# FRM220A-GSW/SNMP-10G FRM220A-GSW/SNMP-1G

- **10G uplink Ethernet Aggregation Switch Card**
- ▶ 1G uplink Ethernet Aggregation Switch Card



FRM220A-GSW/SNMP-10G and FRM220A-GSW/SNMP(n) are next generation switch/management trunk cards for the FRM220A chassis. Twenty (20) GbE switch ports supply each slot of the 2U 20-slot chassis with an electrical gigabit Ethernet uplink with a remaining four (4) electrical gigabit ports accessible via the rear of the chassis. The additional four uplink SFP ports provide 1G/10G Ethernet connections, also on the rear of the chassis. All rear facing eight (8) ports ( $4 \times GE + 4 \times 1G/10G$  or  $4 \times GE + 4 \times 1G$ ) are usable without restrictions for uplink aggregation to the Ethernet Metropolitan Area Network (E-MAN). The FRM220A-GSW/SNMP trunk card transmits Ethernet between the subscriber equipment (bridge/modem or network interface card) and the E-MAN. The trunk card also provides a management interface with Ethernet packets via Telnet, SSHv2, http/https and SNMP (v1,v2c,v3).

#### Features

- Provides chassis aggregation via 4 × 1G/10Gigabit Base-R SFP/SFP+ uplink slots (FRM220A-GSW/SNMP-10G)
- Provides chassis aggregation via 4 × 1G Gigabit Base-X SFP uplink slots (FRM220A-GSW/SNMP-1G)
- Supports IEEE 802.1p HW based 8 priority queues and L2~L4 QoS functions
- Supports IPv6 management
- Fiber optical ports supports Ring topology

- Built-in gigabit Ethernet interface to link with each slot of FRM220A chassis
- Provides Web (https), Telnet, SSHv2, SNMP(V1, V2c, V3) management interface
- Supports IEEE 802.1D/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**

Trunk Interface	$4 \times 1$ G Base-X SFP + $4 \times 10/100/1000$ Base-T RJ45 switch trunk card		
	Supports full-duplex mode for 1G/10G Mbps (FRM220A-GSW/SNMP-10G)		
	Supports full-duplex mode for 1G Mbps (FRM220A-GSW/SNMP-1G)		
Capacity	Supports up to 20 service cards		
Temperature	0~60°C (Operating), -10~70°C (Storage)		
Humidity	5~90% non-condensing		
Certification	CE, FCC, RoHS compliant		
Management Specifications	In-band management	Provides all system OAM functions:	
		software updates, and management system interaction through Ethernet trunk port	
	Out-band management	Supports Web, Telnet and SNMP, SSHv2, EMS management	
Indications	PWR, FAN, Alarm, STK		
Dimensions	$142 \times 200 \times 26 \text{ mm} (D \times W \times H)$		
Weight	0.5kg		
MTBF	65,000 hrs		

## **Ethernet Aggregation Switch Card with In-Band Management**

## Ordering Information

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Model Name	Туре	Description
FRM220A-CH20	Chassis	2U 20-Slot rack mount chassis with 20 line console blank plate
FRM220A-GSW/SNMP-10G	Card	10G Ethernet Aggregate switch card supports web, telnet, SNMP management interface
FRM220A-GSW/SNMP-1G	Card	1G 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 $\sim$ 36 VDC, 3 pin terminal block
FRM220A-DC48	Power	Chassis power module 36 ~ 60 VDC, 3 pin terminal block