CTC union°

NEW

FRM220-10GCM
10GBase-T to 10GBase-R
Managed Media Converter

The 10G Ethernet copper to fiber OAM compliant Managed Media converter, FRM220-10GCM, supports 10G / 5G / 2.5G / 1G / 100 / 10BASE-T RJ-45 over Cat.6a / Cat 7 twisted pair copper cable to optical 10GBASE-R SFP+. Based on a powerful L2+ switch architecture, this converter supports bandwidth control, duplex and speed configuration, VLAN tagging, Q-in-Q, QoS, jumbo frames as well as auto laser shutdown, link fault pass through, OAM loop back and dying gasp. With embedded SNMP and Web-based management, the network administrator can monitor, configure and control the activity of each local and remote fiber connected converter.

When placed in an FRM220 chassis with NMC, the NMC is used to control and manage the local card in the chassis and fiber connected remote converter. With full duplex wire speed forwarding capability, the FRM220-10GCM brings you the best and simplest solution for 10G Ethernet conversion between copper wire and fiber.
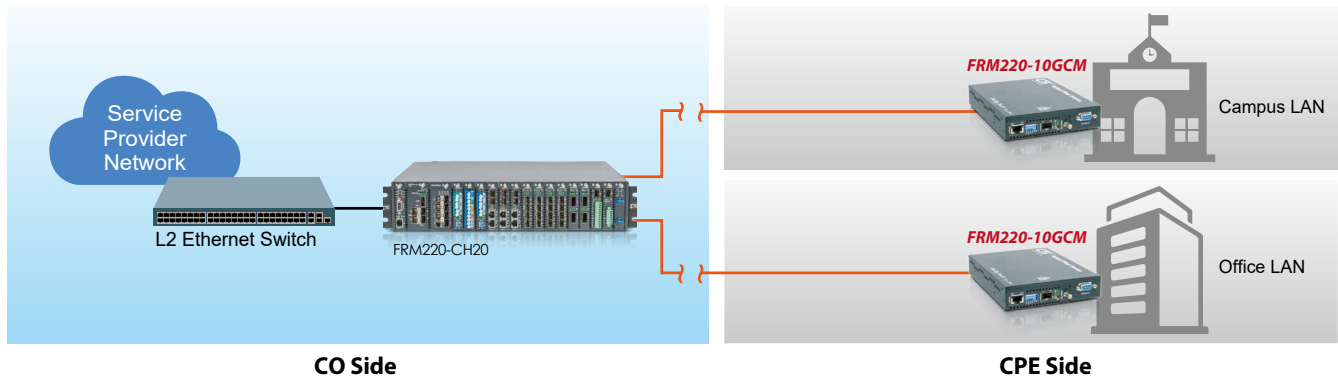
Features

- In-band manageable via FRM220 chassis with NMC card
- Complies with IEEE 802.3bz multi-gigabit NBase-T technology
- Link fault pass through
- Auto laser shutdown
- Manual DIP switch for instant port configuration
- Loopback Test
- Dying gasp OAM and trap message

Specifications

Fiber port	Connector	SFP+ / LC	
	Line Rate	10Gbps	
	Distance	Multimode	300m
		Single mode	10km, 20km, 40km
		BiDi/WDM	10km, 20km, 40km
	Wavelength	Single mode	1310nm, 1550nm
		BiDi/WDM	1270nm/1330nm
Copper port	Connector	RJ45	
	Line Rate	10Gbps	
	Cable Type	Cat 5e/ 6/ 6A/ 7	
	Distance	30m@Cat 5e(Min.)	
	MDI/MDI-X auto crossover		
	10/100/1000/2.5G/5G/10Gbps Auto negotiation		
Standards	IEEE 802.3ae, IEEE 802.3an, IEEE 802.3bz		
Console Interface	DB-9 RS232 via FRM220-CH01M standalone chassis		
DIP switch	Copper port speed, Full/Half duplex, Flow control, Fiber port speed		
LED Display	Power, Link/Act, Speed, Full/Half duplex, CO/CPE alarm		
Packet forwarding rate	14880pps	@10Mbps	
	148800pps	@100Mbps	
	1488000pps	@1000Mbps	
	3720000pps	@2.5Gbps	
	7440000pps	@5Gbps	
	14880000pps	@10Gbps	
Transmission method	Store and Forward Switching		
Packet buffer	8Mbits		
MAC table size	16K		
Jumbo frame size	10240 Bytes		
VLAN feature	IEEE 802.1Q tagged VLAN (4K VLAN groups) IEEE 802.1ad QinQ VLAN		
QoS feature	Hard wired IEEE 802.1p 8 priority queues		
	Ingress / Egress rate limit in steps of 100kbps		
	IEEE 802.3x flow control		
	Multicast / Broadcast / Unicast storm control with flooding control		
Security	Static port security (MAC based)		
	DHCP snooping		
	IP source guard		
	256 ACL rules based on L2~L4 information (MAC/IP/UDP port)		
	RADIUS / TACACS+ authentication		
	HTTPs & SSH v2		

Management	WebGUI / Telnet CLI interface
	SNMP v1/v2c/v3
	RMON I (1,2,3,9 groups) & RFC1213 MIB II
	Dying gasp in trap message
	TFTP/HTTP based firmware and configuration upgrade
	Internal syslog storage (1000 records Min.)
	External Event syslog server
	NTP client
	IPv4/IPv6 management
	SFF-8472 DDMI (Tx power, Rx sensitivity, Voltage, Bias current, Temperature)
	SFP transceiver parameters over threshold alarm in trap message
Ethernet OAM	IEEE 802.3ah link OAM (peer discovery / dying gasp / loopback / event notification)
Power input	100V~240VAC power supply or 18~72VDC power supply
Operating temperature	0~65°C
Storage temperature	-25~70°C
Humidity	10%~95% (non-condensing)
Dimension	185 x 135 x 30 mm (W x D x H)
Certification	CE, FCC class A

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10G Media Converter   FRM220- 10GCM

Application

CO Side

CPE Side

Ordering Information

Model Name	Description
FRM220-10GCM	10G/5G/2.5G/1G/100/10Base-T RJ45 to 10GBASE-R SFP$^+$ Managed Media Converter

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