



### Description

The 1 x 10GbE Ethernet line module provides 10GbE service across a single port with true hitless/zero second switching and path diversity for demanding data applications such as Remote Production/REMI

### Applications

- Local access point-to-point data transfers
- Lossless push-pull bi-directional file transfers
- Protected IP video transport
- Remote production and remote integration
- High speed / High reliability file transfers

### Features & Benefits

- MTU Jumbo Frame support up to 9,026 bytes
- Supports single 10GbE Ethernet port
- Optical 10Gbps SFP+ interface, 10GBASE-SR/LR/ER/ZR with full SFP statistics
- 93.8% Committed Data Rate of Tx RTP Stream
- 512Kbyte FIFO buffer

### Technical overview

- Made for the MD8000 and MD8000-100G networking platforms
- True Hitless data protection using Media Links advanced proprietary Hitless logic
- Bi-directional Ethernet traffic
- High throughput and low latency for real-time applications such as remote production
- Auto or Manual resume for buffer resync

### Compatible with

MD8000SX, MD8000, MD8000 EX  
and MD8000-100G Platforms

## DATASHEET

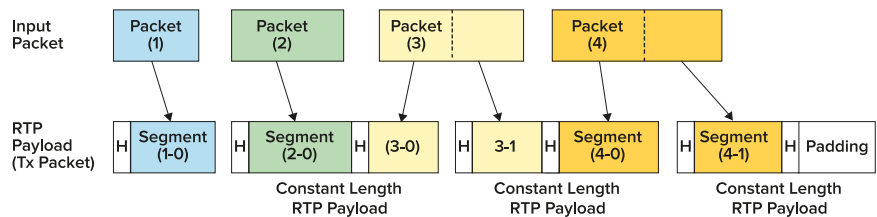
# 1 x 10GbE, Single Port Ethernet Line Module with Hitless Data Switching

As a line card in a MD8000 chassis, the 1 x 10GbE Ethernet module offers a single 10Gbps Ethernet port with hitless switching for uninterrupted, robust data service. The card provides bi-directional hitless switching for customer data traffic between endpoints while providing fiber trunk path diversity between those same endpoints.

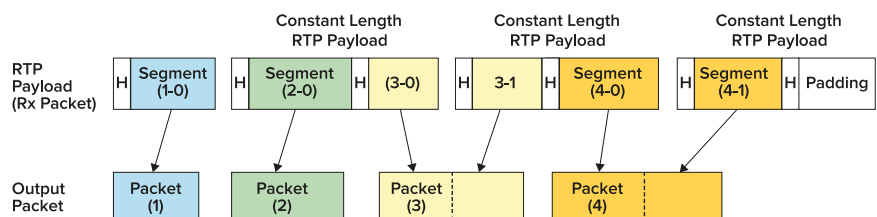
The ingress 1 x 10GbE Ethernet line module encapsulates customer data into a single RTP stream at the transmitter site where resulting packets are then transported on two redundant fiber trunk paths to the receiving site.

The receiving 1 x 10GbE line card checks and aligns sequence numbers and timestamps in the RTP header on both received fiber trunk paths. It then chooses the best packet of the two received paths for de-encapsulation and egress to the customer interface. This allows the network to handle routine errors that may occur such as out-of-order packets, duplicate packets, and/or lost packets. When erred packets are detected, hitless, zero second switchover to the other fiber trunk path will automatically occur by the line module's internal logic.

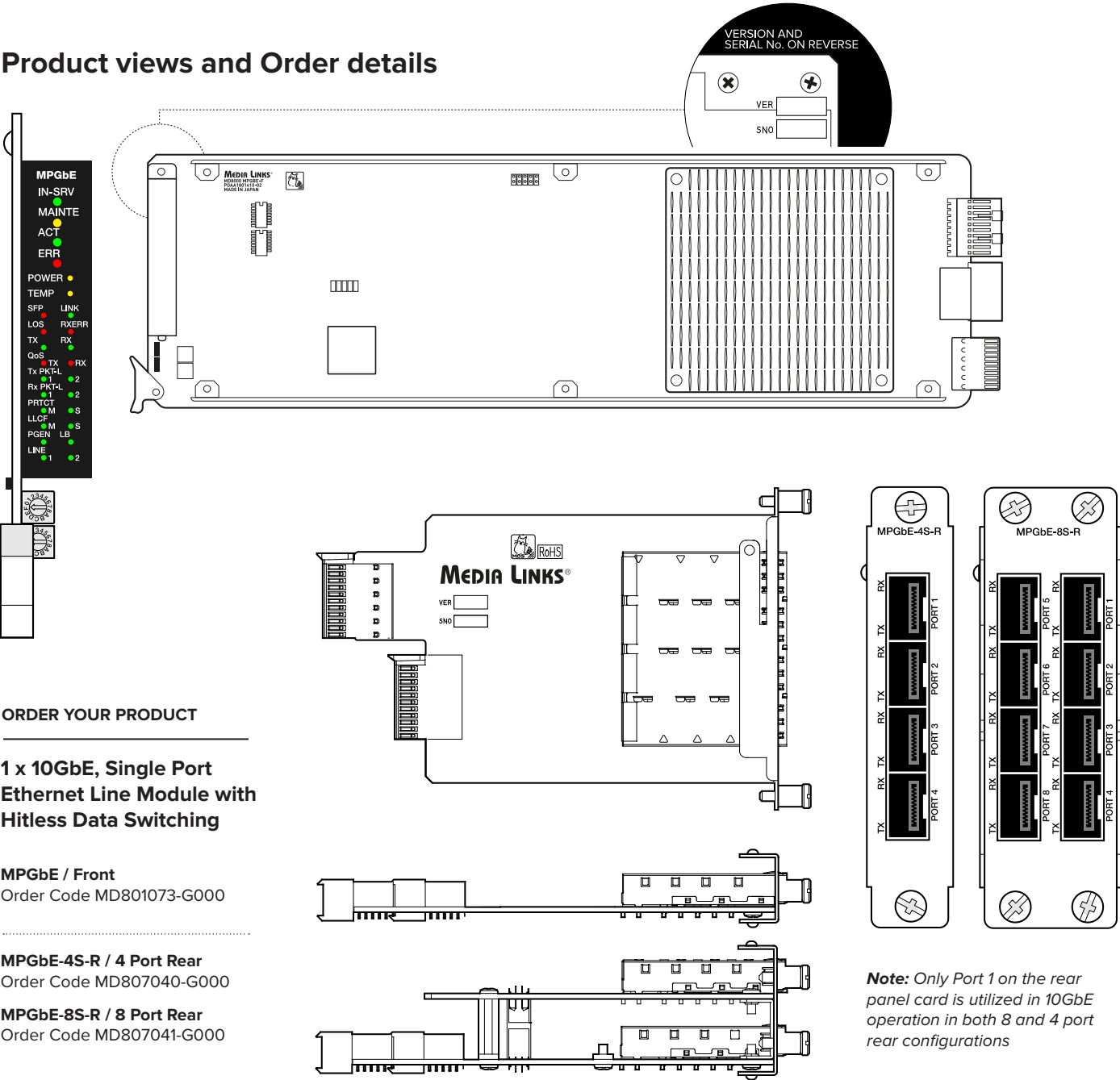
### Customer Ingress Frames



### Customer Egress Frames



# Product views and Order details



## ORDER YOUR PRODUCT

**1 x 10GbE, Single Port Ethernet Line Module with Hitless Data Switching**

**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

## Service Specifications & Supported Parameters<sup>†</sup>

### 1 x 10GbE, Single Port Ethernet Line Module with Hitless Data Switching: Customer Network Interface Specifications

Item	Description	Remarks
Input/output interface	Connector: 1 * SFP+ cages, MSA compliant SFP+ modules shall be used (SFF-8431, SFF-8432, and SFF-8472).	Port-1 only
Supportable interfaces	10GBASE-SR/LR/ER/ZR (depending upon the SFP+ type installed)	
MTU/MRU	9,026 bytes	Including FCS
Supported VLAN Tag Format	IEEE 802.1Q, IEEE 802.1ad format	Untagged, single and double VLAN tagged

<sup>\*</sup>Cards shown not to scale.

<sup>†</sup> Media Links reserves the right to alter specifications without notice.

# Service Specifications & Supported Parameters<sup>†</sup>

## 1 x 10GbE, Single Port Ethernet Line Module with Hitless Data Switching: Service Specifications (port-to-SWCNT)

Item	Description	Remarks
# of Services	1 Hitless Service per port	Port-1 only
Service Description	Hitless Service for any single stream of Ethernet frames (data traffic)	
Port: Filtering	None	All Ethernet frames are transferred
Port: Ingress FIFO Size	512 Kbyte per port	Shared by all the traffic classes
Port: Committed Rate	93.8 % of the Tx RTP Stream rate	
System: Encapsulation Format	MAC+VLAN (IEEE 802.1Q Tag)+IPv4+UDP+RTP	
System: RTP Payload	MGL Data Composition profile (MGL proprietary)	Payload Type = 100 (0x64)
System: RTP Tx Rate	Class J: 100~10,000 Mbps Class B/Class C/Single: 100~5,000 Mbps	Unit = 1Mbps
System: Transmission lines	2 Lines for Hitless protection or 1 line (no protection)	

## 1 x 10GbE, Single Port Ethernet Line Module with Hitless Data Switching: Service Specifications (SWCNT-to-port)

Item	Description	Remarks
# of Services	1 Hitless Service per port	Port-1 only
Service Description	Hitless Service for any single stream of Ethernet frames (data traffic)	
System: Receive Frame Format	MAC+VLAN (IEEE 802.1Q Tag)+IPv4+UDP+RTP	
System: RTP Payload	MGL Data Composition profile (MGL proprietary)	Payload Type = 100 (0x64)
System: Transmission lines	2 Lines for Hitless protection or 1 line (no protection)	
System: Receive Filtering	DMAC Address, VLAN ID, DIP Address, DUDP Port Number	Configured per Line
Port: Output format	Ethernet Frames	
Port: Egress Rate Control	None	Equal to the Ingress rate at the transmitter
Line Switching: Control	Auto Switching between Line1 and Line2 Manually configured to a given Line	MGL Proprietary

## General specifications

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

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**Media Links (Headquarters)**  
Kawasaki Tech Center 18F  
580-16 Horikawa-cho,  
Saiwai-ku, Kawasaki-shi,  
Kanagawa 212-0013 Japan  
Phone: +81 44-589-3440  
query@medialinks.co.jp

**Media Links Americas**  
431-C Hayden Station Road  
Windsor, CT 06095  
USA  
Phone: +1 860-206-9163  
Fax: +1 860-206-9165  
info@medialinks.com

**Media Links EMEA**  
Suite 18242, PO Box 6945,  
London W1A6US  
UK  
Phone: +44 207 096 9569  
emea\_info@medialinks.com

**Media Links Australia**  
2-12 Rokeby Street,  
Collingwood, VIC 3066,  
Australia  
Phone: +61 3-9017-0175  
Fax: +61 3-8456-6339  
info@medialinksaustralia.com.au

[www.medialinks.com](http://www.medialinks.com)

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