

MMA10G-TRM4K-4S

Modular 4K/60 SDI/HDMI Bridge



CONNECT. COLLABORATE. SHARE RESOURCES. MANAGE.

Evertz' MMA-10G is a network-based AV distribution solution constructed using Evertz' award winning SDVN (Software Defined Video Network) architecture. MMA-10G utilizes a highly reliable 10GE infrastructure for routing video and audio and offers unprecedented scalability and reliability.



Key Features

- Four SDI (DIN) inputs or outputs (software defined), one HDMI 2.0a input and one HDMI 2.0a output (software defined)
- SMPTE 425-5 compliant (i.e. square division and 2SI support)
- Receive and combine four SDI 3Gbps 1080p @ 60 Hz signals and output to HDMI or 10G fiber at 4096x2160p @ 60 Hz
- Receive and split HDMI or 10G fiber signals at 4096x2160p @ 60 Hz and output to four SDI at 1080p @ 60 Hz each
- Receive two HDMI or 10G fiber video signals at 4096x2160p @ 30/60 Hz and output scaled video individually to two SDIs
- Receive two SDI 3Gbps 1080p @ 60 Hz signals and output each individually to 10G fiber
- High-quality output scaling and frame sync



The MMA10G-TRM4K-4S is a modular device and is installed in an Evertz rack mount modular frame. This approach offers flexibility and density as well as a secure and reliable solution for mounting next to servers.

Live AV Transport

In addition to bridge functionality, the MMA10G-TRM4K-4S can encapsulate uncompressed video and audio from its SDI and HDMI ports and transports them with ultra low latency over its 10GE links.

3Gbps SDI and HDMI 2.0a Interfaces

For its four SDI inputs/outputs, the MMA10G-TRM4K-4S supports multiple resolutions within the SMPTE 2048-2, 296M, 274M, and 259M standards, as well as both the square division and 2SI methods of 4K transport detailed in the SMPTE 425-5 standard. The MMA10G-TRM4K-4S also supports one HDMI 2.0a input and one output with resolution support of up to 4096x2160p @ 60 Hz, 4:4:4 color sampling. The MMA10G-TRM4K-4S features customizable EDID tables and scaling on the output paths that insure the smoothest handoff between sources and sinks.

High-Quality Scaling and Frame Sync

The MMA10G-TRM4K-4S employs EvertzAV's latest in scaling technology with high-quality algorithms providing the best picture quality possible. The MMA10G-TRM4K-4S also supports frame sync capabilities that can be locked to genlock.

Remote Monitoring

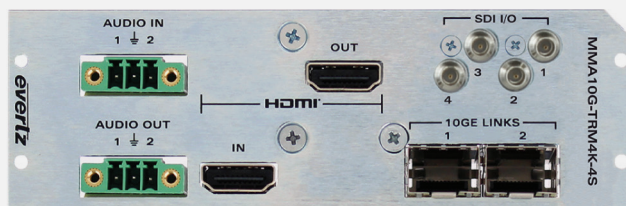
The MMA10G-TRM4K-4S can be remotely monitored via the SNMP protocol using Evertz' award winning VistaLINK Pro NMS software suite. VistaLINK allows a single user from a single workstation complete visibility into the operation of the MMA-10G ecosystem. Users can prevent issues from becoming outages quickly and easily using Evertz' VistaLINK Pro.

Modular 10GE SDI/HDMI Bridge

The MMA10G-TRM4K-4S is a versatile 10GE SDI/HDMI bridge that has four modes of operation:

- **4K SDI transmit mode** allows you to ingest uncompressed broadcast video and audio from four SDI inputs, seamlessly combine the video together, and output via HDMI at 4K60 or via 10G fiber at 4K60 with visually lossless lightweight compression.
- **4K SDI receive mode** allows you to ingest uncompressed video and audio via HDMI or 10G fiber, split the video into four partitions, and output via the four SDI outputs at 1080p60 each.
- **4K individual receive mode** allows you to ingest two 4K30/4K60 (4:2:2 or 4:4:4) video signals via HDMI or two compressed 4K30/4K60 (4:2:2 or 4:4:4) video signals over 10G fiber, and output individually over two SDIs (one scaled 1080p60 video per SDI output).
- **SDI individual transmit mode** allows you to ingest uncompressed broadcast video and audio from two SDI inputs and output each individually over 10G fiber.

MMA10G-TRM4K-4S



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Contents Subject to Change
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Modular 4K/60 SDI/HDMI Bridge



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Specifications

Video Inputs/Outputs	4 SDI (DIN) (software defined), 1 HDMI 2.0a input, and 1 HDMI 2.0a output (software defined)
SDI Supported Resolutions	<p>SMPTE 259M:</p> <ul style="list-style-type: none"> 525i, 625i <p>SMPTE 296M, Y'CbCr 4:2:2, 10-bit:</p> <ul style="list-style-type: none"> 720p @ 23.98 Hz, 720p @ 24 Hz, 720p @ 25 Hz, 720p @ 29.97 Hz, 720p @ 30 Hz, 720p @ 50 Hz, 720p @ 59.94 Hz, 720p @ 60 Hz <p>SMPTE 274M, Y'CbCr 4:2:2, 10-bit:</p> <ul style="list-style-type: none"> 1080i @ 50 Hz, 1080i @ 59.94 Hz, 1080i @ 60 Hz 1080p @ 23.98 Hz, 1080p @ 24 Hz, 1080p @ 25 Hz, 1080p @ 29.97 Hz, 1080p @ 30 Hz 1080p @ 50 Hz, 1080p @ 59.94 Hz, 1080p @ 60 Hz <p>SMPTE 2048-2, Y'CbCr 4:2:2, 10-bit:</p> <ul style="list-style-type: none"> 2048x1080p @ 23.98 Hz, 2048x1080p @ 24 Hz, 2048x1080p @ 47.95 Hz, 2048x1080p @ 48 Hz
HDMI Supported Resolutions	Up to 4096x2160p @ 60 Hz (4:4:4 color sampling)
Audio Inputs	1 stereo unbalanced analog (terminal header)
Audio Input Impedance	High impedance
Audio Input Level	Line level (+4dBu)
Audio Outputs	1 stereo unbalanced analog (terminal header)
Audio Output Impedance	600 Ω
Audio Output Level	Line level (+4dBu)
10GE Outputs	2 SFP+ (see available accessories)
Output Scaling	Yes
HDMI Audio	LPCM (up to 8 channels) Passthrough support for Dolby Digital [®] /AC-3, Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS [®] , DTS-ES, DTS-HD High Res, DTS-HD Master Audio, DTS:X
SNMP Support	Yes
In-Band Control	Yes
Control System	MAGNUM-AV
Web-Based Configuration	Yes
Security Compliance	Compliant with applicable DoD Network Devices Security Technical Implementation Guide (STIG) findings
Modular Design	7800/7801 device, installed in 7800/7801FR
Slots	2
DC Input Voltage	12VDC provided by frame
Power Consumption	40W
Operating Temperature	32° to 104° F (0° to 40° C)
Relative Humidity	10% to 90% RH (non-condensing)

Ordering Information

MMA10G-TRM4K-4S	Modular 4K/60 SDI/HDMI bridge with high-quality scaling and frame sync
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Available Accessories

7801FR	Modular frame, 1RU, 4 slots
7801FC	Modular frame controller for 1RU
7800FR-QT	Modular quiet frame, 3RU, 15 slots, dual PS
7800FC	Modular frame controller for 3RU
MMA10G-SFP-TR85	SFP+, 10GE, 850nm, MMF, 50/125, LC/LC
MMA10G-SFP2-TR13	SFP+, 10GE, 1310nm, SMF, 9/125, LC/LC, 10Km
MMA10G-SFP-SFP-MM3	3m SFP+ to SFP+ fiber patch cable, 10GE, AOC, 850nm

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