



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: HDMI-TPX-RX106-V2

FUNCTIONAL OVERVIEW

The HDMI-TPX-RX106-V2 is an SDVoE-based point-to-point receiver extender for HDMI 2.0 signals. It receives audio/video and control over a 10GBase-T TPX (RJ45) link from a compatible TPX transmitter and outputs HDMI up to 4K60 4:4:4 with ultra-low latency (under 8 ms). The unit supports HDCP 2.3, EDID emulation operation via the front-panel EDID function, and provides Ethernet and RS-232 connectivity for integration and control use cases.

VIDEO INPUT AND OUTPUT

- Video input (TPX / SDVoE)
 - Connector: RJ45 female (TPX input)
 - Data rate: 10GBase-T
 - Compliance: SDVoE
 - HDCP compliance: HDCP 2.3
 - Color space: RGB, YCbCr
 - Video latency: 0 frame (five lines / under 8 ms)
 - Compression ratio: 1.4 : 1 (applied only if AV signal exceeds HDMI 1.4 bandwidth)
 - Supported resolutions at 8 bits/color: up to 4096x2160@60Hz (4:4:4) or up to 3840x2160@60Hz (4:4:4)
 - Transferred signals: Video, Audio, RS-232, Infrared, Ethernet, CEC
- Video output (HDMI)
 - Connector: 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)
 - CEC support: Transparent

AUDIO CAPABILITIES

- Embedded audio transported over TPX and output on HDMI.
- Supported audio formats:
 - 8-channel PCM
 - Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos
 - DTS, DTS-HD Master Audio 7.1, WMA Pro

POWERING

- Local powering via 12V DC input (locking DC connector; supplied power adaptor: 12V DC, 2A)
- Remote power over TPX via PoC (Power over Copper) between compatible TPX-106 series devices

CONTROL

- Control via Ethernet (1GBase-T RJ45) (DHCP or static IP configuration supported via software/API)
- Control/management via BlueRiver AV Manager (SDVoE Control Server-based)
- API control via BlueRiver TCI API over TCP/IP (terminal connection to endpoint; remote TCP port 6970)
- API control via REST API through the SDVoE Control Server interface
- RS-232 via 3-pole Phoenix connector (bi-directional serial communication; baud 9600–115200, 8 data bits, parity none/odd/even, stop bits 1/2)

GENERAL

- Compliance / LVD (electrical safety): EN 62368-1:2024
- Other compliance: CE, UKCA; EMC (emission) EN 55032:2015+A1:2020; EMC (immunity) EN 55035:2017+A1:2020; RoHS EN 63000:2018
- Cooling: Passive
- Warranty period: 3 years
- Operating environment: 0 to +50°C; 10% to 90% RH non-condensing (storage: -40° to +85°C)
- Dimensions: 100.4 W x 151.8 D x 26 H (mm)
- Enclosure: 1 mm steel; rack mountable with mounting accessories

- Mounting options compatibility (Size 2 devices):
 - 1U High Rack Shelf: supported (4x)
 - UD Mounting Kit: supported
 - UD Mounting Kit Double: supported (2x)
 - UD Mounting Plate F110: supported
 - UD Mounting Plate F120: supported (2x)
 - PRC-16-312 rackmount cage: supported (16x)
- Supplied accessories (receiver package):
 - Safety and Warranty Info
 - Quick Start Guide
 - 12V DC adaptor with interchangeable plugs
 - Phoenix® Combicon 3-pole connector
- 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