FibroLAN Access

GSM1000X

GigaBit Ethernet

Flexible 3R GBE Converter /Extender

The GSM1000X device provides conversion from a 1000Base-T, Multi-Mode 1000Base-SX, Single Mode 1000Base-LX or CWDM link to 1000Base-T/1000Base-SX/LX/CWDM link, allowing extension of up to 120km.
The device is based on 3R technology: full 3R Regeneration (re-amplification, re-shaping, re-timing) is implemented between the SFP ports.
The unit is designed for use with SFP (Small Form-factor Pluggable) fiber optic and copper base transceivers. The versatility of the hot-swappable SFP is in the density, flexibility and cost-savings. SFP modules can be easily interchanged; therefore fiber optic networks can be upgraded and maintained more conveniently.
The SFP port 1 is defined as UNI (User Network I/F) and SFP port 2 as OA (Optical Access).
The GSM1000X provides reliable and robust conversion, advanced control /diagnostic features and management. It also allows cascading of several devices, reaching distances of hundreds of kilometers.
Selective Fault Propagation from port 1 to port 2, and/or vice-versa, allows further network resilience.

Each port provides separate and various LED indications for enhanced diagnostics.
The device supports **SLE** (Subscriber Link Emulation) to enhance network resilience.
The MA™ (Micro Agent) is an on chip management system enabling the management of remote access devices ***eliminating the need of an SNMP agent and IP address***.
When the GSM1000X is connected through a F/O link to a remote Master Unit (located at the Network Center) that is MA™ enabled and SNMP managed (FibroLAN *Metrostar*™ MCM1000X module), a comprehensive set of monitoring and controlling functions are implemented from any management station.
The device is housed in a robust metal case suitable for desktop, rack-shelf or wall-mount installation.
It features an internal, wide-range, high quality power supply for reliable operation. DC powered versions (-48VDC) are available. The ETR (Extended Temperature Range) option allows deployment in industrial environments. The device supports RFU (Remote Firmware Upgrade).

Key Features

- **Digital Conversion** - stability, cascading
- **SFP (Small Form-factor Pluggable)** optical interfaces
- **Network extension** - up to 120km
- **Reliability** - internal quality power supply
- **Versatile installation** - desktop, shelf or wall-mount
- **1000Base-X Auto-Negotiation**
- **Fault Propagation**-total network resilience
- **Loop-Back**- for enhanced diagnostics
- **SLE for** enhancing network resilience
- **Rate Limiting** (0-1000Mbps, 10Mbps step increments)
- **Last Gasp -** power failure alert
- **Remote In-Band MA**™ feature rich management
- **RFU** (Remote Firmware Upgrade) support
- **Managed by FibroLAN's *MetroView*** Device Manager

Management Functions

The Main Menu enables the User to display the device's status, display SFP modules status and to enter the device's control menu.

Device status: SFP type (UNI, OA, TP, FO) Link and Signal Detect (SD) status (UNI, OA), Port enabled (UNI) Auto Negotiation mode (UNI), Pause mode (UNI), FP mode OA>>UNI, Loop back mode (UNI and OA), Upstream BW (0-1000Mbps in 10Mbps increments), Temperature and Firmware revision

SFP Modules status: Port #, Part #, Type (TP, MM, SM, and SM-SFS), Range, TX/RX Wavelength, S/N

Device Control: Display Device status, Port SFP status, Set the link's upstream bandwidth, Enable/disable channel, Enable/Disable A/N (UNI port),OA>>UNI FP mode, OA/UNI loop-back mode, Enable/disable Pause (Flow Control), Restore Device defaults. The SLE is enabled via remote management

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General Specifications

Standard Compliance:
IEEE802.3 2000 edition,1000Base-T,1000Base-SX, 1000Base-LX, IEEE802.3z, Flow Control

Conversion Method:
Digital 3R conversion

LEDs: Power ON (green), MA Active (green)
FP (yellow LEDs): upper (UNI>OA),Middle(OA>UNI)
F/O SFP Port: Link/Act (green)
TX-LO(red)=Low Transmission in SFP
Blinking= when not authenticated
LB(red) -Loop-Back for each port

Management:
Remote In-Band MA™ via ***MetroStar*** System
FibroLAN's ***MetroView*** Device Manager

Ports:
Simplex and Duplex LC connectors
(Small Form-factor Pluggable) - See table below

DIP switches (front panel) :
Loop-Back (LB UNI,LB OA) enable/disable
Fault Propagation ON/OFF (UNI>OA, OA>UNI)
Auto-Negotiation for Port 1and Port 2 (enable/disable)
Management commands override DIP switches setup

Environmental/Physical

Power-Supply:
Internal, 100 to 240 VAC, 50-60Hz
DC P.S. range (-36 ÷ -72VDC)

Operating Temperature: 0° ÷ +45°C

Storage Temperature: -20° ÷ +80°C

Safety - EN 60950-1

Dimensions: 120x170x44mm

Power Consumption:
5 Watts maximum

Humidity:
10% ÷ 90% non-condensing

EMC- EN 300 386 V1.3.3, AS/NZS CISPRESS:04
EN55022\24, FCC part 15, Subpart B

Weight: 400gr

Ordering Information

Part #	Model	Description
3750	GSM1000X	MA Managed Gigabit Ethernet converter/access device/extender with 2 SFP modular ports, each may accept any FibroLAN copper or fiber SFP transceiver. Internal AC power supply
3751	GSM1000X-48	MA Managed Gigabit Ethernet converter/access device/extender with 2 SFP modular ports, each may accept any FibroLAN copper or fiber SFP transceiver. Internal -48VDC power supply (PS48)
B098	ETR	Extended Temperature Range option (-10 to +70 Centigrade)
B012	CTF-RM	19" Rack Shelf for installation of up to 3 GSM1000X devices
B151	CBPS - DC48V	DC Power supply cable for PS48, 2m
B161	SCH - WM	Wall mount kit

SFP optical modular interfaces

Part #	Model	Desctiption
B248	SF1G-T	SFP (Small Form Pluggable) GBE STP transceiver, 1000BaseT, shielded RJ-45, 100m over Cat.6 cable
B235	SF1G-S1	SFP GBE F/O transceiver, Duplex LC connectors, MM, 850nm, 220/550m
B236	SF1G-LX1	SFP GBE F/O transceiver, Duplex LC connectors, SM, 1310nm,10Km
B237	SF1G-LX2	SFP GBE F/O transceiver, Duplex LC connectors, SM, 1310nm, 20Km
B238	SF1G-LX3	SFP GBE F/O transceiver, Duplex LC connectors, SM, 1550nm/DFB, 40Km
B239	SF1G-LX4	SFP GBE F/O transceiver, Duplex LC connectors, SM, 1550nm/DFB, 80Km
B240	SF1G-LX5	SFP GBE F/O transceiver, Duplex LC connectors, SM, 1550nm/DFB/APD, 120Km
B241	SF1G-SF13	SFP, SFS, GBE F/O transceiver, Simplex LC connector, SM, 1310nmTx - 1550nmRx, 20km
B242	SF1G-SF15	SFP, SFS GBE F/O transceiver, Simplex LC connector, SM 1550nmDFB Tx - 1310nmRx, 20km
B243	SF1G-LF13	SFP, SFS GBE F/O transceiver, Simplex LC connector, SM 1310nmDFB Tx - 1550nmRx, 40km
B244	SF1G-LF15	SFP, SFS GBE F/O transceiver, Simplex LC connector, SM, 1550nmDFB Tx - 1310nm Rx, 40km
B269	SF1G-ZF49	SFP, SFS, GBE F/O transceiver, LC connector, SM, 1490nmDFB Tx/ 1550nm Rx, 80km
B270	SF1G-ZF57	SFP, SFS, GBE F/O transceiver, LC connector, SM 1550nmDFB Tx/1490nm Rx, 80km
B281-8	SF1G-LX5-5C-WW	CWDM SFP, **1.25**Gbps F/O transceivers, dual LC connector, SM, 1471nm - 1611nm range, DFB/APD, 120km

WW= 47 =1471nm (B281), 49=1491nm, 51= 1511nm, 53=1531nm, 55=1551nm, 57=1571nm, 59=1591nm, 61=1611nm (B288)

Specifications are subject to change w/without prior notice

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