It All Starts with a Single Room

The MMA-10G solution provides scalability and growth with 10GbE transport capability.

Evertz’ MMA-10G is extremely flexible, therefore there is no limit to the type of space the technology can be applied. With support for a variety of video and audio formats and near limitless scalability, you can start small and grow with MMA-10G. The MMA-10G solution can be used in a variety of spaces, including:

Meeting Spaces:
Huddle Rooms, Boardrooms & Training Rooms

Presentation Spaces:
Collaboration Rooms, Lecture Halls & Auditoriums
High Performance Video, Audio & USB Routing

Evertz’ MMA-10G solution can tackle the largest of video, audio and USB routing projects. Size is no longer an issue – the MMA-10G can scale to match project requirements of any size, no matter how large or complex. Transport your video, audio and USB data securely and at the highest quality using the largest switch fabric in the industry.

Command and Control:

SECURE EQUIPMENT ROOM

TRM4K: Modular 4K/60 HDMI Gateway

Server

TRM4K

STB

STB

Aux IN

DVD

TRM4K

EXE-26RU: Modular 10GbE Switch Fabric

OPERATIONS

Operator Display

Operator Display

USB Device

Mouse/Keyboard

TRS4K-2: Standalone 4K/60 Dual HDMI Gateway

Operator Display

Operator Display

USB Device

Mouse/Keyboard

TR4K-2

ROOM AUDIO

Audio DSP

Microphones

Microphones

Microphones

Microphones

Microphones

Microphones

Microphones

Microphones
End-to-End Network Based Distribution

EvertzAV’s MMA-10G is an end-to-end network based distribution and routing technology tailored for the ProAV market. EvertzAV has carefully designed each aspect of the MMA-10G ecosystem, blending the predictability of the baseband world with the flexibility and scalability of the networking world.

MMA-10G uses 10Gb Ethernet at its core for transport of the packetized video, audio and control data. The platform allows multiple videos, audios and control to all be carried over a single 10GbE port. To guarantee trouble-free operation, the MMA-10G solution features purpose-built 10GbE switch fabrics, which come in a wide range of port counts to handle any size project from small to large. Through firsthand industry feedback, EvertzAV has developed a series of gateway products, in-room AV switch platforms and visualization monitoring tools to facilitate a variety of project requirements.

Many organizations have already taken advantage of the flexibility MMA-10G offers. Learn how MMA-10G can benefit your organization and open up a world of possibilities never thought possible before.

Key advantages of a MMA-10G-based facility:

- **Agile**
  Start with a single room and add connectivity on demand

- **Flexible**
  Expand and grow the size of your deployment without limitation

- **Secure**
  Key elements of MMA-10G are NIAP listed and Common Criteria certified

- **Future-proof**
  Fully format- and resolution-agnostic infrastructure equates to a future-proof facility
Getting Connected Has Never Been Easier
Expand your network beyond the boardroom — connect and share as if you are in the same room

Key advantages of a connected facility:
- Ability to support meeting/lecture room overflow
- Higher performance inter-facility intercom
- Pooling/sharing of limited use resources
- Centralized enterprise monitoring/management model

Auditorium
(Building 1)

Corporate Comms Studio
(Building 1)

Lecture Hall
(Building 1)

EvertzAV 10GbE AV Network

AV Master Control
(Building 2)

Pooled Resources
(Building 3)

Conference Room 33
(Building 3)
MMA-10G System Diagram

Modular Gateways

**MMA10G-TRM4K-4S**
- Modular 4K/BD 12G-SDI/HDMI Bridge
  - Four SDI inputs/outputs one HDMI 2.0a input
  - One HDMI 2.0a output
  - Receive and combine four SDI signals (1080p60)
  - Receive and split HDMI or 10G Fiber to SDI
  - Other modes of operation available.

**MMA10G-TRM4K-12G**
- Modular 4K/BD 12G-SDI/HDMI Gateway
  - Two 3G-SDI inputs or outputs, two HDMI
  - 3.5a inputs and two HDMI 2.0a outputs
  - Three main modes of operation: dual receive, dual transmit, and single transceive
  - Supports 256 method of transport outlined in SMPTE 425M
  - Resolution up to 4096x2160@60 4:2:2 color sampling

**MMA10G-TRM4K-2U**
- Modular Dual KVM Transmit Gateway w/ USB 2.0
  - Matrix 4K/BD transmitter two HDMI 1.4a inputs and two HDMI 2.0a outputs
  - Support for USB 2.0
  - Support for resolutions up to 4096x2160@60
  - 4:4:4 color sampling
  - 10GBe interface for transmitter/receiver audio, video, and USB

Switch Fabrics

**MMA10G-IPX**
- 16/32/64/128 Port 1/10GBe Switch Fabric
  - IPX6: 16 SFP ports supporting 1 or 10GbE
  - IPX32: 32 SFP ports supporting 1 or 10GbE
  - Dual Gigabit switch plane capacity in 1RU

**MMA10G-EXE**
- Scalable 10/25/100GbE Switch Fabric
  - EXE26: Modular switch expandable up to 2046 10GbE/25GbE ports in 5RU
  - EXE425: Modular switch expandable up to 1024 10GbE/25GbE ports in 2RU
  - EXE52: Modular switch expandable up to 512 10GbE/25GbE ports in 4RU

Standalone Gateways

**MMA10G-TRX5-USB2**
- Standalone Transceiver Gateway w/ USB 2.0
  - Standalone transceiver with HDMI input and output
  - IPX4K-2U capable (SD/4K HDMI)
  - Support for SDI, analog audio, USB 2.0, USB HID, and serial
  - Dual receive mode allowing for PPF functionality
  - 10GBe interface for remote connectivity and in-band control

**MMA10G-HUB2**
- In-Room AV Switch
  - AV switch, up to 12 video inputs (HDMI, DVI, 1080p60)
  - Four video outputs (HDMI, HDI8)
  - Support for Dante network audio interface
  - 4K capable (1080x2160/60)
  - 10GBe interface for transmitting/receiving audio, video, and USB

**MMA10G-TR54K-2U-HDMI**
- Standalone Dual KVM Receive Gateway w/ USB 2.0
  - Standalone 4K/BD transceiver, two HDMI 2.0a inputs and two HDMI 1.4a outputs
  - Support for USB 2.0
  - Support for resolutions up to 4096x2160@60
  - 10GBe interface for transmitting/receiving audio, video, and USB

Monitoring Software

**VLPRO-AVOC-NMS**
- AV Operations Center
  - Provides graphical representation of enterprise AV deployments
  - Intuitive control interface to aid support personnel
  - Early warning alarms and notifications

Shared Resources

**MMA10G-RS4K-4U & MMA10G-VIP**
- MMA10G-RS4K-4U: Arrange up to four videos (from HDMI inputs or network) and output on a single monitor
  - MMA10G-VIP: Modular multi-window processor, view up to 32 sources across 8 displays

Additional Gateways

**MMA10G-HUB-USB & MMA10G-HUBA-32×32**
- MMA10G-HUB-USB: 10GE standalone USB hub w/ up to six USB modules w/ USB 2.0 ports each per MMC10G-HUBA-32×32 network enabled SDI/HD network audio switch with Dante

**EV-ENC1-4K/5-1/10**
- 4K 1080p Media Encoder/Decoder
  - High video/audio quality using low bandwidth

**HDbaseT & HDMI Accessories**
- EV-PX4K-1: 4K HDMI base PX4K-1
  - HDbaseT, HDMI 2.0 wall plate transmitters
  - HDbaseT 2.0 CEC and switchable cables

**EV-PTZ4K-5**
- 4K PTZ camera
  - EV-IP4K-1: 4K HDbaseT IP camera
  - EV-IP4K-2: 4K HDbaseT IP receiver

**Accessories**
- MAGNUM-RC
  - Standalone Room Controller
    - Simple remote control application
    - Web-based control for BYOD
    - Direct touch panel interface

* For product ordering information please contact your EvertzAV sales representative
## EvertzAV MMA-10G Gateways

<table>
<thead>
<tr>
<th>Feature</th>
<th>MMA10G-TRM4K</th>
<th>MMA10G-TR54K</th>
<th>MMA10G-TRXS-USB2</th>
<th>MMA10G-HUB2</th>
<th>MMA10G-IPGM-6</th>
<th>MMA10G-TRM4K-12G</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Video Inputs</strong></td>
<td>2x HDMI</td>
<td>2x HDMI</td>
<td>1x HDMI, 1x SDI</td>
<td>6x HDMI or</td>
<td>6x SDI</td>
<td>2x HDMI, 2x SDI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(software defined)</td>
<td>4x HDBT, 4x HDMI</td>
<td></td>
<td>(software defined)</td>
</tr>
<tr>
<td><strong>Video Outputs</strong></td>
<td>2x HDMI</td>
<td>2x HDMI</td>
<td>1x HDMI, 1x SDI</td>
<td>4x HDMI or</td>
<td>6x SDI</td>
<td>2x HDMI, 2x SDI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(software defined)</td>
<td>2x HDBT, 2x HDMI</td>
<td></td>
<td>(software defined)</td>
</tr>
<tr>
<td><strong>Supported Resolution</strong></td>
<td>Up to 4096x2160@60Hz (4:4:4 sampling)</td>
<td>Up to 4096x2160@60Hz (4:4:4 sampling)</td>
<td>Up to 3840x2160@30Hz * Inputs 1, 3, 5, 7 * All Outputs</td>
<td>525i, 626i, 720p, 1080i, 1920x1080p, 2048x1080p, 3840x2160p</td>
<td>525i, 626i, 720p, 1080i, 1920x1080p, 2048x1080p, 3840x2160p</td>
<td></td>
</tr>
<tr>
<td><strong>HDBT™ Supported</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Fast Switching</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Output Scaling</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>HDCP Supported</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>EDID Supported</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td><strong>USB</strong></td>
<td>HID standard 2.0 optional (~2RU)</td>
<td>HID standard 2.0 optional (~2RU)</td>
<td>HID USB 2.0</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td><strong>Audio In</strong></td>
<td>2x HDMI, 2x analog</td>
<td>2x HDMI, 2x analog</td>
<td>1x HDMI, 1x SDI (software defined), 1x analog</td>
<td>8x HDMI, 4x analog</td>
<td>6x SDI</td>
<td>2x HDMI, 2x SDI (software defined), 1x analog</td>
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<tr>
<td><strong>Audio Out</strong></td>
<td>No</td>
<td>2x HDMI, 1x analog</td>
<td>1x HDMI, 1x SDI (software defined), 1x analog</td>
<td>4x HDMI, 3x analog</td>
<td>6x SDI</td>
<td>2x HDMI, 2x SDI (software defined), 1x analog</td>
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<tr>
<td><strong>Dante™ Supported</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes * 32x32</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Enclosure</strong></td>
<td>Modular (1 or 3RU) * 7800F FR</td>
<td>Standalone</td>
<td>Standalone</td>
<td>Standalone (2RU)</td>
<td>Modular (1 or 3RU) * 7800F FR</td>
<td>Modular (1 or 3RU) * 7800F FR</td>
</tr>
<tr>
<td><strong>10GbE Redundancy</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>In-band 10GbE Network Control</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>In-band Control Pass Through</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<td><strong>Web Page Configuration</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note: all video, audio and USB signals are transported individually and can be routed separately.

For product ordering information, please contact the appropriate sales office listed below.

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**av.evertz.com**

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