25G-8TPS2-P1-IB

4K HDBaseT Input Board with Remote Powering

25G-8TPS2-P1-IB

Part No: 9122 0070

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.

25G-8TPS2-P1-IB handles embedded audio in the HDMI substream of the HDBaseT signal and can de-embed 2-channel LPCM and various IEC 61937 audio formats from it to the Forward Audio Layer. Embedding of such audio streams from the Return Audio Layer to the HDMI signal is also supported. All audio options of the TPS2 input board are software-configurable on a per-port basis.

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.

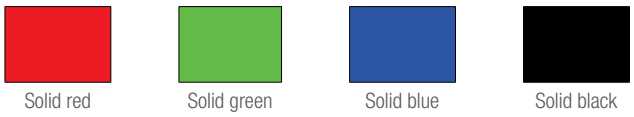
Supported Media Layers:

- 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

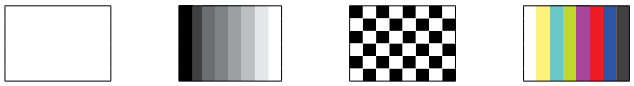
Specifications

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
PoE compliance:	IEEE 802.3af-2003 with output power of 25.5W

Available Video Patterns:



Solid red | Solid green | Solid blue | Solid black



Solid white | Ramp | Chessboard | Color bars

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

Audio Switching Matrix:

		Output	
		HDMI	Forward Audio Layer
Input	HDMI Embedded Audio Over HDBaseT	✔ (All HDMI audio 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*)
	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
- 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.