

NEW



# FRM220A-2000EAS/1 FRM220A-2000EAS/2

1/2x 10/100/1000Base-T + 1/2x 100/1000Base-X SFP  
OAM/IP GbE Managed Switch

The FRM220A-2000EAS/1 and FRM220A-2000EAS/2 are OAM compliant Gigabit Ethernet switch designed to make conversion between 10/100/1000Base-T(X)+100/1000Base-X SFP (2000EAS/1) and 2x 10/100/1000Base-T(X)+2x 100/1000Base-X SFP (2000EAS/2).

With embedded SNMP and Web-based management, the administrator can monitor, configure and control the activity of each switch card both locally and remotely. Based on a powerful L2+ switch architecture, this switch supports bandwidth control, duplex and speed configuration, VLAN tagging, Q-in-Q, QoS, Spanning tree, jumbo frames as well as auto laser shutdown, link fault pass through, OAM loop back and dying gasp. This card may also be controlled and monitored via an GSW/SNMP in a managed FRM220A chassis

## Features

- 10/100/1000Base-T and 100/1000Base-X SFP (2000EAS/1)
- 2x 10/100/1000Base-T and 2x 100/1000Base-X SFP (2000EAS/2)
- Standalone IP Based, Web GUI, Telnet, SNMP management
- Supports RMON counter
- Supports dying gasp
- D/D function for supported SFP fiber transceiver
- Supports Cisco® like CLI
- Online local / remote f/w upgrade
- Supports local / remote IEEE 802.3ah OAM / IP management
- Auto Laser Shutdown (ALS)

## Specifications

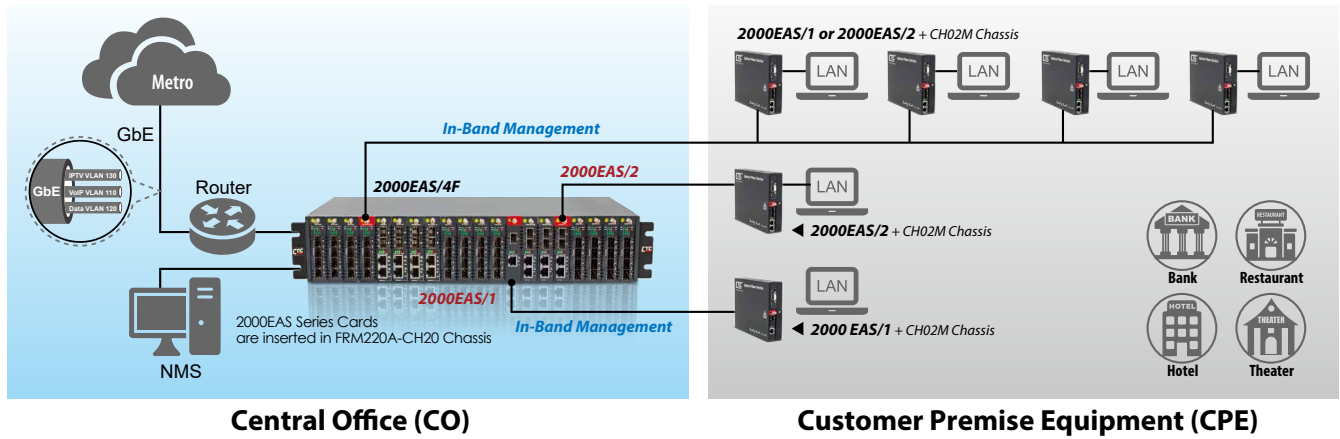
<b>Optical Interface</b>	Connector	SFP LC
	Data rate	125/1250Mbps
	Duplex mode	Full duplex
	Fiber	MM 50/125µm, 62.5/125µm. SM 9/125µm
	Distance	MM 550m, 2km, SM 15/30/50/80/120km WDM 20/40/60km
Wavelength	MM 1310nm, SM 1310,1550nm	
	WDM 1310Tx/1550Rx (type A) 1550Tx/1310Rx (type B)	
<b>Indications</b>	LED (Power, FX-Link, Test, UTP-Link, UTP-SPD)	
<b>Transmission method</b>	Store and Forward Switching	
<b>Standard</b>	IEEE 802.3u, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3x, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1x, IEEE 802.1D, IEEE 802.1w, IEEE 802.1s, IEEE 802.3ad, IEEE 802.1ab	
<b>Packet buffer</b>	4M bits	
<b>MAC table size</b>	8K	
<b>Max. Packet Jumbo frame size</b>	9600 Bytes	
<b>VLAN feature</b>	IEEE 802.1Q tagged VLAN (Max. 4K VLAN groups)	
	MAC based VLAN	
	Protocol based VLAN	
	Private VLAN for port isolation IEEE 802.1ad Q-in-Q	
<b>L2 switching protection</b>	STP, RSTP, MSTP	
<b>Trunking</b>	IEEE 802.3ad LACP	

<b>QoS feature</b>	IEEE 802.1p 8 priority queues per port, Port Default Priority, User Priority, QoS Control List (QCL Mode), Port policers, Port egress shaper, Queue egress shapers, DiffServ (RFC2474) remarking, Tag remarking, Scheduler mode
<b>Security</b>	IP/MAC binding, ACL rule based filtering ARP inspection
<b>Storm Control</b>	Unknown Unicast/Broadcast/Multicast storm suppression
<b>Management</b>	Web/Telnet CLI interface, Web/CLI authentication, SSH v2, HTTPS, Port mirroring, System syslog, IPv4/IPv6 management, NTP, Text based CLI configuration upload or download, IEEE 802.1ab LLDP
<b>SNMP agent</b>	SNMP v1/v2c/v3, RMON Group 1,2,3 and 9, Multiple trap destinations
<b>Software upgrade</b>	TFTP/HTTP
<b>Power Consumption</b>	8W
<b>Power Input</b>	12VDC
<b>Temperature</b>	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)
<b>Humidity</b>	10 ~ 90% non-condensing
<b>Certification</b>	CE, FCC
<b>Dimensions</b>	159.5 × 20.8 × 88mm (D × W × H)
<b>Weight</b>	130g

4

In-Band OAM/IP GbE Managed Switch FRM220A-2000EAS/1 (2)

## Application



**Central Office (CO)**

**Customer Premise Equipment (CPE)**

## Ordering Information

Model Name	Description
FRM220A-2000EAS/2	2x 10/100/1000Base-T and 2x 100/1000Base-X SFP-LC managed switch card (optional SFP module)
FRM220A-2000EAS/1	10/100/1000Base-T to 100/1000Base-X SFP-LC managed converter card (optional SFP module)

## Chassis Option

Model Name	Description
FRM220-CH20(HS)	2U 19", 20 slots rack mount chassis with high speed cooling fan and rack mounting kit
FRM220-CH20-AC	Chassis Power module 100~240 VAC, IEC connector, 200W
FRM220-CH20-DC48	Chassis Power module 36~72 VDC, 3 pin terminal block, 200W
FRM220-CH02M-AC/DC/AD	2-slot chassis with console port and AC or DC power, with fan
FRM220-CH02/NMC-AC/DC/AD	2-slot chassis with fan, managed via optional NMC card and with AC, DC or AD power
FRM220-CH02/SMT-AC/DC/AD	2-slot chassis with fan, managed via optional NMC card and with AC, DC or AD power plus fan/power alarm detection

4

In-Band OAM/IP GbE Managed Switch FRM220A-2000EAS/1 (2)