

## 4-port E1/T1+100M Ethernet Fiber Multiplexer

### FRM220-FOM04

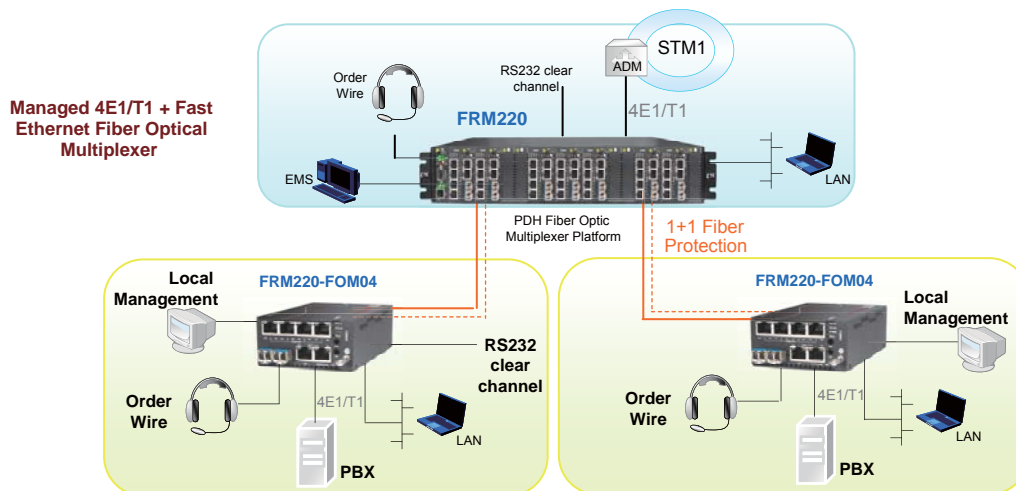


FRM220-FOM04 is a modular design for 4x E1/T1 + Fast Ethernet multi-service to dual strand fiber PDH multiplexer. FRM220-FOM04 provides E1/T1 transmission transparently, pure 100Mbps Fast Ethernet simultaneously. The fiber optic line is based on the SFP technology that allows a flexible use of Multimode or Single mode lines and enable the support of different wavelengths and distances. The use of bi-directional SFPs maximizes the utilization of the fiber optic line and results in saving line costs. With SNMP and Web-based management in the FRM220, the Network administrator can monitor, configure and control the activity of each card in the chassis.

#### Features

- 4 channels unframed E1/T1
- 10/100Base-TX Ethernet
- Auto MDI/MDIX
- Auto-Negotiation or Force mode
- Supports flow control
- Supports 9K jumbo packets
- Supports Link fault pass through (LFP)
- One clear channel RS232 up to 250Kbps(Async)
- 1+1 fiber protection, less than 50ms
- Supports Digital Diagnostics Monitoring Interface (DDMI)
- AIS on signal loss on E1/T1 and fiber port
- Loopback test on E1/T1, LAN, RS232, fiber ports
- Supports Dying Gasp
- 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.

E1/T1 ports	Unframed (transparent)
Framing	E1: 2.048 Mb/s, T1: 1.544 Mb/s
Bit Rate	E1: AMI/HDB3, T1: AMI/B8ZS
Line Code	E1: Unbalanced 75 ohms (BNC cable)
Line Impedance	E1: Balanced 120 ohms (RJ-45)
	T1: Balanced 100 ohms (RJ-45)
Receiver sensitivity	Short haul
"Pulse" Amplitude	Nominal 2.37V +/- 10% for 75 ohms
	Nominal 3.00V +/- 10% for 120 ohms
	Nom
"Zero" Amplitude	+/- 0.3V
Transmit Frequency Tracking	w/external clock card option
Internal Timing	+/- 30 ppm
Jitter Performance	According to ITU-T G.823
Performance monitoring	According to ITU-T G.821
Standard	ITU-T G.703, G.704, G.706 and G.732
Interface Connectors	RJ-45, BNC
Test Loops	LLB (Local Loop Back)
	NELB (Near End Loop Back)
	RLB (Remote Loop Back)
	RRLB (Request Remote Loop Back)
Ethernet	
Interface Type	10/100Base-TX
Connector	RJ-45
Standard	IEEE 802.3, 802.3u
Duplex modes	full/half
Test	Loop back test
Indications	FX1 Link, FX2 link, E1/T1 Mode/Link/Loopback test, Order wire phone indicator, LAN Link/Speed.
Power Input	AC adapter, 12VDC
Dimensions	88 x 42 x 139mm (DxWxH)
Temperature	0 ~ 60°C (Operating), -10 ~ 70°C (Storage)
Humidity	10 ~ 90% RH (non-condensing)
Certifications	CE, FCC, RoHS



#### Ordering Information

FRM220-FOM04: 4-port E1/T1+100M Ethernet Fiber Multiplexer

Smart View Element Management System (EMS)

SV-PLF-05 (5, 25, 50): Platform Server (5, 25, 50 admissions)

SV-AGT-50 (50, 100, 200, 500): Device Agent (50, 100, 200, 500 Devices)

SV-Fiber: FRM220 Managed Module