CWDM
(FRM220 Mux/DeMux)
4 and 8 Channel CWDM Mux/DeMUX

The FRM220 CWDM Mux/DeMux is modular design cards that support ITU-T G.694.2 wavelengths between 1271nm to 1611nm in 20nm increments. The FRM220 CWDM modules are protocol and rate transparent allowing different services such as 10G Ethernet, 10GFC, STM-64, OC-192 to be transported across the same fiber link. The passive FRM220 CWDM Mux/De   Mux modules are available in 4 and 8-Channel (wavelength) models, supporting a variety of wavelength combinations and port configurations. The small and compact size of the CWDM modules yields one of the highest port densities in the industry. A 2U high 19-module FRM220 chassis populated with modules can yield up to 120 channels of capacity. FRM220 CWDM modules are passive devices that require no external power. They can also be installed in an FRM220 powered chassis with a NMC management module[1] and can be managed using SmartView EMS network management software, third-party SNMP software, Telnet or a serial console port. The modules can be installed in any FRM220 chassis equipped with other FRM220 media converters and transponders to provide a multi-service platform capable of delivering Ethernet, TDM, Voice and other services across a CWDM fiber common link.
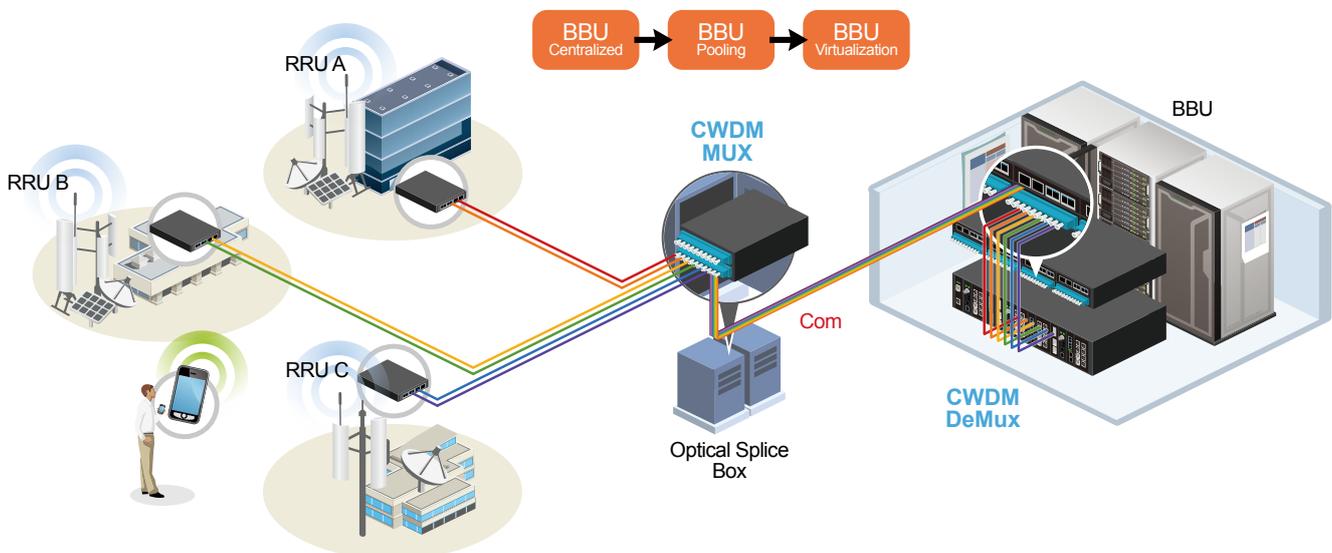
Features

- Full native mode performance
- Passive model requires no power
- Protocol transparent, no limitation
- Utilizes industry standard ITU CWDM wavelength
- Standard LC connectors
- Passive device that can be installed in a powered chassis for managed applications
- Integration with Transponder in FRM220 chassis for CWDM application

Specifications

Model	FRM220-MD-XXX
Channel	4 or 8 channels
Standards	ITU-T G.694.2
Wavelength	1271 ~ 1611nm
Insertion Loss	4ch < 1.8dB, 8ch < 2.8dB
Return Loss	>45dB
Option	Upgrade port
	Wide 1310 ± 50 nm
Line Link	Single fiber or two fiber

Connector	LC / UPC
Dimension	MD40 : 155x 88 x23 mm (D x W x H)
	MD80 : 155x 88 x42 mm (D x W x H)
Weight	MD40 : 200g
	MD80 : 380g
Temperature	0 ~ 50℃ (Operating)
	-40 ~ 70℃ (Storage)
Humidity	0 ~95% (non-condensing)
Certification	RoHS compliant

Application

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

Ordering Information

Model Type	Model Name	Channel Port ITU Center Wavelength(nm)	Chassis Slots Required	Insertion Loss	Client	Line	Mointor	U/P
CWDM 4-Channel MUX/DeMUX	FRM220-MD40-(5157)	1511, 1531, 1551, 1571	1	<1.8dB	LC/UPC			
	FRM220-MD40-(5561)	1551, 1571, 1591, 1611	1	<1.8dB	LC/UPC			
	FRM220-MD40-UP02	1471, 1491, 1591, 1611 + Upgrade port 1 (1531 ~ 1571nm)+ Upgrade port 2 (1261 ~ 1457nm)	2	<2.2dB	LC/UPC			LC/UPC
CWDM 8-Channel MUX/DeMUX	FRM220-MD80	1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611	2	<2.8dB	LC/UPC			
	FRM220-MD81	1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 + monitor port	2	<2.8dB	LC/UPC		LC/UPC	
	FRM220-MD80-UP01	1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 + Upgrade port (1261 ~ 1451nm)	2	<2.8dB	LC/UPC			LC/UPC
Single fiber CWDM 4-Channel MUX/DeMUX	FRM220-MD40-WA	TX/RX (1471/1491, 1511/1531, 1551/1571, 1591/1611)	1	<1.8dB	LC/UPC			
	FRM220-MD40-WB	TX/RX (1491/1471, 1531/1511, 1571/1551, 1611/1591)	1	<1.8dB	LC/UPC			
Single fiber CWDM 8-Channel MUX/DeMUX	FRM220-MD81-WA-2	TX/RX (1271/1471, 1291/1491, 1311/1511, 1331/1531, 1351/1551, 1411/1571, 1431/1591, 1451/161nm) + monitor port	2	<2.8dB	LC/UPC	SC/UPC	FC/UPC	
	FRM220-MD81-WB-2	TX/RX (1471/1271, 1491/1291, 1511/1311, 1531/1331, 1551/1351, 1571/1411, 1591/1431, 1611/1451nm) + monitor port	2	<2.8dB	LC/UPC	SC/UPC	FC/UPC	

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CWDM Mux/DeMux

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