FRM220-DATA

RS232/530/V35 over Fiber

The FRM220-DATA is a fiber modem for high-speed (up to 8.192Mbps) synchronous or low speed synchronous and asynchronous data transmissions (V.35, RS-232, RS-530, X.21 or RS-449) over fiber optical media. When the FRM220-DATA 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, set the data rate, modify the clock mode, and initiate local or far end loop back tests. The FRM220-Data fiber modem may also be paired with the FRM220-E1/T1 for Nx64K transmissions. When placed in a single slot chassis and used standalone without management, the card may be configured by DIP switches.
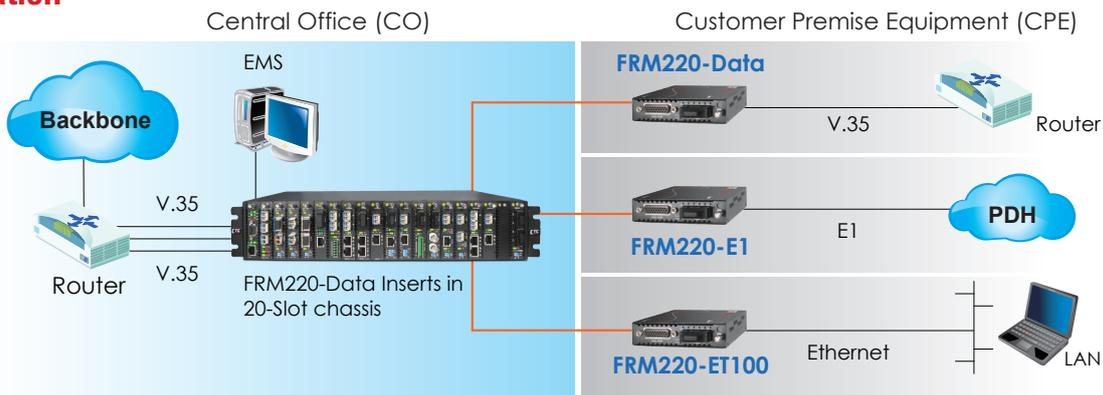
Features

- Synchronous or Asynchronous data over fiber
- In-band network management via terminal, web or SNMP in FRM220 chassis
- Selectable I/F, V.35, X.21, RS-530, RS-449, RS-232
- Selectable DCE or DTE mode
- Data rate n x 64kbps, up to 9Mbps
- Multiple clock setting
- Electrical and optical loop back tests
- Compatible with FRM220-E1 on same fiber link for N x 64k
- Standalone RS232 console management via CH01M

Specifications

Optical Interface	Connector	SFP LC / 1x9 (SC, FC, ST)
	Data rate	36.864Mbps
	Line coding	Scrambled NRZ
	Bit Error Rate	Less than 10-10
	Distance	MM 2km, SM 15/30km, WDM 20/40km
	Wavelength	1310nm, 1550nm
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	

Electrical Interface	Connector	HDB26F w/ adapter cable for V35 X21, RS530, RS449,RS232
	Line Code	NRZ
	Baud Rate	RS-232 up to 384K async
		V.35/RS-530 up to 9152k sync
		where n=1 to 143 (64K ~ 9152KKbps)
	Clock source	Internal, Recovery, External
Standard	ITU-T	
Indications	LED (Power, FX Link, RTS, Test , TD, RD, CTS, DCD)	
Power Input	12VDC	
Power Consumption	< 6W	

Application

Central Office (CO) — Customer Premise Equipment (CPE)

Ordering Information

Model Name	Description
FRM220-V35	V.35 to fiber card with HD26M to MB34F cable (1m)
FRM220-X21	X.21 to fiber card with HD26M to DB15M cable (1m)
FRM220-RS530	RS530 to fiber card with HD26M to DB25M cable (1m)
FRM220-RS449	RS449 to fiber card with HD26M to DB37M cable (1m)
FRM220-RS232	RS232 to fiber card with HD26M to DB25M cable (1m)
FRM220-V35-SFP	V.35 to fiber card with HD26M to MB34F cable (1m) (SFP module not included)
FRM220-X21-SFP	X.21 to fiber card with HD26M to DB15M cable (1m) (SFP module not included)
FRM220-RS530-SFP	RS530 to fiber card with HD26M to DB25M cable (1m) (SFP module not included)
FRM220-RS449-SFP	RS449 to fiber card with HD26M to DB37M cable (1m) (SFP module not included)
FRM220-RS232-SFP	RS232 to fiber card with HD26M to DB25M cable (1m) (SFP module not included)

Interface Type   Connector Type   Connectivity Distance

FRM220 – ☐☐☐ – ☐☐☐☐☐

Example: FRM220 – V35 – SC002

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

Interface Cable Adapters

V35	X21	RS530	RS449	RS232

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

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.

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DATA Fiber Modem