



FRM220-10G-3R

10G 3R Multi-rate Transponder with Optical Line Protection

The FRM220-10G-3R has 4 SFP+ slots that can be configured as a dual channel 10G 3R multi-rate transponder or in a 1-to-2 port protection mode. The device provides a flexible transmission of various protocols, such as 1G/10G Ethernet, SDH STM16/STM64, OTU1/OTU1e/OTU2/OTU2e, Fiber Channel 1/2/4/8/10, OBSAI, CPRI, etc. Using SFP+ ports with dedicated CWDM or DWDM wavelengths, the 10G transponder supports multi-rate functionality with optical data rates from 1Gbps up to 10Gbps. With its functionality the FRM220-10G-3R transponder is also suitable as a repeater for transmission over extended distances. In addition, the use of state of the art components greatly reduces the power requirements and heat dissipation factors over our previous transponders.

Features

- Multi-rate supports 1Gbps ~ 10Gbps
- Protocol Transparent 3R fiber Media Transponder / Repeater
- Supports 1+1 Optical Line Protection, switching time <50ms
- Supports 2 channels with different bit rate
- Supports Loopback Test
- Supports 1550nm ITU-T C-band tunable DWDM SFP+ Transceiver
- SFP DDM Information
- Firmware Upgrade
- Setting from DIP Switch, Console, NMC

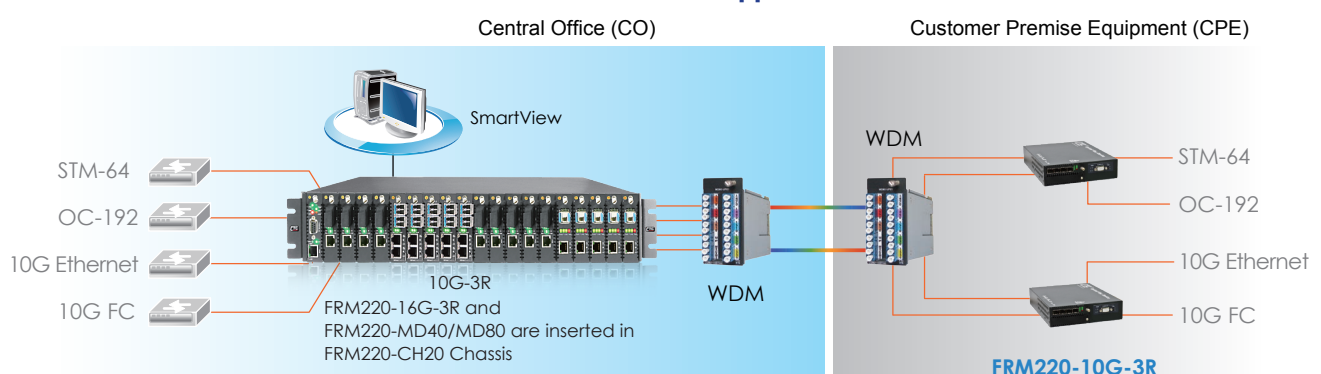
Specifications

| | | |
|--------------------------|---|--|
| Optical Interface | Connector | LC (SFP+, SFP) |
| | Wavelength | CWDM 1271 ~ 1611nm DWDM 1529.5~1565.50nm |
| Operation mode | Dual channel mode : Ch 1 SFP1 line / SFP2 client. Ch2 SFP3 line/ SFP4 client. Protection mode : SFP1 line / SFP2, SFP3 client | |
| Protocol | SONET | OC-12, OC-24, OC-48, OC-192 |
| | SDH | STM-4, STM-16, STM-64 |
| | Ethernet | 1G, 2.5G, 10G |
| | OTU | 10GE OTU2e, 10GE OTU1e, STM-64 OTU2, STM-16 OTU1, 10GFC OTU2 |
| | ODU | 10GE ODU2e, 10GE ODU1e, STM-64 ODU2, STM-16 ODU1 |
| | OBSAI | OBSAI x1, x2, x4, x8 |
| | CPRI | CPRI x1, x2, x4, x5, x8, x10, x16, x20 |
| | Fiber Channel | 1/ 2/4/8/10G FC |
| | SDI/Other | HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI |

| | | |
|---------------------|---|---|
| Regeneration | Re-Amplification, Re-Shaping, Re-Timing | |
| Indication | LED | Power, System, Mode, Test, FX1 Link, FX2 Link, FX3 Link, FX4 Link |
| Power | Input | 12V / 1A |
| | Power Consumption | < 8W |
| Size | Dimensions | Card: 155 x 20.8 x 88mm (D x W x H) |
| | Weight | 150g |
| Environment | Operating Temperature | 0 ~ 50°C |
| | Storage Temperature | -10 ~ 70°C |
| | Humidity | 10 ~ 90% |
| | Certification | CE, FCC |
| | MTBF | 65000 hrs |

Application

10G-3R CWDM P to P application



-Related Products: FRM220-40G-2Q/1Q45/16G-3R/4G-3R/MP7G1X (40G, 16G, and 4G 3R Transponder/Muxponder)

Ordering Information

| Model Name | Description |
|---------------|--|
| FRM220-10G-3R | 2 Channels 10Gbps 3R Multi-rate transponder card (optional SFP+) |

Note: This card may be placed in CH02M, CH01M or CH04A chassis with fan. For SNMP management, place this card in CH02/NMC or CH04A Chassis.