



ARCHITECTURAL AND ENGINEERING SPECIFICATION

PRODUCT: GVN-HDMI-TX210AP

FUNCTIONAL OVERVIEW

GVN-HDMI-TX210AP is a GEMINI GVN 1Gb AV-over-IP transmitter endpoint for extending HDMI video, embedded audio, USB 2.0, and RS-232 over a 1 Gigabit network as part of a virtual matrix system controlled by the GVN-MMU. It supports up to HDMI 2.0 4K60 4:4:4 transmission with ultra-low latency, advanced EDID management, HDCP 2.2 compliance, and a local HDMI output for monitoring the transmitted signal. It can connect to the network via RJ45 or SFP (one active at a time).

VIDEO INPUT AND OUTPUT

- Video input
 - 1× HDMI Input Port (19-pole HDMI Type-A receptacle)
 - AV standard: DVI 1.0, HDMI 1.4, HDMI 2.0
 - HDCP compliance: HDCP 2.2
 - Color space: RGB, YCbCr
 - Supported resolutions at 8 bits/color: up to 3840×2160@60Hz (4:4:4) or 3840×2160@60Hz (4:2:0); 1920×1080@60Hz (4:4:4); and 4096×2160@60Hz (4:2:0) up to 12 bits/color
 - Input audio formats (embedded): LPCM, Dolby Digital 5.1 ch, Dolby Digital Plus, Dolby Digital Pro-Logic, Dolby TrueHD, DTS:X, Dolby Atmos, DTS 5.1 ch, DTS 96/24, DTS-ES Discrete, DTS-ES Matrix, DTS-HD High Resolution Audio, DTS-HD Master Audio
- Video output (local / monitoring)
 - 1× Local HDMI Output Port (mirrored from AV output; “For a local sink device”)
 - Supported resolutions (8 bits/color): up to 3840×2160@60Hz (4:4:4) or 3840×2160@60Hz (4:2:0); 1920×1080@60Hz (4:4:4); and 4096×2160@60Hz (4:2:0) up to 12 bits/color
 - Embedded audio formats listed (same family list shown for HDMI output): LPCM, Dolby Digital 5.1 ch, Dolby Digital Plus, Dolby Digital Pro-Logic, Dolby TrueHD, DTS:X, Dolby Atmos, DTS 5.1 ch, DTS 96/24, DTS-ES Discrete, DTS-ES Matrix, DTS-HD High Resolution Audio, DTS-HD Master Audio

- AV-over-IP network output
 - 1× AV Output RJ45 connector and 1× SFP module slot (only one active at a time)
 - RJ45 cabling note: applied cable max 100 m (at least CAT5e) for RJ45
 - SFP note: SFP module not supplied; SFP slot supports up to 1 GbE (SFP+ fits physically but will not work)

AUDIO CAPABILITIES

- Embedded audio handling
 - Audio embedded in the HDMI input is transported with the stream and can be de-embedded at endpoints
- Analog audio
 - 5-pole Phoenix® connector present (balanced analog audio; unbalanced also supported)
- Analog audio output: “signal is de-embedded from the selected video signal”
 - Analog audio input mode is supported on GVN-HDMI-TX210AP transmitters from FW v1.7.0b9 (port mode configurable as input; if input, output function not available)
- Audio formats
 - Embedded LPCM and compressed formats listed

POWERING

- Local powering (DC)
 - Powered locally via locking DC 12V connector
 - Supported power source (adaptor): 100–240 V AC, 50/60 Hz
 - Supplied power: 12V DC, 2A DC
- Remote powering
 - Power over Ethernet (PoE) supported: IEEE 802.3af
- PoE+ not supported for this model
- Power consumption / heat
 - Power consumption (max, measured): 11 W
- Heat dissipation (max): 38 BTU/h
- Boot time
 - Approx. 40–45 seconds

CONTROL

- System control modes
 - Lightware Device Controller (LDC) via Ethernet (matrix control/configuration)
 - LW3 protocol commands (ASCII-based Lightware Protocol #3)
 - Built-in website is stated as a GVN control option (MMU provides built-in web; endpoints also provide HTTP preview functions)
- Physical controls
 - Function button: press/hold 5 seconds toggles DHCP vs Static IP mode (with note: switching from DHCP sets static IP to 192.168.1.200 regardless of prior static config)
 - Reset button (hidden)
- Preview / monitoring
 - Note (per manual): configuration via built-in web preview parameters is immediate but not saved and reverts after reboot

GENERAL

- Dimensions / enclosure / weight
 - Enclosure material: 1 mm steel
 - Dimensions: 221 W × 120 D × 26 H mm
 - Weight: 692 g (1.53 lb)
- Cooling: Passive
- Mounting options
 - Gemini devices are half-rack sized
 - Optional mounting accessory described: UD Mounting Plate F120 (single device under-desk/flat surface mounting; maintain ventilation holes)
- Compliance / LVD compatibility
 - Compliance: CE, UKCA
 - EMC (emission): EN 55032:2015+A1:2020
 - EMC (immunity): EN 55035:2017+A11:2020
 - RoHS: EN 63000:2018
 - Electrical safety (LVD-related): EN 62368-1:2020
- Laser safety: EN 60825-1:2014+A11:2021
- Warranty period: 3 years

- Operating environment
 - Operating temperature: 0° to +45°C
 - Operating humidity: 10% to 90%, non-condensing
- Supplied accessories
 - GVN Device
 - Safety and warranty info, Quick Start Guide
 - Phoenix® Combicon 3-pole connector
 - Phoenix® Combicon 5-pole connector
- The product has full paper / green packaging

DOCUMENT REVISION HISTORY

Document	Release Date	Changes	Checked by
Rev. 1.0	2026-06-23	Initial version	Tamas Forgacs