPTN output)
 - Audio formats: 8 channel PCM; Dolby Digital; Dolby Digital Plus; Dolby TrueHD; Dolby Atmos; DTS; DTS-HD Master Audio 7.1; WMA Pro
- Analog audio output (de-embedded from HDMI)
 - Connector: 5-pole Phoenix connector
 - Audio formats: 2-channel PCM
 - Signal transmission: Balanced signal
 - Sampling frequency: 48 kHz

POWERING

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

CONTROL

- EDID control via front-panel EDID button
 - Short press: switch between default and stored user EDID
- RS-232
 - Connector type: 3-pole Phoenix® connector
 - Baud rates: between 9600 and 115200 baud
 - Data bits: 8
 - Parity: None / Odd / Even
 - Stop bits: 1 / 2
- Ethernet
 - Connector type: RJ45 female connector
 - Ethernet data rate: 1GBase-T, full duplex with autodetect
 - Power over Ethernet: Not supported
- System control methods (via TPN-MMU)
 - Built-in web, REST API, LW3 protocol

GENERAL

- Dimensions (mm): 100.4 W x 151.8 D x 26 H
- Dimensions (inch): 3.95 W x 5.97 D x 1 H
- Weight: 476 g (1.05 lbs)
- Cooling: Passive
- Warranty period: 3 years
- Compliance: CE, UKCA
- Electrical safety (LVD compatibility): EN 62368-1:2024
- Mounting options (compatibility)
 - 1U High Rack Shelf (4x)
 - UD Mounting Kit (1x)
 - UD Mounting Kit Double (2x)
 - UD Mounting Plate F110 (1x)
 - UD Mounting Plate F120 (2x)
 - PRC-16-312 rackmount cage (16x)
- 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
- 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