



FRM220-Serial

RS232/485 over Fiber

The FRM220-Serial provides a fiber modem solution to extend asynchronous RS-232, RS-422 or RS-485 transmission distance up to 2km over multimode fiber or up to 120km over single mode fiber. The converter is equipped with multiple interface circuits for connection to RS-232 or RS485/422 (2 or 4 wire, full or half duplex). The FRM220-Serial secures data transmission over EMI resistant fiber at speeds up to 256kbps for RS-232 or up to 1024kbps for RS485/422. When the FRM220-Serial/485 card is placed in the FRM220 rack with SNMP management, in-band management allows configuring and viewing the card and remote converter's status, type, version, fiber link status, data link status and alarms. When placed in a single slot chassis and used standalone without management, the card may be configured by DIP switches.

Features

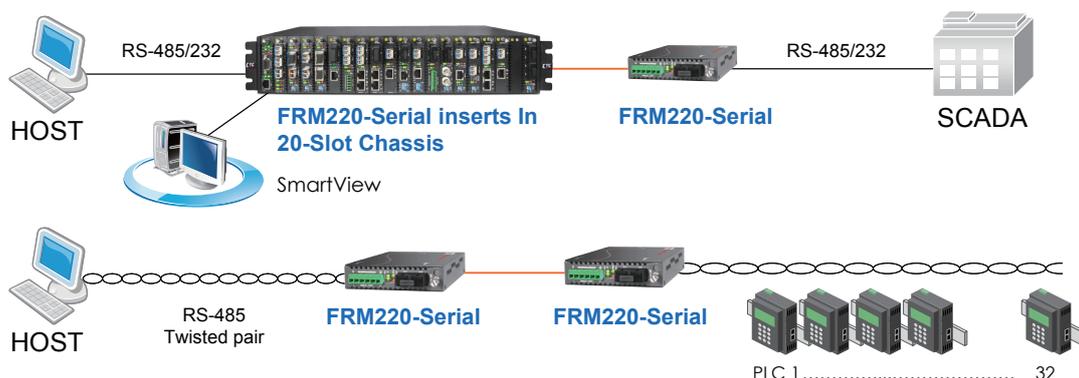
- Extend asynchronous serial transmission up to 120km over fiber
- In-band network management via terminal, Web or SNMP in FRM220-CH20 chassis
- Software selectable data interface for RS-232/ 485
- Software selectable three or five wires RS-232
- Speeds up to 256kbps for RS-232 (Async. mode)
- Speeds up to 1Mbps for RS-485
- Standalone RS232 console management via CH01M
- Software selectable two wires (half duplex) or four wires (full duplex) RS-485

Specifications

Optical Interface	Connector	SFP LC
	Data rate	36.864Mbps
	Line coding	Scrambled NRZ
	Bit Error Rate	Less than 10 ⁻¹⁰
	Fiber	MM 62.2/125µm, 50/125µm SM 9/125µm
	Distance	MM 2km, SM 15/30/50km WDM 20/40km
	Wavelength	MM 1310nm, SM 1310, 1550nm WDM 1310Tx/1550Rx (type A) 1550Tx/1310Rx (type B)
Standards	EIA/TIA RS-485, RS-232	
LEDs	Power, FX Link, DI, DO, Test	
Power Input	12VDC	

Electrical Interface	Connector	6 pins Terminal block
	Data Signal Formats	RS-485 2-wire RS-232 RTS/CTS 5-wire RS-232 3-wire
	Baud Rate	RS-422, RS-485 up to 1024kbps RS-232 up to 256kbps
	Bit Error Rate	Less than 10 ⁻¹⁰
Power Consumption	< 6W	
Dimensions	Card: 155 x 20.8 x 88mm (D x W x H)	
Weight	130g	
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)	
Humidity	10 ~ 90% non-condensing	
Certification	CE, FCC	
MTBF	65,000 hrs	

Application



Ordering Information

Model Name	Description
FRM220-Serial	RS-232/485 fiber converter
FRM220-Serial-SFP	RS-232/485 fiber converter (SFP module not included)
Connector Type	Connectivity Distance

SC,ST,FC (Not Applicable for SFP Type) 002: 2km 015: 15km 030: 30km 050: 50km
20A: WDM 20km A type 20B: WDM 20km B type 40A: WDM 40km A type 40B: WDM 40km B type

Connector Type Connectivity Distance
FRM220 – Serial –
 Example: FRM220 – Serial – SC002

Note: This card may be set by DIP switch and placed in CH01 chassis, or set by serial console if placed in CH01M chassis. When connected as a remote to a managed central chassis, this card supports in-band management and only needs a CH01 chassis.