

TPS Output Board for HDMI, Ethernet, Audio and Control



Part No: 9113 0027, 9113 0028 (A), 9113 0029 (S)



Features:

- HDMI extension supporting 3D and 4K
- 4K / UHD (30Hz RGB 4:4:4, 60Hz YCbCr 4:2:0), UHD, 2560 x 1600, HD video resolutions and all 3D formats are supported
- Accepts HDMI + Ethernet + RS-232 over one CAT5/6/7 cable up to 170m distance
- HDMI 1.4; DVI and HDCP compliant
- 10/100 Ethernet transmission
- Supports all HDMI audio formats
- Digital or analog audio add-on option
- Adjustable analog audio settings
- Integrated PoE power injection option for TPS extenders

MX-TPS2-OB-P the 8 channel twisted pair output board provides HDMI 1.4, audio, Ethernet and RS-232 transmission on a single CAT5/6/7 cable up to 100m in HDBaseT™ and 170m distance in Long reach mode (maximal resolution is Full HD 1080p in Long reach mode). Resolutions up to 4K and 48-bit color depth are handled with all standard audio formats as well as 120Hz 3D signals. The board offers bi-directional RS-232 and Ethernet transmission (each board has a 10/100 uplink connector for the Ethernet network connection) and remote powering option for the TPS extenders available with the PoE add-on. The output board is available with audio add-ons: digital S/PDIF or analog stereo connectors are available for advanced audio functions (HDMI embedded audio signals are managed by the board).

The MX-TPS2-OB-P without the digital or analog audio option also handles HDMI embedded audio. The board is compatible with deep color, Dolby TrueHD and DTS-HD audio and features PCM audio sample rate conversion. Advanced professional functions such as HDCP enable/disable mode, Pixel Accurate Reclocking, Advanced EDID Management and Frame Detector are integrated providing the highest level of setup and usage.

Digital S/PDIF Audio Option:

- S/PDIF breakout for every port
- Bi-directional configurable S/PDIF connectors: audio can be de-embedded from the HDMI signals or audio can be embedded (or replaced) to the HDMI signal
- PoE compatible
- Remote powering on/off switching
- Status feedback

Analog Stereo Audio Option:

- Bi-directional configurable analog stereo port with 5-pole Phoenix connector
- Stereo PCM audio up to 96 kHz can be de-embedded from the HDMI signals
- Digitized audio (PCM 48 kHz) can be embedded (or replaced) to the HDMI signal
- Volume, gain control
- PoE compatible
- Remote powering on/off switching
- Status feedback

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MX-TPS-OB

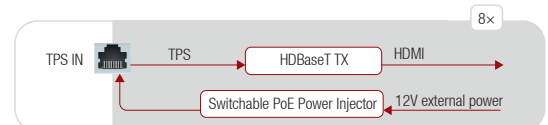


MX-TPS-OB-A

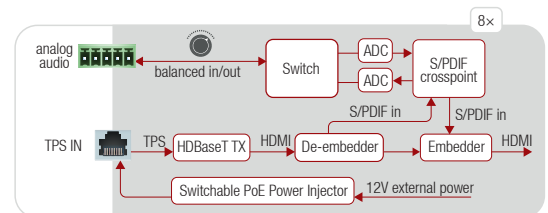


MX-TPS-OB-S

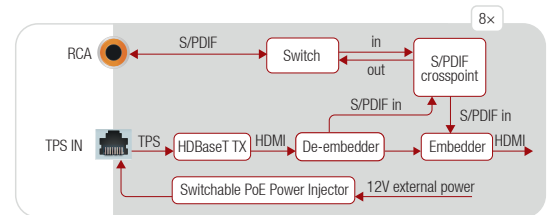
Port Diagram



MX-TPS-OB



MX-TPS-OB-A



MX-TPS-OB-S

Analog Audio Outputs

Volume:	-78 .. 0 dB
Balance:	0 .. 100%

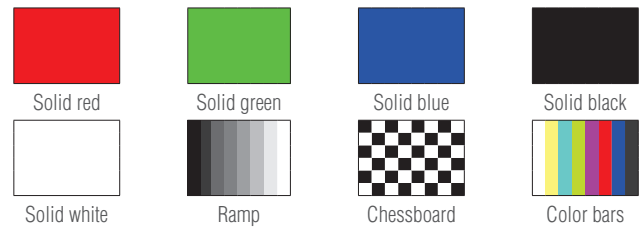
Analog Audio Inputs

Volume:	-63 .. 0 dB
Gain:	0 .. 24 dB
Balance:	0 .. 100%

Specifications

HDCP compliancy:	Yes
Max resolution:	Up to 4K / UHD (30Hz RGB 4:4:4, 60Hz YCbCr 4:2:0)
3D signal compatibility:	Frame packing, side-by-side, top-bottom
Input connectors:	RJ45, S/PDIF, PHOENIX
Power consumption (3.3 V) -OB & -OB-S:	3,4A typ., 7,8 max.
Power consumption (3.3 V) -OB-A:	3,8A typ., 8,2 max.
Power consumption (5 V) -OB & -OB-S:	2,2A typ., 3,1 max.
Power consumption (5 V) -OB-A:	2.2A typ., 3,1 max.
Calculated AC Power (W) -OB & -OB-S:	22W typ., 41W max.
Calculated AC Power (W) -OB-A:	23,5W typ., 42,5W max.
Heat dissipation (BTU) -OB & -OB-S:	75 typ., 139,89 max.
Heat dissipation (BTU) -OB-A:	80,18 typ., 145 max.
Weight MX-TPS-OB:	855 g
Weight MX-TPS-OB-S:	925 g
Weight MX-TPS-OB-A:	920 g

Available Video Patterns:



Test pattern generator video formats:

480p, 576p, 720p, 1080p, 1080p deep color

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.