

# FRM220-Serial

## RS-485 / 232 over Fiber



FRM220-Serial

FRM220-Serial-SFP

The FRM220-Serial provides a fiber converter solution to extend asynchronous RS-485 or RS-232 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 (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. When the FRM220-Serial/485 card is placed in the FRM220 rack with SNMP management, in-band management allows viewing the card and remote converter's status, type, version, fiber link status, data link status and alarms. Both card and remote can be configured to enable or disable the port, reset the port and set the interface type.

### Features

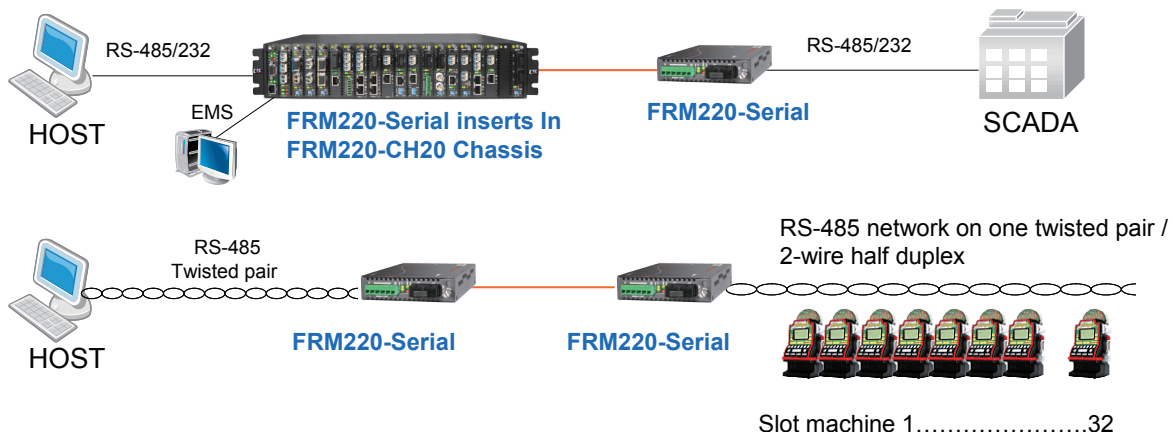
- ◆ Extend asynchronous serial transmission from 2km to 120km over fiber
- ◆ In-band network management via terminal, web or SNMP in FRM220-CH20 chassis
- ◆ Software selectable data interface for RS-232/ 485
- ◆ Software selectable two wires (half duplex) or four wires (full duplex) RS-485
- ◆ Software 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

### Specifications

Optical Interface	Connector	1x9 (SC, ST, FC)
	Data rate	36.864Mbps
	Line coding	Scrambled NRZ
	Bit Error Rate	Less than 10 <sup>-10</sup>
	Fiber	MM 62.2/125µm, 50/125µm SM 9/125µm
	Distance	MM 2km, SM 15/30/50/80/120km, WDM 20/40/60/80km
Wavelength	MM	1310nm, SM 1310, 1550nm, WDM 1310Tx/1550Rx(type A) 1550Tx/1310Rx(type B)
	SM	
Electrical Interface	Connector	6 pins Terminal block
	Data Signal	RS-485 2-wire
	Formats	RS-232 RTS/CTS 5-wire
		RS-232 3-wire

Electrical Interface	Baud Rate	RS-422, RS-485 up to 1024kbps RS-232 up to 256kbps
	Bit Error Rate	Less than 10 <sup>-10</sup>
Standards	EIA/TIA RS-485, RS-232	
LEDs	Power, FX Link, DI, DO, Test	
Power Input	Card	: 12VDC
	Standalone	: AC, DC options
Power Consumption	< 5W	
Dimensions	155 x 88 x 23mm (D x W x H)	
Weight	130g	
Temperature	0 ~ 60°C (Operating), -10 ~ 70°C (Storage)	
Humidity	10 ~ 90% non-condensing	
Certification	CE, FCC, LVD, RoHS	
MTBF	65,000 hrs	

### Application



### Ordering Information

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

Note: The card is suitable for use in CH01M standalone chassis.

FRM220 – Serial –

Connector Type      Connectivity Distance

Example: FRM220 – Serial – SC002

Connector Type	Connectivity Distance
SC, ST, FC (Not Applicable for SFP Type)	002: 2km    015: 15km    030: 30km    050: 50km    080: 80km    120: 120km
	20A: WDM 20km A type    20B: WDM 20km B type    40A: WDM 40km A type    40B: WDM 40km B type
	60A: WDM 60km A type    60B: WDM 60km B type    80A: WDM 80km A type    80B: WDM 80km B type