

8 x 1GbE, 8 Port 10/100/1000 BaseT Ethernet Line Module

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The 8 x 1GbE module accepts one to eight 10/100/1000 BaseT signals, provides rate policing and VLAN tagging, and transfers them to the MD8000 SW-CNT modules.

KEY FUNCTIONS:

- External interface to user circuits
- Optical (LC) or Electrical (RJ-45) interfaces via Rear Panel SFP Cage
- Auto protection switchover

KEY FACTS:

- Eight, 1GbE fully independent Ethernet Circuits (Note: a 4 x 1GbE version is also available)
- Automatic Rate Negotiation
- 4 Transport/Operation Modes:
 - Transparent
 - Double Tag
 - Tunneling
 - Tag Exchange (Over Write)
- Input Filtering and Rate Policing to eliminate traffic disruptions

APPLICATIONS:

- LAN Extension
- WAN Access Circuit
- Network Management
- Telemetry
- File Transfer

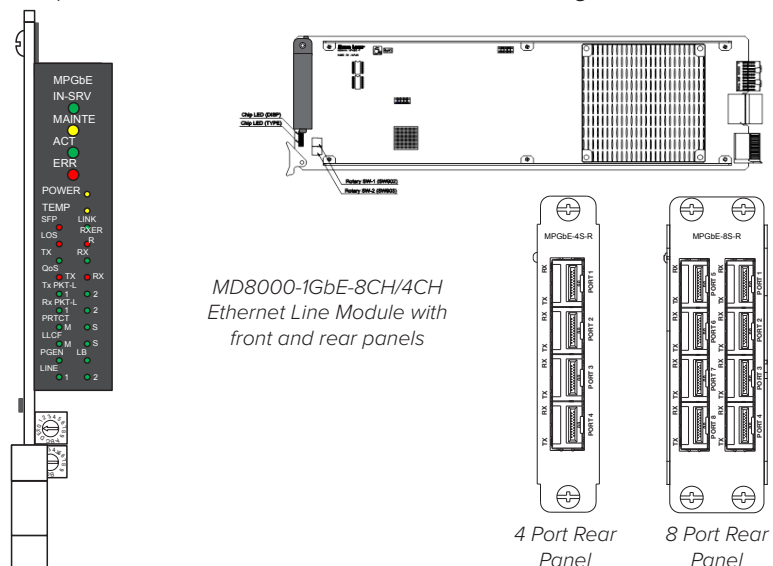
The 8 x 1GbE module accepts one to eight 10/100/1000 BaseT signals, provides rate policing and VLAN tagging and transfers them to the MD8000-SW-CNT modules. In the receive direction, the 8 x 1GbE module accepts Ethernet packets transferred from the SW-CNT and provides one to eight unique 10/100/1000 BaseT output signals.

Eight completely independent bi-directional GbE channels ensure that data on the individual ports is kept separate, permitting operation at full wire speed rates with total isolation. Auto-Negotiation is supported on all 8 ports. In addition, customer loopback and continuity checking functionality is also provided to facilitate circuit setup and operational troubleshooting.

The 8 x 1GbE module has four encapsulation/decapsulation modes of operation: Transparent, Double Tag, Tunneling and Tag Exchange (Over Write). All modes handle packets up to Jumbo Frames (i.e. maximum of 9022 bytes in length including headers and FCS).

Input filtering and rate policing is provided on each individual Ethernet circuit to guarantee that data bursts cannot disrupt overall traffic flow. Either optical or electrical SFPs can be used on the rear panel.

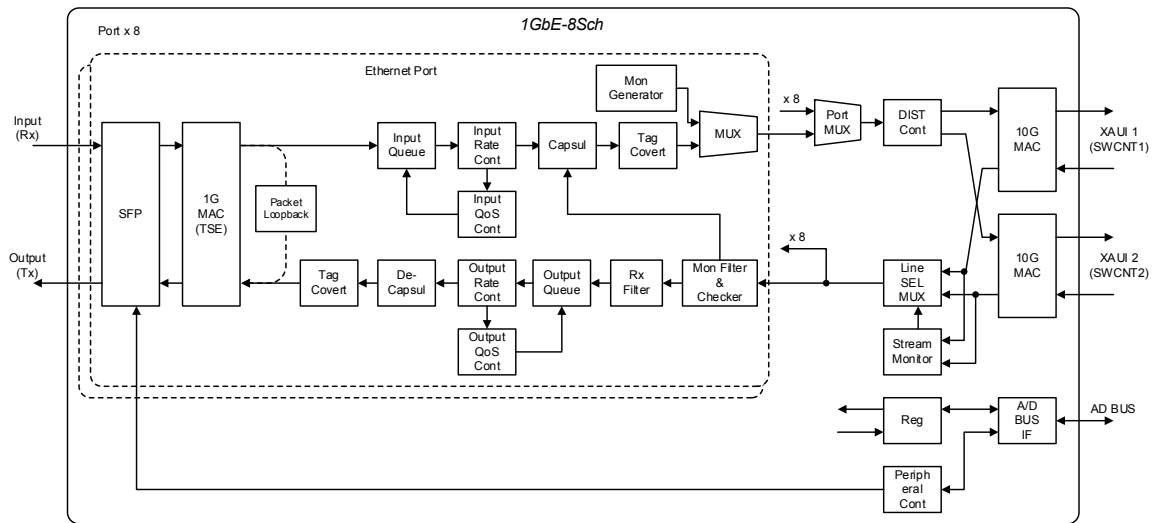
A 4 x 1GbE line module (with rear panel SFP cage) is also available that accepts one to four 10/100/1000 Ethernet BaseT signals.



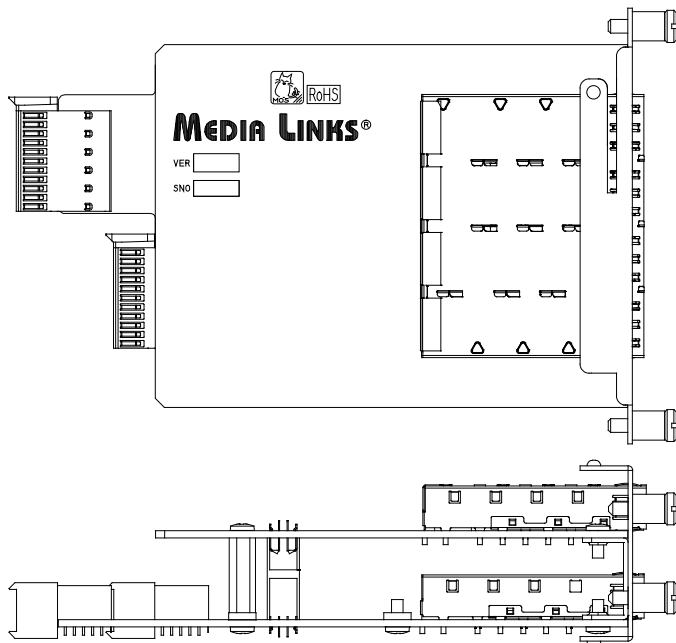
GENERAL SPECIFICATIONS:

| Item | Description | Remarks |
|---------------------------------|---|--|
| Operable chassis | All MD8000 series chassis | MD8000, MD8000EX, or MD8000SX |
| Board structure | Front + Rear | |
| External dimensions | Front board: 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, 20.5mm (W)) | Front board occupies a 1-slot width Rear board occupies 2 slots for 8 port version, 1 slot for 4 port version |
| Weight | 1 kg or less | |
| Power consumption | 33.0 W or less | |
| Operating temperature | 0 ~ 40°C (Ambient) | Under the no-condensing humidity condition |
| Input/output interface | 8 X SFP cages for 8 port version, 4 X SFP cages for 4 port version. MSA compliant SFP modules shall be used (SFF-8074i and SFF-8472). (LC connectors for optical SFPs, RJ-45 connectors for electrical SFPs.) | |
| Supportable interfaces | 1000BASE-X (IEEE 802.3z Optical); 1000BASE-T (IEEE 802.3ab Electrical); 100BASE-TX (IEEE 802.3u Electrical); and 10BASE-T (IEEE 802.3i Electrical) | Installed modules shall meet their individual port-parameter settings |
| Input data rate limitation | Specifiable in 1 Mbps steps | |
| Output data rate limitation | Specifiable in 1 Mbps steps | |
| Input priority control | Controllable using VLAN Priority | Strict Priority |
| Output priority control | Controllable using VLAN Priority | Strict Priority |
| MTU/MRU | 9,022 bytes | |
| Tagging modes | Transparent, Double Tag, Tunneling, and Tag Exchange (Over Write) | |
| Transportation support function | Auto Protection and LLCF | |
| Self-test function | Packet Loopback | |
| TxRx Filter (VLAN Table) | Up to 32 entries/port (Common to both Tx & Rx) | To be used for Transparent, Double Tag, and Tag Exchange modes |
| Rx Filter (IP Filter) | 2 entries/port (Line-1/Line-2) | To be used for Tunneling mode |
| Tag Exchange Table | Up to 32 entries/port (Tx/Rx separate) | Usable for Tag Exchange mode |
| Redundancy modes | All MD8000 modes of operation are supported | Single/Class B/Class C/Class J |
| Compliant with | CE/CSA, NEBS Level 3 | |

MD8000- 1GbE-8CH
Block Diagram



MD8000-1GbE-8CH SFP Cage Rear Panel Details



ORDERING INFORMATION:

ETHERNET LINE MODULE COUPLED WITH SFP CAGE REAR PANEL

| MODEL | ORDER CODE |
|--|-----------------|
| 8 Port 10/100/1000 Front Line Module with 8 Port SFP Cage Rear Panel | MD8000-1GbE-8CH |
| 4 Port 10/100/1000 Front Line Module with 4 Port SFP Cage Rear Panel | MD8000-1GbE-4CH |

SFP CAGE REAR PANEL PLUG-INS

| MODEL | ORDER CODE |
|--|----------------|
| 1Gb SFP Optical Module, 1310nm, 10km, ROHS, Digital Diagnostics | SFP-1310-1G10 |
| 1Gb SFP Optical Module, 1310nm, 40km, ROHS, Digital Diagnostics | SFP-1310-1G40 |
| 1Gb SFP Optical Module, 1550nm, 80km, ROHS, Digital Diagnostics | SFP-1550-1G80 |
| 1Gb SFP Optical Module, 1550nm, 120km, ROHS, Digital Diagnostics | SFP-1550-1G120 |
| 1Gb SFP RJ45 Electrical Module, ROHS, Digital Diagnostics | SFP-RJ45 |

Note: All SFP modules are compliant to MSA (INF-8074i and SFF-8472) standards.

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

Media Links EMEA
Suite 18242
PO Box 6945
London W1A 6US
United Kingdom
Phone: +44 (0)20 7096 9569
emea_info@medialinks.com

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www.medialinks.com