FRM220-10/100i

10/100Base-TX to 100Base-FX
In-Band Managed Converter

The FRM220-10/100i is a 10/100Base Ethernet to 100Base-FX fiber slide-in card converter designed for central and remote applications. With advanced features like bandwidth control, this media converter is targeted for customer premises equipment in metro LAN, campus, enterprise and FTTx applications. By offering in-band management, this converter can be completely controlled and monitored from a centrally located managed rack controlling all converter settings including bandwidth control, duplex, and speed configuration. This media converter is completely transparent to Layer 2 and Layer 3 protocols including IEEE 802.1q, VLAN tag, Q in Q, STP, IPX, IP, etc. When used stand-alone, this converter has no access to management functions except to force Ethernet connection and apply Link Fault Pass-thru via setting of a 4-pole DIP switch.
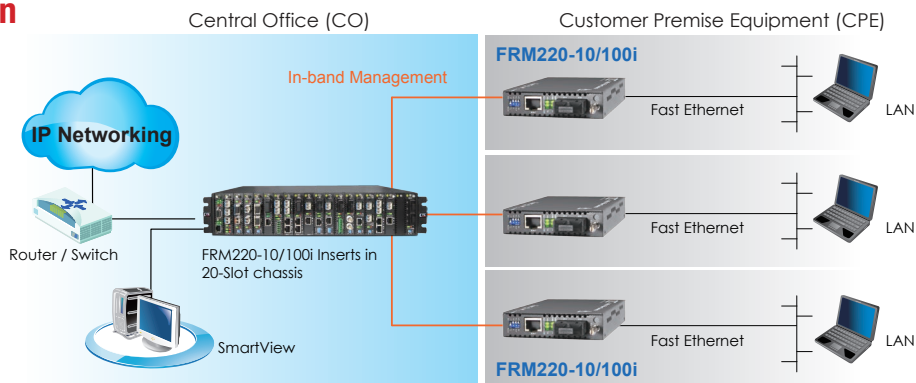
Features

- 1-Port 10/100Base-TX to 100Base-FX Converter
- Auto-Negotiation or forced mode
- Supports remote CPE power fail detect (dying gasp)
- Supports Far End Fault Indication (FEFI)
- Supports Link Fault Pass-Through (LFPT)
- Supports Loop Back Test
- Supports RMON counter
- Auto Laser Shutdown (ALS)
- Auto MDI/MDIX

- Forward 2046 bytes (max.) packets in switch mode
- Forward 9K jumbo packets in converter mode
- Supports transparent Q in Q double tagged frame
- Supports IEEE 802.1q Tag VLAN pass thru
- Supports local / remote In-band management (Monitor and Configure) by the SNMP manager. (NMC)
- Bandwidth control (Nx32Kbps or Nx512Kbps)
- Supports IEEE 802.3x flow control (Pause)
- Fiber Hardware Reset (FHR)
- Online local / remote f/w upgrade

Specifications

Optical Interface	Connector	1 x 9 (SC, ST, FC)
	Data rate	125Mbps
	Duplex mode	Full duplex
	Fiber	MM 50/125µm, 62.5/125µm
		SM 9/125µm
	Distance	MM 2km, SM 15/30/50km
		WDM 20/40km
	Wavelength	MM 1310nm, SM 1310, 1550nm
		WDM 1310Tx/1550Rx (type A)
		1550Tx/1310Rx (type B)
Electrical Interface	Connector	RJ45
	Data rate	10Mbps, 100Mbps
	Duplex mode	Half / Full duplex
	Cable	10Base-T Cat.3, 4, 5, UTP
		100Base-TX Cat.5, 5e or higher

Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, TS-1000
Indications	LED (Power, FEF, FX-Link, TX-SPD, TX-Duplex, TX-Link)
Power Input	12VDC
Power Consumption	< 6W
Dimensions	Card: 155 x 20.8 x 88mm (D x W x H)
Weight	120g
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)
Humidity	10 ~ 90% non-condensing
Certification	CE, FCC
MTBF	65,000 hrs

Application

Central Office (CO)

Customer Premise Equipment (CPE)

In-band Management

IP Networking

Router / Switch

FRM220-10/100i Inserts in 20-Slot chassis

SmartView

FRM220-10/100i
Fast Ethernet — LAN

Fast Ethernet — LAN

Fast Ethernet — LAN
FRM220-10/100i

Ordering Information

Connector Type   Connectivity Distance

FRM220 – 10/100i – ☐☐☐☐☐

Example: FRM220 – 10/100i – SC002

Model Name	Description
FRM220-10/100i	10/100Base-TX to 100Base-FX In-band managed converter card

Connector Type	Connectivity Distance
SC, ST, FC	002: 2km 015: 15km 030: 30km 050: 50km
	20A: WDM 20km A type 20B: WDM 20km B type 40A: WDM 40km A type 40B: WDM 40km B type

Note: This card must use CH01M, with serial console, to configure standalone settings.
When connected as a remote to a managed central chassis, this card supports in-band management and only needs a CH01 chassis.