MX20-3155

Dual Channel WDM MUX/DeMUX

MX20-3155 is a dual channel, passive, protocol transparent, WDM multiplexer/demultiplexer which utilizes two popular WDM lambda channels of 1310nm and 1550nm. The demultiplexed channels utilize industry standard FC connectors while the multiplexed WAN uses a duplex LC connection. Housed in a convenient 1RU 19" metal chassis, MX20-3155 offers two completely independent and isolated channels for effectively doubling the utilization of a bi-directional fiber pair.

Features

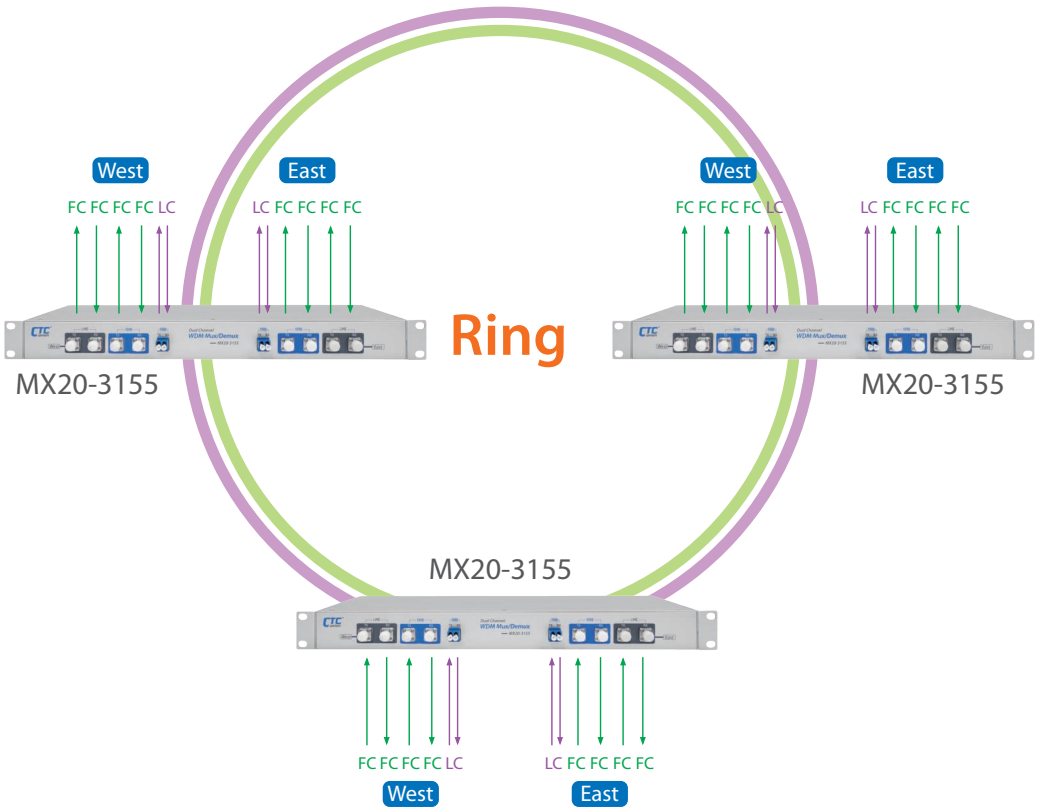
- Full native mode performance
- Optical connectors
- Passive model requires no power
- Protocol transparent, no data rate limitation
- Utilizes two popular WDM wavelengths

Specifications

Operating Wavelengths (nm)	1310/1550
Insertion Loss (max.) (dB)	0.6 with connectors for all ports
Isolation(db)	≧25
PDL (dB)	≧0.05
Retum Loss (dB)	≧55

Directivity (dB)	≧55
Temperature	-10 ~ 70°C (Operating) -40 ~ 85°C (Storage)
Fiber Type	Corning© Singlemode SMF-28E
Dimensions	432 x 150 x 43mm (D x W x H)

Application



Ordering Information

Model Name	Description
MX20-3155	1U high 19"2 channels (1310,1550) WDM MUX/DeMUX

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

SML40-CH04

MUX/DeMUX Passive Chassis

SML40-CH04 is a 1U 19-inch CWDM passive rack that features 4 cards capacity and supports SML-40-8181-L, 8+1 channels MUX/DEMUX cards. The 8+1 channels MUX/DEMUX card is a modular design for CWDM wavelengths including 1471nm, 1491nm, 1511nm, 1531nm, 1551nm, 1571nm, 1591nm, and 1611nm. The 1311nm CWDM channel is accessible separately. The MUX/DEMUX cards provide the primary wave division and combination functions for CWDM. Line side wave lengths require translation to client side equipment via a transponder card. The unique design makes the SML40-CH04 one of the compact CWDM solutions in the industry.

Features

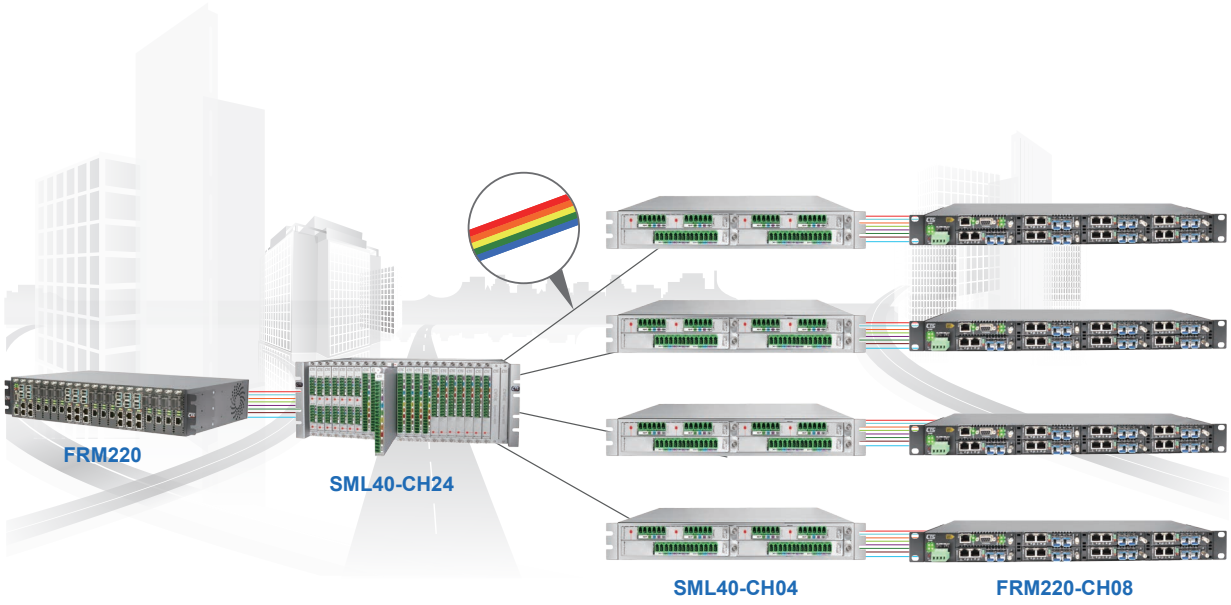
- 4-Slot for MUX/DEMUX card
- 1U, 19-inch Rack Mount
- Passive model requires no power
- Plug & Play Operation
- Optical connectors: LC connectors, SMF 9/ 125um
- Protocol transparent, no limitation
- Utilizes industry standard ITU-T CWDM wavelengths

Specifications

Connectors	LC	
Physical Specifications	Dimensions (D x W x H)	1U passive chassis : 280 x 438 x 43 mm
		Mux/ Demux card : 260 x 240 x 18 mm

Environmental Specifications	Operating 0 ~ 50°C
	Storage 0 ~ 70°C
	Relative humidity 5% ~ 90% non-condensing
Certification	RoHS compliant

Application



Ordering Information

Model Name	Description
SML40-CH04	1U 19" 4-slot chassis
SML40-CH24	4U 19" 24-slot chassis

Chassis Type
SML40 –□□□□
Example: SML40 – CH04

SML40-MD

8-Ch/5-Ch MUX/DeMUX with Monitor Port

The SML-40-MD80 is an 8 channel MUX/DeMUX modular design card for CWDM wavelengths including 1471nm, 1491nm, 1511nm, 1531nm, 1551nm, 1571nm, 1591nm, 1611nm. The SML-40-MD81 is 8 channels MUX/DeMUX modular design card with monitor port. The SML-40-MD51 is a 5 channel MUX/DeMUX modular design card for CWDM wavelengths including 1491nm, 1511nm, 1571nm, 1591nm, 1611nm. The SML-40-MD40 is a dual 4 channels Mux/Demux card with wavelengths including 1471, 1491, 1551, 1531nm. The MUX/DEMUX cards provide the primary wave division and combination functions for CWDM. Line side wave lengths require translation to client side equipment via a transponder card.

Features

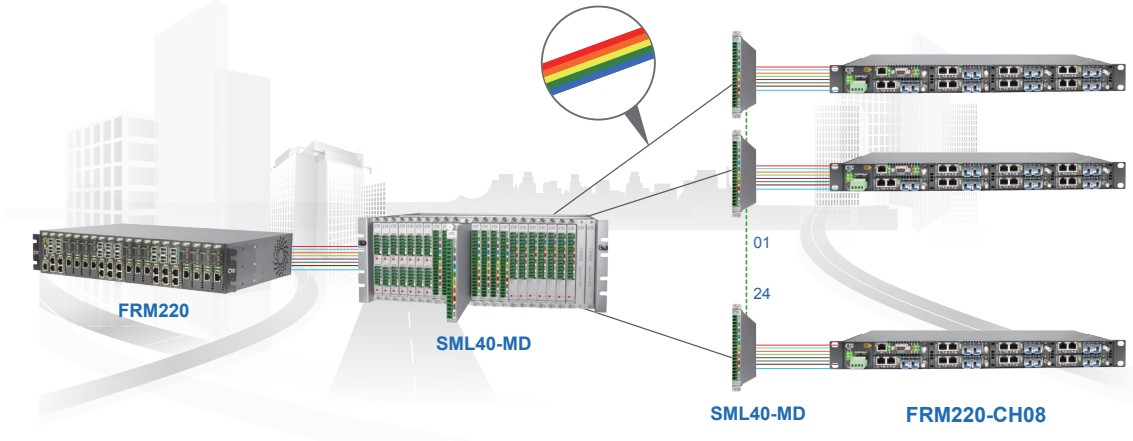
- Full native mode performance
- Optical connectors : LC connectors, SMF 9/125um (UPC or APC)
- Optical Input/Output monitor port
- Passive model requires no power
- Protocol transparent, no limitation
- Utilizes industry standard ITU CWDM wavelength

Specifications

Connector	LC
Standard	ITU-T G.694.2
Wavelength	1311,1471,1491,1511,1531,1551, 1571,1591,1611nm
Insertion Loss	< 3.5dB for CWDM wavelength
Return Loss	> 45dB
Dimensions	260 x 240 x 18.2mm (D x W x H)

Weight	0.6kg
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)
Humidity	10 ~ 90% non-condensing
Certification	CE, FCC, RoHS compliant
MTBF	75,000 hrs

Application



Ordering Information

Model Name	Description
SML40-MD80-UPC-Wavelength	8-Ch Mux/Demux Card **1471 / 1491 / 1511 / 1531 / 1551 / 1571 / 1591 / 1611**nm LC UPC wavelength selected from 1271 ~ 1611nm
SML40-MD80-APC-Wavelength	8-Ch Mux/Demux Card **1471 / 1491 / 1511 / 1531 / 1551 / 1571 / 1591 / 1611**nm LC APC wavelength selected from 1271 ~ 1611nm
SML40-MD81-UPC-Wavelength	8-Ch Mux/Demux Card **1471 / 1491 / 1511 / 1531 / 1551 / 1571 / 1591 / 1611**nm with Monitor port. LC UPC wavelength selected from 1271 ~ 1611nm
SML40-MD81--APC-Wavelength	8-Ch Mux/Demux Card **1471 / 1491 / 1511 / 1531 / 1551 / 1571 / 1591 / 1611**nm with Monitor port. LC APC wavelength selected from 1271 ~ 1611nm
SML40-MD51-UPC-Wavelength	5-Ch Mux/Demux card **1491 / 1511 / 1571 / 1591 / 1611**nm with Monitor Port LC UPC wavelength selected from 1271 ~ 1611nm
SML40-MD51-APC-Wavelength	5-Ch Mux/Demux card **1491 / 1511 / 1571 / 1591 / 1611**nm with Monitor Port LC APC wavelength selected from 1271 ~ 1611nm
SML40-2D40-UPC-Wavelength	Dual 4 ch Mux/Demux card, single direction **1471 / 1491 / 1511 / 1531**nm LC UPC wavelength selected from 1271 ~ 1611nm
SML40-2D40-APC-Wavelength	Dual 4 ch Mux/Demux card, single direction **1471 / 1491 / 1511 / 1531**nm LC APC wavelength selected from 1271 ~ 1611nm
SML40-1D80-UPC-Wavelength	8-Ch Mux/Demux card, single direction **1471 / 1491 / 1511 / 1531 / 1551 / 1571 / 1591 / 1611**nm LC UPC wavelength selected from 1271 ~ 1611nm
SML40-1D80-APC-Wavelength	8-Ch Mux/Demux card, single direction **1471 / 1491 / 1511 / 1531 / 1551 / 1571 / 1591 / 1611**nm LC APC wavelength selected from 1271 ~ 1611nm
SML40-MD-31/CWDM-UPC	1310nm plus CWDM **1470 ~ 1610**nm Mux/Demux LC UPC
SML40-MD-31/CWDM-APC	1310nm plus CWDM **1470 ~ 1610**nm Mux/Demux LC APC

SML40 –□□□□–□□□–□□□□□□□□□

Example: SML40 – MD80 – UPC – Wavelength

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

SML01-10G-SXX

10G 3R Transponder with Optical Line Protection

The SML01–10G–SXX is a 10G fiber to fiber 3R repeater and transponder. Based on 10 Gigabit Fiber standards, the transponder support SFP+ to XFP (SX) or XFP to XFP (XX) fiber connections. 1+1 Automatic optical line Protection Switching is supported for the aggregate XFP fiber ports. The transponder is protocol transparent, providing 3R (Re-amplification, Re-shaping and Re-clocking) 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 transparent bi-directional forwarding capability between the 2 fiber media, the SML01–10G–SXX brings you the best and simplest solution for your 10G conversion between fiber and fiber.

Features

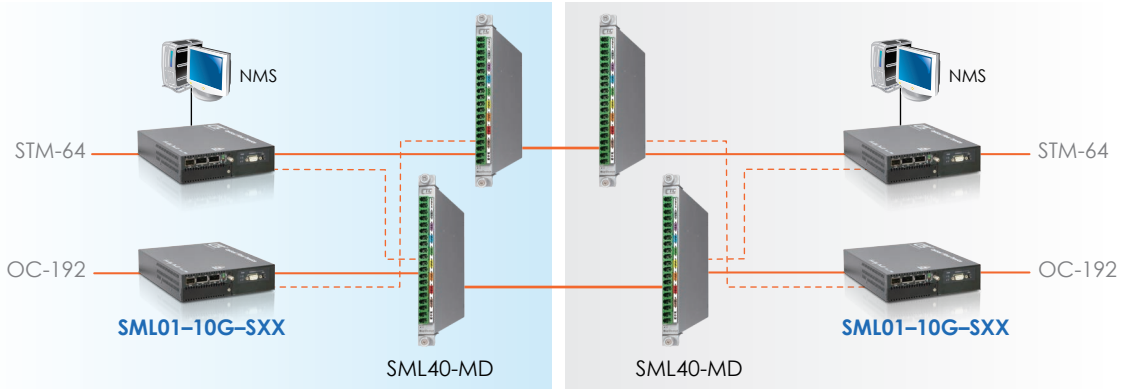
- Multiple protocol supported 10G Ethernet, STM-64, OC-192, G.709 OTU2, Fiber Channel (8 x FC)
- Network management via Web, Telnet, SNMP with NMC card inserted
- Protocol transparent 3R fiber media transponder / repeater
- (Re-amplification, Re-shaping and Re-clocking)
- Promotes flexibility and eases management with pluggable SFP+ or XFP transceiver
- Features two 10G ports offering multiservice 10G transponder and regenerator function
- Built-in self test (BIST) 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
- XFP power supplies: +5.0V, -5.2V, +3.3V and +1.8V
- Supports reference clock output
- Supports 1+1 optical line protection

Specifications

Optical Interface	Connector	LC
		1x Line SFP+ to 2x Client XFP
		1x Line SFP+ to 1x Client XFP
		1x Line XFP to 1x Client XFP
	Traffic Format	OC-192/STM-64 (9.95328Gbps)
		1 Gigabit Ethernet (1.25Gbps)
		10 Gigabit Ethernet LAN(10.3125Gbps)
		G.709 OTU2 (10.709225Gbps)
		Fiber Channel
		1xFC(1.062 Gbps); 2xFC(2.125 Gbps);
		4xFC(4.25 Gbps); 8xFC(8.5 Gbps);
		10xFC(10 Gbps)
	Regeneration	Re-amplification
		Re-shaping, Re-timing

Optical Interface	Loopback	Line / Client
	Fiber	SM 9/125µm
		MM 50/125µm or 62.5/125µm
	Wavelength	Depends on SFP+ or XFP
Indications	LED (Power, Line Link, Client Link, Test, Loop back, Port Active, Alarm)	
Power Input	Standalone : AC, DC option	
Power Consumption	<10W	
Dimensions	155 x 88 x 23mm (D x W x H)	
Weight	150g	
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)	
Humidity	10 ~ 90% non-condensing	
Certification	CE, FCC, RoHS compliant	
MTBF	65,000 hrs	

Application



Ordering Information

Model Name	Description
SML01-10G-SXX-AC, DC, AD	Console management, standalone 10G 3R transponder with AC, DC or AD (AC+DC) Power
SML01-10G-SXX-NM-AC/DC/AD	SNMP management, standalone 10G 3R transponder with AC, DC or AD (AC+DC) Power

Note: SML01-10G-SXX-AC, DC, AD = (FRM220-10G-SXX) + (CH02M-AC, DC or AD)
SML01-10G-SXX-NM-AC, DC, AD = (FRM220-10G-SXX) + (CH02/SNMP-AC, DC or AD)

Power Type
SML01-10G-SXX – □□
Example: SML01-10G-SXX – AD

SML01-10G-SS

10G 3R Transponder

The SML01-10G-SS is a 10G fiber to fiber 3R repeater and transponder. Based on a number of 10 Gigabit Fiber standards, these transponders support SFP+ to SFP+ (SS) fiber connections. The transponders are protocol transparent, providing 3R (Re-amplification, Re-shaping and Re-clocking) 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 transparent bi-directional forwarding capability between the 2 fiber media, the SML01-10G-SS brings you the best and simplest solution for your 10G conversion between fiber and fiber.

Features

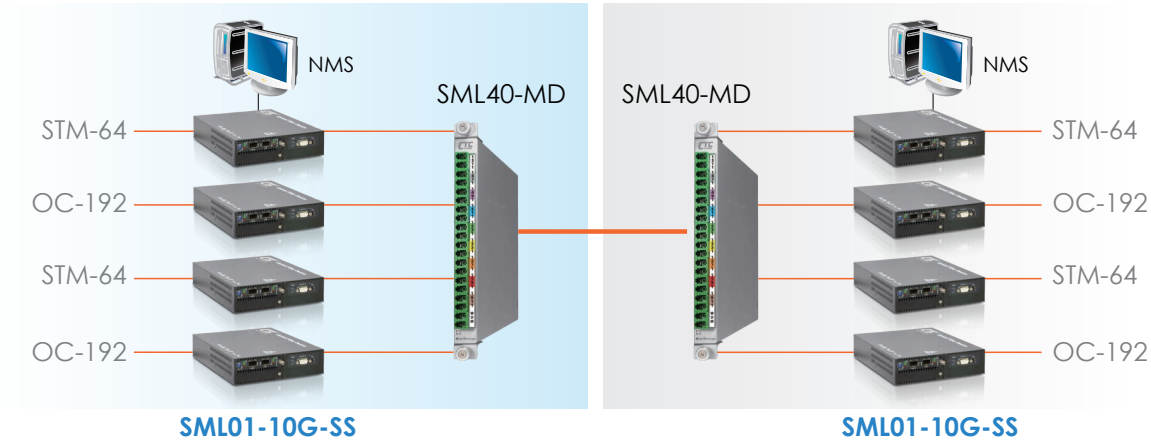
- Multiple protocol supported 10G Ethernet, STM-64, OC-192, G.709 OTU2, Fiber Channel (8 x FC)
- Network management via Web, Telnet, SNMP with NMC card inserted
- Protocol transparent 3R fiber media transponder / repeater (Re-amplification, Re-shaping and Re-clocking)
- Promotes flexibility and eases management with pluggable SFP+ transceiver
- SFP+ power supplies: +3.3V
- 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

Specifications

Optical Interface	Connector	LC, 1x Line SFP+ to 1x Client SFP+
	Traffic Format	OC-192/STM-64 (9.95328Gbps)
		10 Gigabit Ethernet LAN(10.3125Gbps)
		G.709 OTU2 (10.709225Gbps)
		Fiber Channel
		1xFC(1.062 Gbps); 2xFC(2.125 Gbps);
		4xFC(4.25 Gbps); 8xFC(8.5 Gbps);
		10xFC(10.51875 Gbps)
	Regeneration	Re-amplification
		Re-shaping, Re-timing
	Loopback	Line / Client
	Fiber	SM 9/125μm
		MM 50/125μm or 62.5/125μm

Optical Interface	Wavelength	CWDM 1470 ~ 1610nm
		DWDM 1529.55 ~ 1565.50nm
Indications	LED (Power, Line Link, Client Link, Test, Loop back, Port Active, Alarm)	
Power Input	Standalone : AC, DC option	
Power Consumption	<10W	
Dimensions	155 x 88 x 23mm (D x W x H)	
Weight	150g	
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)	
Humidity	10 ~ 90% non-condensing	
Certification	CE, FCC, RoHS compliant	
MTBF	65,000 hrs	

Application



Ordering Information

Model Name	Description
SML01-10G-SS-AC, DC, AD	Console management, standalone 10G 3R transponder with AC, DC or AD (AC+DC) Power
SML01-10G-SS-NM-AC, DC, AD	SNMP management, standalone 10G 3R transponder with AC, DC or AD (AC+DC) Power

Note: SML01-10G-SS-AC, DC, AD = (FRM220-10G-SS)+ (CH02M-AC, DC or AD)
SML01-10G-SS-NM-AC, DC, AD = (FRM220-10G-SS) + (CH02/SNMP-AC, DC or AD)

Power Type
SML01-10G-SS – □□
Example: SML01-10G-SS – AD

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

SML01-4G-3S

4G 2R Transponder with Optical Line Protection

The SML01-4G-3S is a 2R 4G optical regeneration device, which consists of Re-amplification and Re-shaping. The transponder card converts a data signal to the correct wavelength for transmission on a specific channel by supporting SFP optics on both line side and client side interfaces. 1+1 Automatic optical line Protection Switching is supported for the aggregate fiber ports. When the NMC card is placed in the 2-slot chassis with SML01-4G-3S, the management can view the converter card's status, type, version, fiber link status and alarms. The card can be configured to enable or disable the port, reset the port and perform diagnostic loop backs.

Features

- Multiple protocol supported at bit rates 28Mbps to 4.25Gbps (Fast Ethernet, Gigabit Ethernet, OC-3, OC-6, OC-12, OC-24, OC-48, STM-1, STM-4 STM-16, FC-1, FC-2, FC-4)
- Network management via Web, Telnet, SNMP with NMC card inserted
- Local configuration via DB9 console port
- Digital diagnostic monitoring of SFP module
- Perform optical repeater function (Re-amplification, Re-shaping)
- Facility loopback on both Client / Line sides
- 1+1 optic fiber protection
- Link Fault Pass-Through (LFPT)
- Auto Laser Shutdown (ALS)
- Detect transceiver transmitter error alarm

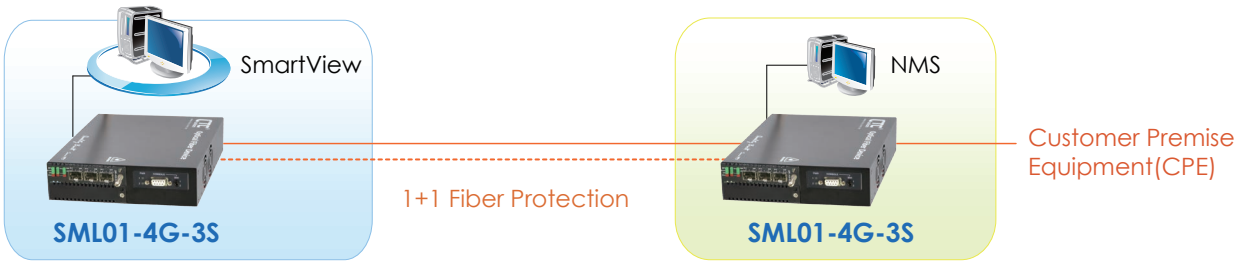
Specifications

Optical Interface	Connector	SFP LC
	Data rate	28Mbps to 4.25Gbps
	Regeneration	Re-amplification
		Re-shaping
	Loop back	Line/Client
	Fiber	MM 62.2/125µm, 50/125µm.
		SM 9/125µm
	Wavelength	MM 850, 1310nm
		SM 1310, 1550nm
		WDM 1310T/1550R, 1550T/1310R
		CWDM 1470 ~ 1610nm

Indications	LED (PWR, Line Link, Client Link, Test, Loop back, Port Active, Alarm)
Power Input	Standalone : AC, DC option
Power Consumption	< 8W
Dimensions	155 x 88 x 23mm (D x W x H)
Weight	120g
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)
Humidity	10 ~ 90% non-condensing
Certification	CE, FCC, RoHS compliant
MTBF	65,000 hrs

Application

Managed 4G 2R Transponder with Fiber Protection



Client: Fast Ethernet, Gigabit Ethernet, OC-3, OC-6, OC-12, OC-24, OC-48, STM-1, STM-4 STM-16, FC-1, FC-2

Ordering Information

Model Name	Description
SML01-4G-3S-AC, DC, AD	Console management, standalone 4G 2R transponder with AC, DC or AD (AC+DC) power
SML01-4G-3S -NM-AC, DC, AD	SNMP management, standalone 4G 2R transponder with AC, DC or AD (AC+DC) power

Note: SML01-4G-3S-AC, DC, AD = (FRM220-4G-3S) + (CH02M-AC, DC or AD)
SML01-4G-3S-NM-AC, DC, AD = (FRM220-4G-3S) + (CH02/SNMP-AC, DC or AD)

Power Type
SML01-4G-3S – □□
Example: SML01-4G-3S – AD

SML01-2.7G-3S

2.7G 3R Transponder with Optical Line Protection

The SML01-2.7G-3S is a 3R 2.7G optical regeneration device, which consists of Re-amplification, Re-shaping and Re-timing. The transponder card converts a data signal to the correct wavelength for transmission on a specific channel by supporting SFP optics on both line side and client side interfaces. 1+1 Automatic optical line Protection Switching are supported for the aggregate fiber ports. When the NMC card is placed in the 2-slot chassis with SML01-2.7G-3S, the management can view the converter card's status, type, version, fiber link status and alarms. The card can be configured to enable or disable the port, reset the port and set the desired data rate.

Features

- Multiple protocol supported at bit rates 34.3Mbps to 2.7Gbps (Fast Ethernet, Gigabit Ethernet, OC-3, OC-6, OC-12, OC-24, OC-48,
- STM-1, STM-4 STM-16, FC-1, FC-2)
- Network management via Web, Telnet, SNMP with NMC card inserted
- Link Fault Pass-Through (LFPT)
- Auto Laser Shutdown (ALS)
- Local configuration via DB9 craft port In Stand-alone
- Digital diagnostic monitoring of SFP module
- Perform optical repeater function (Re-amplification, Re-shaping, and Re-clocking)
- Facility loopback on both Client / Line sides
- 1+1 optic fiber protection
- Dip switch setting data rate
- Detect transceiver transmitter error alarm

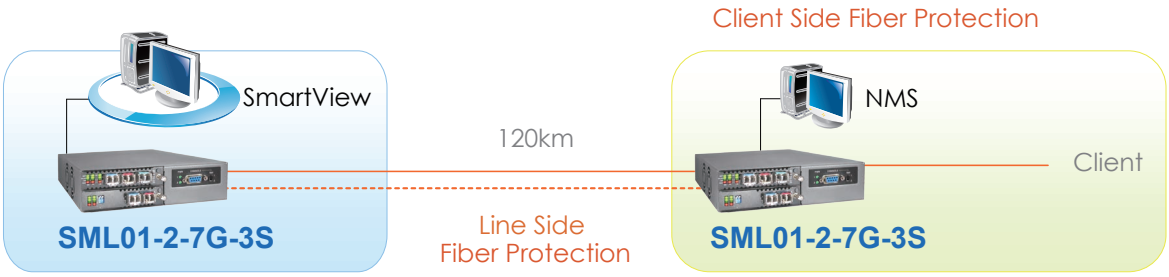
Specifications

Optical Interface	Connector	SFP LC
	Data rate	E3 to OC-48
	Regeneration	Re-amplification
		Re-shaping
		Re-clocking
	Loop back	Line/Client
	Fiber	MM 62.2/125μm, 50/125μm.
		SM 9/125μm
	Wavelength	MM 850, 1310nm
		SM 1310, 1550nm
		WDM 1310T/1550R, 1550T/1310R
		CWDM 1470 ~ 1610nm

Indications	LED (PWR, Line Link, Client Link, Test, Loop back, Port Active, Alarm)
Power Input	Standalone : AC, DC option
Power Consumption	< 10W
Dimensions	155 x 88 x 23mm (D x W x H)
Weight	120g
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)
Humidity	10 ~ 90% non-condensing
Certification	CE, FCC, RoHS compliant
MTBF	65,000 hrs

Application

Managed 2.7G 3R Transponder with Fiber Protection



Client: Fast Ethernet, Gigabit Ethernet, OC-3, OC-6, OC-12, OC-24, OC-48, STM-1, STM-4 STM-16, FC-1, FC-2

Ordering Information

Model Name	Description
SML01-2.7G-3S-AC, DC, AD	Console management, standalone 2.7G 3R transponder with AC, DC or AD (AC+DC) Power
SML01-2.7G-3S -NM-AC, DC, AD	SNMP management, standalone 2.7G 3R transponder with AC, DC or AD (AC+DC) Power

Note: SML01-2.7G-3S-AC, DC, AD = (FRM220-2.7G-3S) + (CH02M-AC, DC or AD)
SML01-2.7G-3S-NM-AC, DC, AD =(FRM220-2.7G-3S) + (CH02/SNMP-AC, DC or AD)

Power Type
SML01-2-7G-3S – □□
Example: SML01-2-7G-3S – AD

SML01-1000DS

1G (2R) Transponder

The SML01-1000DS is a fiber to fiber optical media converter and repeater that allows data rates up to 1Gbps. SML01-1000DS supports 2R regeneration, which consists of re-amplification and reshaping. This converter is compatible with fiber interfaces such as 100Mbps Fast Ethernet, 155Mbps STM-1, 4, Fiber Channel 1, 2, and OC3, 12, 24. The SML01-1000DS work as a stand-alone fiber converter. When the SML01-1000DS is placed in the 2-slot chassis with NMC card, the management can view the converter card's status, type and fiber link status.

Features

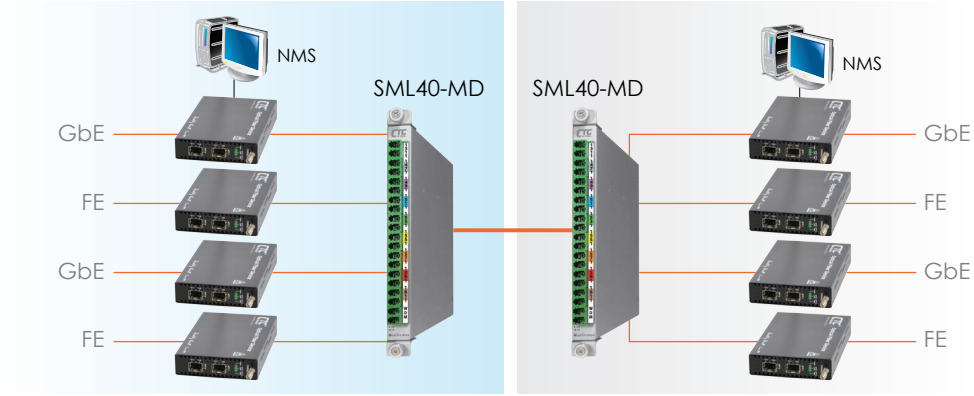
- Transparent fiber media converter / repeater
- Data rate up to 1G
- Network management via terminal or SNMP in CH02 chassis
- Extend transmission from 2km to 120km over fiber
- Perform optical repeater function (Re-amplification & Reshaping)
- Digital diagnostic monitoring of SFP modules

Specifications

Optical Interface	Connector	SFP LC x 2
	Data rate	Up to 1G
	Duplex mode	Full duplex
	Fiber	MM 50/125μm, 62.5/125μm.
		SM 9/125μm
	Distance	MM 550m, 2km, SM 15/30/50/80/120km
		WDM 20/40/60km
	Wavelength	MM 1310nm, SM 1310,1550nm
		WDM 1310Tx/1550Rx (type A)
		1550Tx/1310Rx (type B)

Indications	LED (Power, FX-Link1, FX-Link2)
Power Input	Standalone : AC, DC (Option)
Power Consumption	< 5W
Dimensions	123 x 86 x 20mm (D x W x H)
Weight	130g
Temperature	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)
Humidity	10 ~ 90% non-condensing
Certification	CE, FCC, RoHS compliant
MTBF	65,000 hrs

Application



Ordering Information

Model Name	Description
SML01-1000DS-AC, DC, AD	Console management, standalone 1G 2R transponder with AC, DC or AD (AC+DC) Power
SML01-1000DS-NM-AC, DC, AD	SNMP management, standalone 1G 2R transponder with AC, DC or AD (AC+DC) Powerr

Note: SML01-1000DS-AC, DC, AD = (FRM220-1000DS) + (CH01M-AC, DC or AD)
SML01-1000DS-NM-AC, DC, AD = (FRM220-1000DS) + (CH02/SNMP-AC, DC or AD)

Power Type
SML01-1000DS – □□
Example: SML01-1000DS – AD

SML01-Protection

1+1 Fiber Optical Protection Switch

The Fiber optical protection unit is able to provide fiber path redundancy on a channel by channel basis. These units are particularly well suited for protection in fiber data transmission. The solution includes monitoring capabilities for both working and protection paths. The monitoring is available through the SNMP Management unit. In case of a fiber cut in the protecting path, traffic will be switched over to the protecting path in less than 50 ms.

Features

- 1+1 full optical protection
- Low channel cross talk < -55dB
- Low insertion loss < 5.5dB
- Latch feature, if power is lost the switch remains in its current state
- Protection transition < 50 ms
- Works with any combination of 1 ~16 wavelengths
- Traffic is switched in one of three modes : revertive,non-revertive, manual
- Programmable Rx threshold setting for switch-over
- Optical Interface Type : LC connectors
- Working and protected lines are physically separated fiber

Specifications

Connecter	LC
LEDs	Power System, Working Path, Protection Path, Work mode
Power	AC, DC (Option)
Restoration Time	50ms
Range	Input PWR : +3 ~ -15dBm(TX), -2~-29dBm(RX)
	Detection : -5 ~ -29dBm
Loss	Insertion Loss < 5.5dB, Return Loss > 45dB

Power Consumption	< 5W
Dimensions	155 x 88 x 23mm (D x W x H)
Weight	130g
Temperature	0 ~ 50°C (Operating), 20 ~ 70°C (Storage)
Humidity	10 ~ 90% non-condensing
Certification	CE, FCC, RoHS compliant
MTBF	65,000 hours

Application

Ordering Information

Model Name	Description
SML01-Protection-AC, DC, AD	Console management, standalone 1+1 Optical Protection with AC, DC or AD (AC+DC) Power
SML01-Protection-NM-AC, DC, AD	SNMP management, standalone 1+1 Optical Protection with AC, DC or AD (AC+DC) Power

Note: SML01-Protection-AC, DC, AD = (FRM220-Protection) + (CH01M-AC, DC or AD)
SML01-Protection-NM-AC, DC, AD = (FRM220-Protection) + (CH02/SNMP-AC, DC or AD)

Power Type
SML01-Protection – □□
Example: SML01-Protection – AD

SML01-MX210

2x Gigabit Ethernet Multiplexer

SML01-MX210 is 2-port Gigabit Ethernet Multiplexer which aggregates two wire-speed Gigabit Ethernet services into one 2.5G uplink, reducing the conversion CAPEX and increasing the fiber utilization effectively. The Multiplexer can be used either in point-to-point topology functioning as a media converter for transporting 2 Gigabit Ethernet services over one fiber or in CWDM system working as a wavelength converter for extending the system's transmission capacity doubly. SML01-MX210 is equipped with one 10/100/1000M RJ-45 network management port and three SFP based ports: two Gigabit Ethernet service ports and one 2.5G uplink port, enabling a flexible application as required and realizing a cost effective remote management. Additionally its advanced features such as downlink and uplink loop back, auto laser shutdown and remote network management provide carriers a flexible, reliable and cost-effective two Gigabit Ethernet over one wavelength conversion solution.

Features

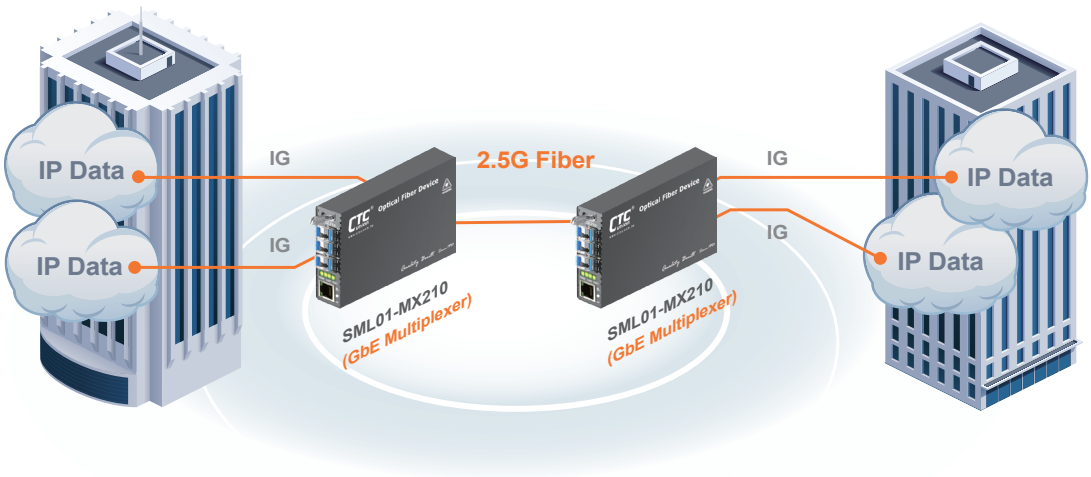
- Local configuration via DB9 craft port in stand-alone (CH01M)
- Forward 9K bytes Jumbo Packets
- Transports two Gigabit Ethernet over one wavelength doubling the CWDM system transmission capacity
- Facility loopback on both Line / client sides
- Auto Laster Shutdown (ALS)
- Hot-swappable SFP module
- Detect transceiver error Alarm
- 10/100/1000M Network management port
- Supports Q in Q double tagged frame transparent
- Supports IEEE 802.1Q Tagging and Port based VLAN
- Supports IEEE 802.1D STP
- Default port and 802.1Q tag priority QoS

Specifications

Optical Interface	Port1/Port2	100Base-FX, 1000Base-X or 2500Base-X
Electrical Interface	Port3	100Base-FX or 1000Base-X
	Port4	RJ45
		10/100/1000Base-T
		MDI/MDIX auto crossover
		IEEE802.3x flow control
Standards	IEEE 802.3, 802.3u, 802.3z, 802.3ab	
LEDs	PWR, Link (Port1, Port2, Port3) Port4: Link/Speed	

Power	AC, DC (Option)
Power Consumption	< 10W
Dimensions	155 x 88 x 23mm (D x W x H)
Weight	120g
Temperature	0 ~ 50°C (Operating) , 0 ~ 70°C (Storage)
Humidity	5 ~ 90% non-condensing
Certification	CE, FCC, RoHS compliant
MTBF	65,000 hrs

Application



Ordering Information

Model Name	Description
SML01-MX210-AC, DC, AD	Console management, standalone 2-port GE mux with AC, DC or AD (AC+DC) Power
SML01- MX210-NM-AC, DC, AD	SNMP management, standalone 2-port GE mux with AC, DC or AD (AC+DC) Power

Note: SML01- MX210-AC/DC/AD = (FRM220- MX210) +(CH01M-AC, DC or AD)
SML01- MX210-NM-AC/DC/AD =(FRM220- MX210) + (CH02/SNMP-AC, DC or AD)

Power Type
SML01-MX210 – □□
Example: SML01-MX210 – AD