



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: HDMI-TPS-TX220

FUNCTIONAL OVERVIEW

The HDMI-TPS-TX220 is an HDBaseT™-compatible transmitter designed to extend digital video (HDMI 1.4 / DVI 1.0) and audio over a single CATx cable via its TPS interface, transporting Ethernet, RS-232 and infrared signals as well. It supports HDCP-encrypted content and advanced EDID management (factory, dynamic, user and transparent EDID emulation) to control source output formats. The unit provides a local HDMI output mirroring the TPS output, pixel accurate reclocking, and optional analog audio embedding. GPIO is available for general purpose input/output control.

VIDEO INPUT AND OUTPUT

- HDMI input: 19-pole HDMI Type A receptacle; A/V Standard: DVI 1.0, HDMI 1.4
- HDCP compliance: Yes, 1.4
- Color space: RGB, YCbCr
- Video delay: 0 frame
- Supported resolutions at 8 bits/color: up to 4096x2048@30Hz (4:4:4) or 4096x2048@60Hz (4:2:0); up to 3840x2160@30Hz (4:4:4) or 3840x2160@60Hz (4:2:0); 1920x1080@60Hz (4:4:4) up to 12 bits/color
- Reclocking: Pixel Accurate Reclocking
- 3D support: Yes
- TPS output port: RJ45 connector; Compliance: HDBaseT™; transferred signals: Video, Audio, RS-232, Infrared, Ethernet
- Local HDMI output: 19-pole HDMI Type A receptacle; same AV content as the TPS output
- EDID management: EDID emulation yes, advanced EDID management; EDID memory: 120 factory presets, 15 programmable; Supported standard EDID v1.3

AUDIO CAPABILITIES

- Embedded audio formats (HDMI/TPS): 8 channel PCM, Dolby TrueHD, DTS-HD Master Audio 7.1
- Analog audio input port (model series spec): 3.5 mm TRS (1/8" jack); Audio formats: 2-ch PCM; Sampling frequency: 48 kHz; Signal transmission: Unbalanced signal
- Maximum analog input level: +0 dBu, 0.77 Vrms, 2.19 Vpp
- Analog audio processing ranges: Volume -95.62 – 0 dB; Gain -12 dB – +6 dB

- Audio embedding: analog audio can be embedded into the TPS output

POWERING

- Local powering: 12V DC input via locking DC connector (5.5/2.1mm pin); supplied power adaptor: 12V 1A DC; supported power source 100-240 V AC; 50/60 Hz
- Remote powering (PoE): Power over Ethernet (PoE) via TPS output (IEEE 802.3af)
- Using PoE with power injector: connect TPS OUT (PoE) to TPS+PoE port of TPS-PI-1P1 power injector, then connect TPS input of compatible receiver to TPS port of TPS-PI-1P1
- Using PoE with matrix/input board: connect TPS OUT (PoE) to PoE-compatible TPS input port of the matrix or input board by a CATx cable
- Ethernet port does not support PoE; only TPS port supports PoE
- If both remote and local power sources are connected, the remote power will be used

CONTROL

- Ethernet control: locking RJ-45 connector for configuring the device using Lightware Device Controller (LDC), or updating it using Lightware Device Updater (LDU); third-party control systems can use this port to control the device
- Control protocols over Ethernet: supports both LW2 and LW3 protocols
- RS-232: 3-pole Phoenix connector for controlling the device with LDC or third-party control systems, or third-party device control; bi-directional serial port pass-through supported; RS-232 modes: Control / Pass-through / Command Injection
- Infrared: IR IN and OUT via 3.5 mm jack; supported carrying frequency is 38 kHz; bidirectional and transparent IR transmission; command injection supported
- GPIO: 8-pole Phoenix connector with seven GPIO pins operating at TTL digital signal levels; direction configurable (input/output)
- Front panel buttons: Reset button; Video Select / Audio Select (as applicable); Show Me button (DHCP settings, restore factory default settings, firmware update mode, Event Manager condition launching); control lock via button combination
- Event Manager: performs predefined actions in response to device status changes

GENERAL

- Enclosure: 1 mm steel
- Dimensions: 221W x 100.4D x 26H mm (8.7 W x 3.95 D x 1.02 H)
- Weight (HDMI and DVI-HDCP series): 610 g
- Cooling: Passive
- Operating temperature: 0 to +50 °C (+32 to +122 °F)
- Operating humidity: 10% to 90%, non-condensing
- Compliance: CE, UKCA; Electrical safety: EN 62368-1:2020; RoHS: EN 63000:2018; EMC (emission): EN 55032:2015+A1:2020; EMC (immunity): EN 55035:2017+A11:2020
- Warranty: 3 years
- Mounting options: under-desk mounting options; rack shelf mounting options (1U high rack shelf); device has two mounting holes with inner thread on the bottom side; optional mounting accessories available
- Supplied accessories:
 - transmitter device
 - 12V DC power adaptor
 - Phoenix® Combicon 3-pole connector
 - Safety and warranty info
 - Quick Start Guide
- Packaging: product has a full paper / green packaging

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
v1	2026-08-03	Initial version	Tamas Forgacs