

25G-8TPS2-A2P1-IB

4K HDBaseT Input Board with Digital Audio and Remote Powering

Part No: 9122 0071

Features

- HDMI 1.4 compliant video input over HDBaseT with a resolution of up to 4K / UHD (30Hz RGB or YCbCr 4:4:4, 60Hz YCbCr 4:2:0)
- Pass-through of 4:2:0 3840x2160@60 Hz video input
- Support for HDMI 1.4 embedded uncompressed LPCM audio or compressed high bitrate audio (LPCM, AC-3, MPEG1 Layer 1, MPEG1 Layer2, MPEG1 Layer 3, MPEG2, AAC, DTS, ATRAC, Dolby Digital+, DTS-HD, Dolby Digital TrueHD, DST, and WMA Pro, Dolby Digital EX, Dolby Digital Surround EX)
- De-embedding of IEC 60958-1 (only stereo LPCM), and IEC 61937 (only AC-3, Dolby Digital Plus, Dolby Digital EX, Dolby Digital Surround EX, DTS, DTS ES)
- Video test pattern generation
- Cable length and link quality estimation
- Frame detector functionality with frame rate, color space, pixel clock rate, and active and total area detection
- HDCP 1.4 support
- Deep color support for up to 36 bpp
- Automatic Ethernet only mode support when an Ethernet only device is connected
- Extension for up to 170 meters over CAT6a depending on the video clock used
- Remote powering according to IEEE 802.3af-2003 with increased output power

Featuring eight HDBaseT 1.x input ports, the board is compatible with the full range of Lightware TPS extenders and HDBaseT compliant third party transmitters. The HDBaseT technology provides a transparent medium for all video, audio, data and control signals in line with the 25G multilayer architecture and allows for a cost effective extension solution for up to 170 meters.

The A2 add-on has bi-directional and configurable S/PDIF connectors. 2-channel LPCM or various IEC 61937 audio formats embedded in the HDMI input or from the Return Audio Layer can be switched to the S/PDIF output. Moreover, such audio streams through the S/PDIF input can be embedded into the HDMI signal or can be routed to the Forward Audio Layer.

The board provides remote powering for extenders according to the PoE specification (IEEE 802.3af-2003) but with increased output power of 25.4W. Remote powering does not require an external power source other than that of the 25G matrix switcher.

Supported Media Layers:

- Video layer with embedded audio
- Forward Audio Layer
- Return Audio Layer
- Ethernet layer
- USB KVM layer
- Infra layer
- Consumer Electronics Control layer
- RS-232 & RS-422 control layer

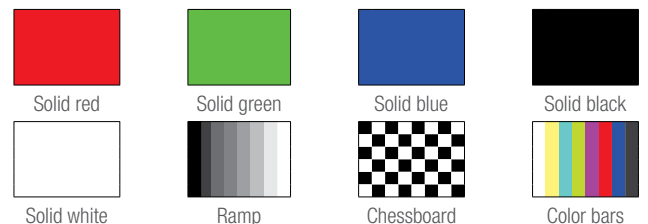


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Specifications

| | |
|---------------------------|--|
| HDCP compliance: | 1.4 |
| HDBaseT compliance: | 1.4 |
| Max resolutions: | 4K / UHD (30Hz RGB or YCbCr 4:4:4, 60Hz YCbCr 4:2:0), 1080p@60Hz, 720p/1080i@120Hz |
| Supported audio formats: | HDMI audio according to the Audio switching matrix section |
| 3D signal compatibility: | Frame packing, side-by-side, top bottom |
| Input cable equalization: | Up to 170 meters according to the maximum cable lengths section |
| HDBaseT connectors: | 8 x RJ45 |
| Audio connectors: | 8 x S/PDIF |
| PoE compliance: | IEEE 802.3af-2003 with output power of 25.5W |

Available Video Patterns:



Test Pattern Generator Video Formats:
480p, 576p, 720p, 1080p, 1080p deep color

Audio Switching Matrix:

| | | Output | | |
|-------|----------------------------------|--|--|--|
| | | HDMI | Digital Audio | Forward Audio Layer |
| Input | HDMI Embedded Audio Over HDBaseT | ✓ (All HDMI audio formats) | ✓ (2-channel LPCM and various IEC 61937 formats*) | ✓ (2-channel LPCM and various IEC 61937 formats*) |
| | Return Audio Layer | ✓ (2-channel LPCM and various IEC 61937 formats*) | ✓ (2-channel LPCM and various IEC 61937 formats*) | ✓ (2-channel LPCM and various IEC 61937 formats*) |
| | Digital Audio | ✓ | ✗ | ✓ |
| | Audio Test Generator | ✓ | ✓ | ✓ |

Note: Simultaneous embedding to and de-embedding from HDMI is not supported.
* Dolby Digital, Dolby Digital EX, Dolby Digital Plus, Dolby Digital Surround EX, DTS, DTS ES

Physical Interfaces:

- 8 RJ45 connectors
- S/PDIF connectors
- Link Status LED per connector
- LED tower (Service, Control, Live and Power indicator)

Max Cable Lengths Supported by the Available Firmware Versions

| Resolution | Pixel Clock Rate | Cable Lengths (Auto / LR Link Mode) | | |
|-------------------------|------------------|-------------------------------------|---------------|----------------|
| | | CAT5e AWG24 | CAT7 AWG26 | CAT7 AWG23 |
| 1024x768@60Hz | 65 MHz | 100 m / 130 m* | 90 m / 120 m* | 120 m / 170 m* |
| 1280x720p@60Hz | 73.8 MHz | 100 m / 130 m* | 90 m / 120 m* | 120 m / 170 m* |
| 1920x1080p@60Hz / 24bpp | 148.5 MHz | 100 m / 130 m* | 90 m / 120 m* | 120 m / 170 m* |
| 1920x1200@60Hz | 152.9 MHz | 100 m / NA* | 90 m / NA* | 120 m / NA* |
| 1600x1200@60Hz | 162 MHz | 100 m / NA* | 90 m / NA* | 120 m / NA* |
| 1920x1080@60Hz / 36bpp | 223 MHz | 70 m / NA* | 70 m / NA* | 100 m / NA* |
| 3840x2160@30Hz UHD | 297 MHz | 70 m / NA* | 70 m / NA* | 100 m / NA* |
| 4096x2160@30Hz 4K | 297 MHz | 70 m / NA* | 70 m / NA* | 100 m / NA* |

* with Long reach operation mode which supports pixel clock frequencies up to 148,5 MHz.