



## FRM220-10/100AS-2

2x 10/100Base-TX + 2x 100Base-FX  
OAM / IP Managed Switch

## FRM220-100AS-1

OAM/IP Managed 10/100Base-TX to  
100Base-FX Media Converter

The FRM220-100AS-1 and FRM220-10/100AS-2 are an IEEE 802.3ah OAM compliant copper to fiber Fast Ethernet solution designed to make conversion between 10/100Base-TX and 100Base-FX with SFP. With stand-alone SNMP and Web-based management, the network administrator can monitor, configure and control the activity of each IEEE 802.3ah series card and remotely connected OAM compliant converter. By offering IEEE 802.3ah 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

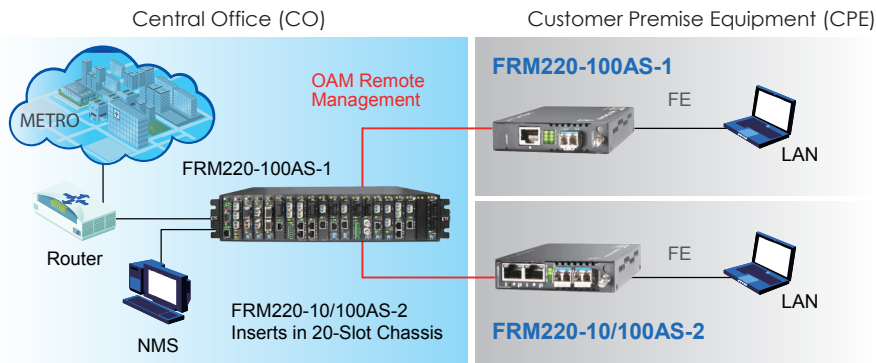
- 10/100Base-TX to 100Base-FX SFP (100AS-1)
- 2x 10/100Base-TX + 2x 100Base-FX SFP (10/100AS-2)
- Supports local / remote IEEE 802.3ah OAM/IP In-band management
- Stand-alone IP Based, Web GUI, Telnet, SNMP management
- Auto-Negotiation or forced mode
- Auto MDI/MDIX
- Supports IEEE 802.1Q Tagging
- Supports Q in Q double tagging
- Max. MTU size 10K bytes (100AS-1), 1536 bytes (10/100AS-2)
- Supports Flow control (Pause)
- Supports OAM remote loopback to assist in diagnosing network problems
- Supports bandwidth control
- Supports remote CPE power fail detect (dying gasp)
- Supports Far End Fault Indication (FEFI)
- Supports Link Fault Pass-Through (LFPT)
- Supports remote loopback
- D/D function for supported SFP fiber transceiver
- Auto Laser Shutdown (ALS)
- Online local / remote f/w upgrade
- Default port and IEEE 802.1Q Tagging priority QoS
- SNMP trap and LED alarm for loss of light and loss of signal

### Specifications

<b>Optical Interface</b>	Connector	SFP LC
	Data rate	100Mbps
	Duplex mode	Full duplex
	Fiber	MM 50/125µm, 62.5/125µm. SM 9/125µm
	Distance	MM 550m, 2km, SM15/30/50/80/120km WDM 20/40/60km
Wavelength	MM	1310nm, SM 1310, 1550nm
	WDM	1310Tx/1550Rx (type A) 1550Tx/1310Rx (type B)
<b>Power Consumption</b>	< 12W	
<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
	Duplex mode	Half / Full duplex

<b>Electrical Interface</b>	Cable: 10Base-T	Cat.3, 4, 5, UTP
	100Base-TX	Cat.5, 5e or higher
<b>Standards</b>	IEEE 802.3, IEEE 802.3u, IEEE 802.1Q, ITU-T G.664	
<b>Indications</b>	LED : Power, FX-Link, FEF, TEST, Speed(10,100), FULL	
<b>Power Input</b>	Card	: 12VDC
	Standalone	: AC, DC options
<b>Temperature</b>	<b>Storage conditions</b>	
	Temperature range : -5~+45°C	
	Relative Humidity : 5~95% Rh	
	Absolute Humidity : 1~25g H2O/m <sup>3</sup>	
	<b>Operation conditions</b>	
	Temperature range : -5~+45°C	
	Relative Humidity : 5~95% Rh	
Exist conditions for condensation and icing		
Absolute Humidity : 1~29g H2O/m <sup>3</sup>		
<b>Certification</b>	CE, FCC, EN60950 LVD compliant	
<b>MTBF</b>	65,000 hrs	

### Application



### Ordering Information

Model Name	Description
FRM220-100AS-1	10/100Base-TX to 100Base-FX with OAM/IP-Based managed FE Media Converter card (optional SFP)
FRM220-10/100AS-2	2x 10/100Base-TX + 2x 100Base-FX with OAM/IP Based Managed FE Switch card (optional SFP)

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