



## FRM220-1000EAS/X-1

### OAM/IP Managed 10/100/1000Base-T to 100/1000Base-X SFP GbE Media Converter

The FRM220-1000EAS/X-1 is an IEEE802.3ah OAM compliant copper to fiber Gigabit Ethernet solution designed to make conversion between 10/100/1000Base-T and 100/1000Base-X with SFP. With stand-alone SNMP and Web-based management, the network administrator can monitor, configure and control the activity of each IEEE802.3ah series card and remotely connected OAM compliant converter. By offering IEEE802.3ah OAM in-band management, this converter can also be completely controlled and monitored from a centrally located managed rack. Based on a powerful L2 switch architecture, this converter supports bandwidth control, duplex and speed configuration, VLAN tagging, Q-in-Q, QoS, Spanning tree as well as auto laser shutdown, link fault pass through, OAM loop back and dying gasp.

### Features

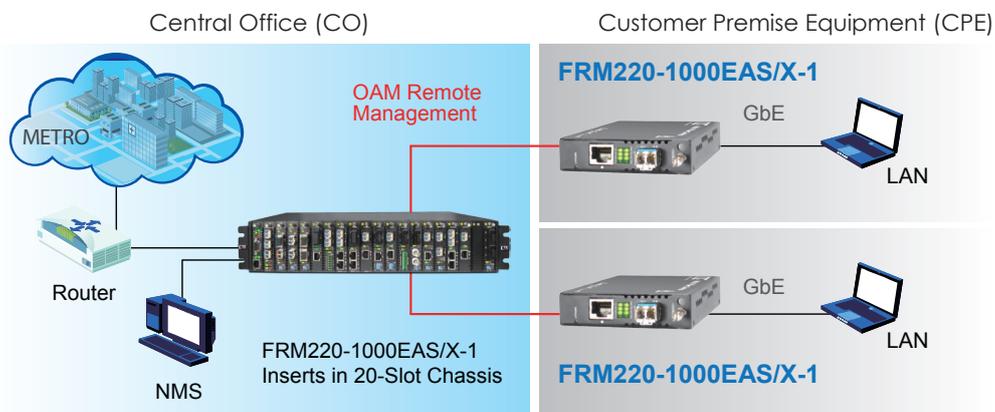
- 10/100/1000Base-T to 100/1000Base-X SFP
- Supports local / remote IEEE802.3ah OAM/ IP In-band management
- Stand-alone IP Based, Web GUI, Telnet, SNMP management
- Auto-Negotiation or forced mode
- Auto MDI/MDIX
- Supports IEEE 802.1Q Tagging
- Supports Q in Q double tagging
- Forward 10K bytes Jumbo packets (max.)
- Supports Flow control (Pause)
- Supports OAM remote loopback to assist in diagnosing network problems
- Supports remote IP ping function for diagnostic purpose
- Supports bandwidth control
- Supports remote CPE power fail detect (dying gasp)
- Supports Far End Fault Indication (FEFI)
- Supports Link Fault Pass-Through (LFPT)
- Supports RMON counter
- D/D function for supported SFP fiber transceiver
- Auto Laser Shutdown (ALS)
- Online local / remote f/w upgrade
- Default port and IEEE802.1Q Tagging priority QoS

### Specifications

<b>Optical Interface</b>	Connector	SFP LC
	Data rate	100/1000Mbps
	Duplex mode	Full duplex
	Fiber	MM 50/125µm, 62.5/125µm. SM 9/125µm
	Distance	MM 550m, 2km, SM 15/30/50/80/120km WDM 20/40/60km
	Wavelength	MM 1310nm, SM 1310, 1550nm WDM 1310Tx/1550Rx (type A) 1550Tx/1310Rx (type B)
<b>Power Consumption</b>	< 8W	
<b>Dimensions</b>	Card: 155 x 20.8 x 88mm (D x W x H)	
<b>Weight</b>	120g	

<b>Electrical Interface</b>	Connector	RJ45
	Data rate	10Mbps, 100Mbps, 1000Mbps
	Duplex mode	Half / Full duplex
	Cable	10Base-T Cat.3, 4, 5, UTP 100Base-TX Cat.5, 5e or higher 1000Base-T Cat.5, 5e or higher
<b>Standards</b>	IEEE 802.3, IEEE 802.3u, IEEE 802.1Q, IEEE 802.3ab, IEEE 802.3z	
<b>Indications</b>	LED : Power, FX-Link, FEF, TEST, Speed(10,100,1000), FULL	
<b>Power Input</b>	Card	: 12VDC Standalone : AC, DC options
<b>Temperature</b>	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)	
<b>Humidity</b>	10 ~ 90% non-condensing	
<b>Certification</b>	CE, FCC	
<b>MTBF</b>	65,000 hrs	

### Application



### Ordering Information

Model Name	Description
FRM220-1000EAS/X-1	10/100/1000Base-T to 100/1000Base-X with OAM/IP-Based managed GbE Media Converter, (optional SFP)

**Note:** This card may use CH01M to provide console for initial TCP/IP settings, or use CH01 with default IP.