



# FRM220A-GSW/SNMP-10G

10G uplink Ethernet Aggregation Switch Card

The FRM220A-GSW/SNMP-10G is the next generation management module card of FRM220A chassis. It is built in gigabit Ethernet interface to connect with backplane and link to each slot of FRM220A chassis.

To aim at the Metro Ethernet application, the specifications of FRM220A-GSW/SNMP-10G fully meet the attributes of Carrier Ethernet proposed by MEF (Metro Ethernet Forum). It comply MEF 9 standard to support E-Line/E-LAN service, MEF 14 standard to enable the bandwidth profile configuration delivering SLA (Service Level Agreement) for end-to-end performance characteristics as well as MEF21 to support carrier grade service OAM management rapidly detecting and recovering from the network incidents in real time.



# FRM220A-GSW/SNMP

Gigabit Ethernet Aggregation Switch Card

The FRM220A incorporates a 24+4 Gigabit Ethernet Switch. Twenty ports supply each slot of the 2U 20-slot chassis with an electrical gigabit Ethernet uplink with the remaining four electrical gigabit ports accessible via the rear of the chassis. The additional four ports are provided by SFP sockets. All eight Gigabit ports (4+4) are usable without restrictions for uplink aggregate to the Ethernet Metropolitan Area Network (E-MAN). The FRM220A-GSW/SNMP card transmits Ethernet between the subscriber equipment (bridge/modem or network interface card) and the E-MAN. The card provides a user-networking interface with Ethernet packets. This card is capable of providing high bandwidth for assembling Ethernet traffic. The FRM220A-GSW/SNMP card is not only the system aggregate/trunk module, but also the system's control module, providing OAM Management functions.

## Features

- Provides chassis aggregation via 4x10Gigabit Base-X SFP+ uplink slots (FRM220A-GSW/SNMP-10G)
- Provides chassis aggregation via 4x1000Base-X SFP uplink slots (FRM220A-GSW/SNMP)
- Supports ITU-T G.8032 Ethernet ring protection (FRM220A-GSW/SNMP-10G)
- Supports IEEE 802.1p HW based 8 priority queues and L2~L4 QoS functions (FRM220A-GSW/SNMP-10G)
- Supports IEEE 802.3ah/IEEE 802.1ag/ITU-T Y.1731 Ethernet OAM features (FRM220A-GSW/SNMP-10G)
- Supports IPv6 management (FRM220A-GSW/SNMP-10G)
- Compliant to MEF 9/MEF 14 standards for E-Line, E-LAN services (FRM220A-GSW/SNMP-10G)
- Fiber optical ports supports ring or chain topology
- Built-in gigabit Ethernet interface to link with each slot of FRM220A chassis
- Provides Web, Telnet, SNMP management interface
- Supports IEEE802.1D/802.1w/802.1s for ring protection on the trunk interfaces
- Supports IEEE 802.1Q tagged VLAN and IEEE 802.1ad Q-in-Q application

## Specifications

<b>Trunk Interface</b>	4x 10/100/1000Base-T+ 4x 1000Base-X/2500Base-X GbE switch trunk card (FRM220-GSW/SNMP)	<b>Certification</b>	CE, FCC, RoHS compliant
	4x 10G Base-X + T+ 4x 1000Base-X/2500Base-X GbE switch trunk card (FRM220-GSW/SNMP-10G)	<b>Physical Specifications</b>	In-band management Provides all system OAM functions: software updates, and management system interaction through Ethernet trunk port
	Supports full-duplex mode for 1000Mbps (FRM220A-GSW/SNMP)		Out-band management Supports Web, Telnet and SNMP, EMS management
	Supports full-duplex mode for 10G Mbps (FRM220-GSW/SNMP-10G)	<b>Indications</b>	PWR, FAN, Alarm, STK
<b>Capacity</b>	Supports up to 20 service cards	<b>Dimensions</b>	142 x 200 x 26 mm (D x W x H)
<b>Temperature</b>	0~60°C (Operating), -10~70°C (Storage)	<b>Weight</b>	0.5kg
<b>Humidity</b>	5~90% non-condensing	<b>MTBF</b>	65,000 hrs

## Ordering Information

Model Name	Type	Description
FRM220A-CH20	Chassis	2U 20-Slot rack mount chassis with 20 line card blank plate
FRM220A-GSW/SNMP	Card	Gigabit Ethernet Aggregate switch card supports web, telnet, SNMP management interface
FRM220A-GSW/SNMP-10G	Card	10G Ethernet Aggregate switch card supports web, telnet, SNMP management interface
FRM220A-AC	Power	Chassis power module 100 ~ 240 VAC, IEC connector
FRM220A-DC24	Power	Chassis power module 18 ~ 36VDC, 3 pin terminal block
FRM220A-DC48	Power	Chassis power module 36 ~ 72VDC, 3 pin terminal block

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Example: FRM220A - CH20

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Example: FRM220A - GSW/SNMP