

## Managed Family

Managed slide-in card  
3R 10G Transponder for FRM220

## FRM220-10G



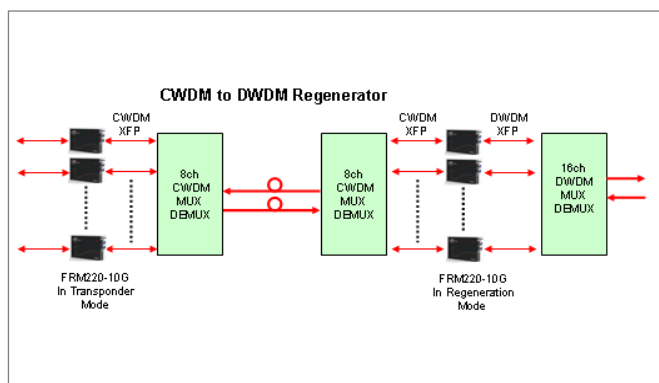
The FRM220-10G-xx is a series of managed 10G fiber to fiber 3R repeater/transponders. Based on a number of 10 Gigabit Fiber standards, these transponders support XFP to XFP (XX), SFP+ to XFP (SX), or SFP+ to SFP+ (SS) fiber connections. The transponders are protocol transparent, providing 3R regeneration between these different optical module types. One of the major applications for this converter is in connecting proprietary transceiver equipment to CWDM or DWDM when these 'colored' optical modules are not available for the proprietary equipment. With full duplex wire speed forwarding capability between the 2 fiber media, the FRM220-10G-xx brings you the best and simplest solution for your 10G conversion between fiber and fiber.

## Features

- Multiple protocol supported 10G Ethernet, 10G FC, STM-64, OC-192
- Network management via Web, Telnet, SNMP in central FRM220-CH20 chassis
- Protocol transparent 3R fiber media transponder / repeater (Re-amplification, Re-shaping and Re-clocking)
- Promotes flexibility and eases management with pluggable SFP+ or XFP transceiver
- Features two 10G ports offering multiservice 10G transponder and regenerator function
- Provides superior optics capabilities resulting in extended transport distances for regional application.
- Extend 10G Ethernet transmission over fiber
- Useful as a 'Transponder' in CWDM or DWDM systems for 10G Ethernet/Fiber Channel/STM-64
- Supports Client / Line loop back tests
- Serial console for stand-alone management When inserted in CH01M Single Slot Chassis

## Specifications

Ports	Optical Interface
	FRM220-10G-SS LC, 1x Line SFP to 1x Client SFP+
	FRM220-10G-XX LC, 1x Line XFP to 1x Client XFP
	FRM220-10GSX LC, 1x Line SFP+ to 1x Client XFP
	OC-192/STM-64 10 Gigabit Ethernet LAN 10G FC (10.51875G) OTN G.709; OTU2 (10.709225G)
	Re-Amplification Re-Shaping Re-Timing
	Line / Client
	SM 9/125um
	CWDM 1470 ~ 1610nm DWDM 1529.55 ~ 1565.50nm
LED	PWR, Line Link, Client Link, Test, Loop back, Port Active, Alarm
Power	DC 12V 1A
Power consumption	<18W
Dimensions ( DxWxH)mm	155 x 88 x 23 mm
Weight	150g
Temperature	-10 ~ 60°C (Operating) -20 ~ 70°C (Storage)
Humidity	10 ~90% non-condensing
Certification	CE, FCC, LVD, RoHS
MTBF	75,000 h



## Ordering Information

## Line card

- FRM220-10G-SS** 3R 10G Transponder SFP+ to SFP+ slide-in card
- FRM220-10G-SX** 3R 10G Transponder SFP+ to XFP slide-in card
- FRM220-10G-XX** 3R 10G Transponder XFP to XFP slide-in card

## Stand-alone

- FRM220-10G-SS-AC** 3R 10G Transponder SFP+ to SFP+ with built-in AC power
- FRM220-10G-SX-AC** 3R 10G Transponder SFP+ to XFP with built-in AC power
- FRM220-10G-XX-AC** 3R 10G Transponder XFP to XFP with built-in AC power
- FRM220-10G-SS-DC** 3R 10G Transponder SFP+ to SFP+ with built-in DC power
- FRM220-10G-SX-DC** 3R 10G Transponder SFP+ to XFP with built-in DC power
- FRM220-10G-XX-DC** 3R 10G Transponder XFP to XFP with built-in DC power
- FRM220-10G-SS-AD** 3R 10G Transponder SFP+ to SFP+ with built-in AC+DC power
- FRM220-10G-SX-AD** 3R 10G Transponder SFP+ to XFP with built-in AC+DC power
- FRM220-10G-XX-AD** 3R 10G Transponder XFP to XFP with built-in AC+DC power