Description
Designed to facilitate the hand-off between private customer networks and MD8000 networks, the 1 GbE MXG line module provides a variety of network address translation modes for VLANs, IP networks, and RTP and UDP media streams.

Applications
- SDI video transport over diverse VLANs, IP networks, or IP subnets
- Service provider to private customer network transport integration
- Video transport and pass-through over customer L3 IP networks

Features & Benefits
- Supports up to 48 VLANs and 24 Hand-off services per port
- Independent Ingress and Egress address (Header) translation, Stream Filtering, and Stream Policing (using 1Mbps increments)
- Stream replication (three outputs per service)

Technical overview
- Made for the MD8000 and MD8000-10G networking platforms
- L2/L3 translation for Ingress or Egress streams
- Two 1Gbps Ethernet user ports and one 1Gbps Ethernet port for monitoring (Copper or Optical)
- Virtual network interface support for easy connection to customer L3 networks using ARP or IGMP protocols

Compatible with
MD8000SX, MD8000, MD8000 EX and MD8000-10G Platforms

1 GbE MXG Media Exchange Gateway

The seamless bi-directional interconnection of broadcast video transport networks with private customer networks is a challenge for many service providers. Our MXG line modules meet this challenge head-on by giving users a wide range of Layer 2 and 3 address translation options. These choices include both Ingress and Egress address translation by source or destination MAC address, VLAN ID and Priority, and source and destination IP address. In addition, the 1 GbE MXG module supports Time-to-Live, ToS/DSCP, and source/destination UDP port number conversions. A granular Stream Policing feature based on 1Mbps increments is also available.

Multiple 1 GbE MXG line modules can be installed in a single MD8000 chassis, giving users the ability to perform frame and packet header conversions on dozens of video streams. Two 1Gbps user ports are supported, with each port capable of handling 24 hand-off services. For Egress streams, stream replication with three outputs per service is offered.
ORDER YOUR PRODUCT

1 GbE MXG
Media Exchange Gateway

MPGbE / Front
Order Code MD801073-G000

MPGbE-4S-R / 4 Port Rear
Order Code MD807040-G000

MPGbE-8S-R / 8 Port Rear
Order Code MD807041-G000

*Cards shown not to scale. Media Links reserves the right to alter specifications without notice.
Service Specifications & Supported Parameters

### 1 GbE MXG Service Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>1 GbE MXG Ingress (port-to-SWCNT)</th>
<th>1 GbE MXG Egress (SWCNT-to-port)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Services</td>
<td>24 Hand-off Services per port</td>
<td>24 Hand-off Services per port</td>
<td>Port-1 and Port-2</td>
</tr>
<tr>
<td>Target of Services</td>
<td>MAC+IPv4+UDP+RTP</td>
<td>MAC+IPv4+UDP+RTP</td>
<td>Format can be specified per service</td>
</tr>
<tr>
<td>Stream Filtering</td>
<td>DMAC Address, SMAC Address, VLAN ID, SIP Address, DIP Address, SUDP Port Number, DUDP Port Number</td>
<td>DMAC Address, VLAN ID, DIP Address, DUDP Port Number</td>
<td>Qualification in each field is available</td>
</tr>
<tr>
<td>Stream Policing</td>
<td>Configurable with 1 Mbps unit</td>
<td></td>
<td>Rate can be specified /service</td>
</tr>
<tr>
<td>Address (Header)</td>
<td>DMAC Address, SMAC Address, VLAN ID, VLAN Priority, SIP Address, DIP Address, TTL, ToS/DSCP, SUDP Port Number, DUDP Port Number</td>
<td></td>
<td>Configurable (Overwrite or Through) per field/service</td>
</tr>
<tr>
<td>Replication</td>
<td>Extra three outputs /service. Independent address translation /output. (One service entry is consumed /replicated output)</td>
<td></td>
<td>Some restrictions apply</td>
</tr>
</tbody>
</table>

### Supported Protocols and Functions at a Virtual Network Interface

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Supported function</th>
<th>Description of the action</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARP</td>
<td>Response to an ARP request received at a virtual network interface.</td>
<td>The ARP request targets to a valid virtual network interface at a port.</td>
<td></td>
</tr>
<tr>
<td>IGMPv3</td>
<td>Transmission of Join (IGMPv3 membership report, EXCLUDE) messages</td>
<td>When an Ingress Service is enabled (periodically in every 30 seconds after that)</td>
<td>Filter DIP Address is an IP Multicast address</td>
</tr>
<tr>
<td></td>
<td>Transmission of Leave (IGMPv3 membership report, INCLUDE) messages</td>
<td>When an Egress Service is enabled (periodically in every 30 seconds after that)</td>
<td>New DIP Address is an IP Multicast address</td>
</tr>
<tr>
<td>ICMP</td>
<td>Transmission of ICMP Echo Reply when an ICMP Echo is received at a virtual network interface</td>
<td>The ICMP Echo targets to a valid virtual network interface at a port</td>
<td>Active line can’t be changed by manual operation</td>
</tr>
</tbody>
</table>

### General specifications

- **External dimensions**
  - (Front) 17 mm (W) * 113 mm (H) * 367 mm (D).
  - (Rear) 41 mm (W) * 96 mm (H) * 126 mm (D) for 8 port ver. (For 4 port ver., width is 20.5mm (W))
- **Board Structure**
  - Front and Rear
- **Chassis slots needed**
  - Front board occupies a 1-slot width. Rear board occupies either a 1-slot width (SFPx4port) or a 2-slot width (SFPx8port)
- **Weight**
  - 1 kg or less
- **Power consumption**
  - 33.0 W or less
- **Operating temperature**
  - 0 ~ 40°C (Ambient) (Under the no-condensing humidity condition)
- **Redundancy modes**
  - All MD8000 modes of operation are supported (Single/Class B/Class C/Class J)
- **Compliance**
  - CE/CSA, NEBS Level 3

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