



# FRM220-40G-1Q4S

40G QSFP<sup>+</sup> to 4x 10G SFP<sup>+</sup> Transponder

The FRM220-40G-1Q4S is a 40G QSFP<sup>+</sup> to 4x 10G SFP<sup>+</sup> transponder that provides media conversion and distance extension for 40G over 10G links. The FRM220-40G-1Q4S meets the growing need for more bandwidth for data centers and enterprises. The emergence of high-end servers and Ethernet switches with 40G Ethernet interfaces increases the need for media conversion (multi-mode to single-mode) and link range extension. The FRM220-40G-1Q4S is a two slot wide hot-swappable card with one QSFP<sup>+</sup> slot for QSFP<sup>+</sup> 40G transceiver and four SFP<sup>+</sup> slots for SFP<sup>+</sup> 10G transceivers. The installation and setup is simple plug and play. The FRM220-40G-1Q4S can be inserted into any powered FRM220-CH20 chassis with QSFP<sup>+</sup> and SFP<sup>+</sup> transceivers required for the application.

## Features

- Device Management via FRM220 Chassis with NMC
- Multiple functions in one module: 40G converter/repeater and Quad 10G optical multiplexer
- 40G link interface --Ethernet/IEEE: 802.3ba 40GE-LR4
- 40G multi-link (fiber) interfaces --Ethernet/IEEE: 802.3ba XLAUI and OIF: CEI-11G
- QSFP<sup>+</sup> ports for flexibility and scalability
- Hot-swap support (module and interfaces)
- Supports 1x 40G QSFP<sup>+</sup> and 4x 10G SFP<sup>+</sup>
- Supports DMI function for QSFP<sup>+</sup> & SFP<sup>+</sup> module
- Supports Loopback test function
- 3R function.

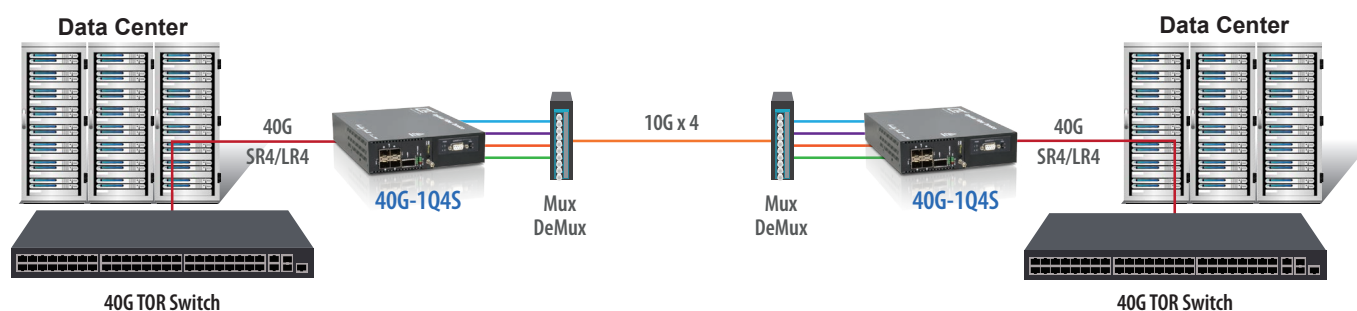
## Specifications

<b>Equipment function</b>	3R Transponder, Regenerator, Reshaper, Retimer
<b>Data Rate</b>	Aggregate Data Rate 32 - 56.8 Gbps
	Data Rate per Lane 8 - 14.2 Gbps
<b>Protocol</b>	CPRI x 16
	STM - 64
	OC - 192
	FC8, FC10
	10G Ethernet
<b>Interface Type</b>	40Gbps : QSFP <sup>+</sup> (1 port), 10Gbps : SFP <sup>+</sup> ( 4 ports)

<b>Transmission Distance</b>	depends on QSFP <sup>+</sup> & SFP <sup>+</sup> module
<b>Power requirement</b>	Power input 12VDC
	Power consumption: ≤12W
<b>Work Environment</b>	Operating Temperature 0 ~ 50°C
	Storage Temperature -10 ~ 70°C
	Humidity 10 ~ 90% (non-condensing)
<b>Weight</b>	170g
<b>Dimension</b>	Card: 155 x 46 x 88mm (D x W x H)

## Application

### 40G SR4/LR4 P to P application



-Related Products : FRM220-40G-2Q/16G-3R/10G-3R/4G-3R/MP7G1X (40G, 16G, 10G and 4G 3R Transponder/Muxponder)

## Ordering Information

Model Name	Description
FRM220-40G-1Q4S	40G converter/repeater, Quad 10G Optical Multiplexer module with QSFP Interfaces (optional SFP <sup>+</sup> , QSFP <sup>+</sup> )

**Note:** This card MUST be placed in CH02M chassis with fan. For SNMP management, place this card in CH04A chassis.