

FRM220-GFOM04 FRM220-GFOM08

4/8 E1/T1 + GbE Fiber Multiplexer



The FRM220-GFOM04/GFOM08 is a 4/8 channel E1/T1 fiber multiplexer with an additional Gigabit Ethernet trunk, plus order wire and clear channel RS-232, constructed as a two slot wide card for the FRM220 series. When the FRM220-GFOM04/GFOM08 card is placed in the FRM220 rack with NMC, the administrator can view the converter card's status, type, version, fiber link status and alarms. Remote, fiber connected standalone card, can also be managed through in-band management via the chassis NMC. The card can be configured to enable or disable the port, reset the port, and provide local or remote diagnostic loopback. The 1+1 redundant optical aggregate of this multiplexer employs industry standard pluggable optics (SFP) operating at 1.25Gbps data rates. The SFP modules can be chosen to support single-mode, multi-mode, single fiber bi-directional or Coarse and Dense Wave Division Multiplexing (CWDM and DWDM).

Features

- 8 channels unframed E1/T1 (transparent)(FRM220-GFOM08)
- 4 channels unframed E1/T1 (transparent)(FRM220-GFOM04)
- 10/100/1000Base-T Ethernet
- Auto MDI/MDIX & Auto-Negotiation or Force Mode
- Supports flow control 802.3x & 9K jumbo packets
- Supports link fault Pass-Through for Ethernet
- One clear channel RS232 up to 250Kbps(Async)
- 1+1 fiber protection, switching time < 50ms
- Supports Digital Diagnostics Monitoring Interface (DDMI) SFP
- AIS on signal loss on E1/T1 and fiber port
- Loopback test on E1/T1, RS232, fiber ports
- Supports local or remote In-band management (Monitor or Configure status) by SNMP manager and console port
- Supports Order wire Ear / Microphone port
- Supports On-Line F/W upgrade & Dying Gasp

Specifications

E1/T1 ports	Framing	Unframed (transparent)
	Bit Rate	E1:2.048 Mb/s , T1: 1.544Mb/s
Line Impedance	Line Code	E1:AMI/HDB3, T1: AMI/B8ZS
	Line Impedance	E1: Unbalanced 75 ohms (BNC)
		E1: Balanced 120 ohms (RJ-45)
Receiver sensitivity	"Pulse" Amplitude	T1: Balanced 100 ohms (RJ-45)
		Short haul
	"Zero" Amplitude	Nominal 2.37V+/-10% for 75 ohms
Internal Timing	Internal Timing	Nominal 3.00V+/-10% for 120 ohms
		+/-0.3V
	Jitter Performance	+/-30 ppm
Standards	Performance monitoring	According to ITU-T G.823
	Interface Connectors	According to ITU-T G.821
	Test Loops	ITU-T G.703, G.704, G.706 and G.732
Test Loops	Test Loops	RJ-45
		LLB (Local Loop Back)
		NELB (Near End Loop Back)
		RLB (Remote Loop Back)
Test Loops	Test Loops	RRLB (Request Remote Loop Back)

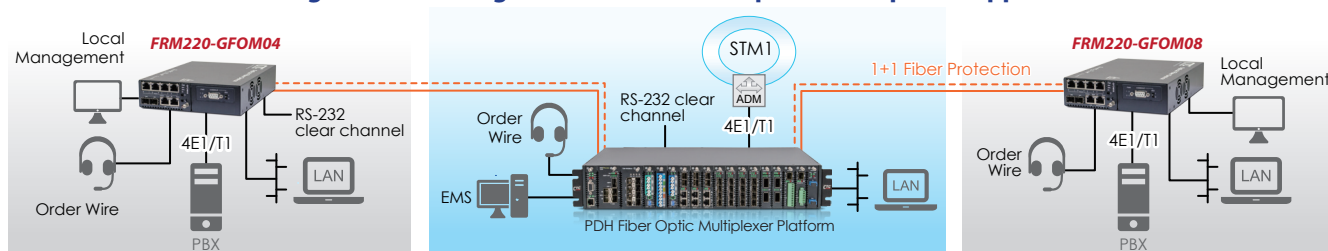
GbE Fiber Multiplexer with In-Band Management

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Fiber	Connector	SFP LC
	Data Rate	1.25 Gbps
Ethernet	Interface Type	10/100/1000Base-T
	Connector	RJ-45
	Standards	IEEE 802.3, 802.3u, 802.3ab
	Duplex modes	full/half
Indications	FX1 Link, FX2 link, E1/T1 Mode/Link/Loopback test, Order wire phone indicator, LAN Link/Speed	
Power Input	12VDC	
Power Consumption	< 12W	
Dimensions	159.5 × 42.1 × 88mm (D×W×H)	
Weight	200g	
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)	
Humidity	10 ~ 90% RH (non-condensing)	
Certifications	CE, FCC	
MTBF	65,000hrs	

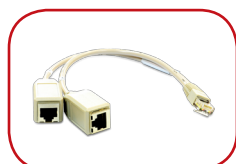
Application

Managed 4E1/T1 + Gigabit Ethernet Fiber Optical Multiplexer Application



Ordering Information

Model Name	Description
FRM220-GFOM04-SR	4 x E1/T1 RJ-45 and 10/100/1000Base-T Ethernet fiber optic multiplexer card (optional SFP module)
FRM220-GFOM04-SB	4x E1 BNC and 10/100/1000Base-T Ethernet fiber optic multiplexer card (optional SFP module)
FRM220-GFOM08-SR	8x E1/T1 RJ45 and 1000Mbps Ethernet fiber mux card with 4x2E1 RJ45 cable (optional SFP module, Model : SFS-70xx-xx)
FRM220-GFOM08-SB	8x E1 BNC and 1000Mbps Ethernet fiber mux card with 4x2E1 BNC cable (optional SFP module, Model : SFS-70xx-xx)



2E1 RJ45 cable