



10 Channel 25G Ready Single Fiber Hybrid MUX/DEMUX SHMD-10A

Product Description:

SHMD-10A is part of our Industrial Passive xWDM filter series and supports 10 channel interconnection over single fiber using 8 CWDM wavelength 1331-1351nm and 1471-1571nm from ITU-T G.694.2 grid and 12 LWDM (LAN-WDM) wavelength 1269.23-1318.35nm. SHMD-10A is a LGX type B module installed in standard 19-inch 1U telecom subrack, is simple to install and requires zero configuration or maintenance and is fully passive - no power supply or cooling required.

SHMD-10A is deployed in the main site and used together with Industrial SCMD-4BI deployed in the middle site and SLMD-6BI which is deployed in the far end site. Both Industrial SCMD-4BI, SLMD-6BI are deployed in harsh outdoor environments. SHMD-10A uses Compact CWDM and LWDM TFF (thin-film filters) with band skip filters to achieve ≤ 4.0 dB insertion loss. Unit has a monitor port, which ensures easy troubleshooting without downtime.

xWDM filters are data rate or line protocol neutral and are used in combination with colored optical transceivers which ensure desired application and data rate. Typical use case for SHMD-10A filters are 5G/4G Mobile Fronthaul Network Baseband Unit (BBU) and Remote Radio Head (RRH) interconnection (CPRI/eCPRI protocol), Enterprise Network 25G/10G Ethernet links or Datacenter 32/16/8G Fiber Channel connections.

Key Highlights:

- 10 CWDM/LWDM Data services over Single SMF
- Connect to SCMD-4BI and SLMD-6BI
- Compact: 1U Standard 19" Rack
- Low Insertion Loss: ≤ 4 dB
- Compact CWDM & TFF with band skip filters
- Monitoring Port for easy troubleshooting
- Fully passive (No Power Supply or Cooling)
- Zero configuration or maintenance
- Protocol & Data Rate neutral
- MTBF: 100+ Years
- 5 Year Warranty

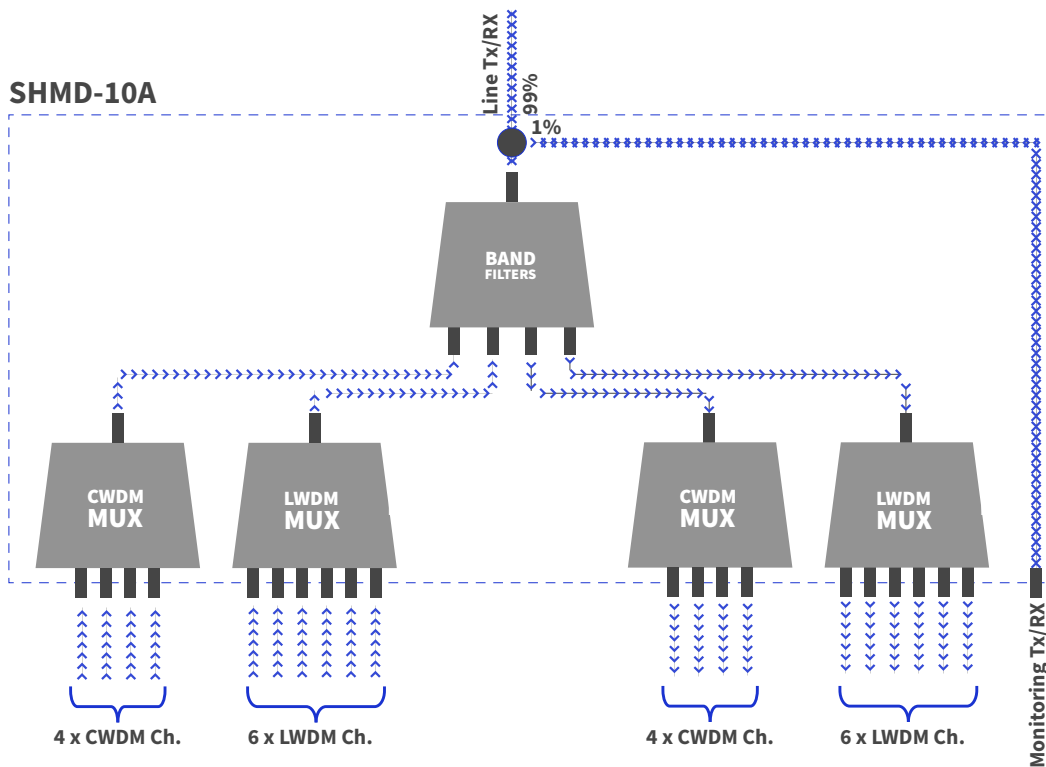


Product Specification:

Parameter		Unit	Value
Product Type:			Single Fiber Hybrid xWDM Unit
Number of Data Channels:			10
Number of Wavelength			8 CWDM Channels According ITU-T G.694.2 / 12 LWDM (LAN-WDM) Channels
Transport Media:			Single Fiber Single Mode Fiber (SMF)
Operating Wavelengths:	center	nm	CWDM Channels: <ul style="list-style-type: none"> • Ch1-Tx:1331nm • Ch1-Rx:1351nm • Ch2-Tx:1471nm • Ch2-Rx:1491nm • Ch3-Tx:1511nm • Ch3-Rx:1531nm • Ch4-Tx:1551nm • Ch4-Rx:1571nm LWDM Channels: <ul style="list-style-type: none"> • Ch5-Tx:1269.23nm • Ch5-Rx:1273.54nm • Ch6-Tx:1277.89nm • Ch6-Rx:1282.26nm • Ch7-Tx:1286.66nm • Ch7-Rx:1291.10nm • Ch8-Tx:1295.56nm • Ch8-Rx:1300.05nm • Ch9-Tx:1304.58nm • Ch9-Rx:1309.14nm • Ch10-Tx:1313.73nm • Ch10-Rx:1318.35nm
Filter Technology:			CCWDM (Compact CWDM - Free Space Technology) for CWDM & TTF for LWDM
Passband:	λ_{center}	nm	CWDM ± 7.5 nm / LWDM ± 1.5 nm
Channel Spacing:		nm	CWDM 20 nm / LWDM 4.5 nm
Insertion Loss Passband:	Max	dB	≤ 4 dB
Monitoring Port Type:			Yes - 1% Monitoring Port
Isolation Adjacent Channels:	Min	dB	30 dB
Isolation Non-Adjacent Channels:	Min	dB	45 dB
Channel Passband Ripple:	Min	dB	0.5 dB
Insertion Loss Temperature:		dB/ (°C)	<0.003
Wavelength Temperature Shifting:		nm/ (°C)	<0.002
Polarization Dependant Los (PDL):	Max	dB	<0.1 dB
Polarization Mode Dispersion (PMD):	Max	ps/nm	< 0.1 ps/nm
Directivity:	Min	dB	>50 dB
Return Loss:	Min	dB	>45 dB
Maximum Power Handling:	Max	mW	500mW = 26.98dBm maximum power pass
Connectors:			TIA/EIA 604-10 compliant LC UPC Connectors
Operating Temperature:		(°C)	5~+70 (°C)
Storage Temperature:		(°C)	-40~+85 (°C)
Dimensions (W x H x D):		mm	214 x 41.3 x 198
Relative Humidity:		%	0 - 90%
Compliance:			ITU-T G.694.2, CE, RoHS

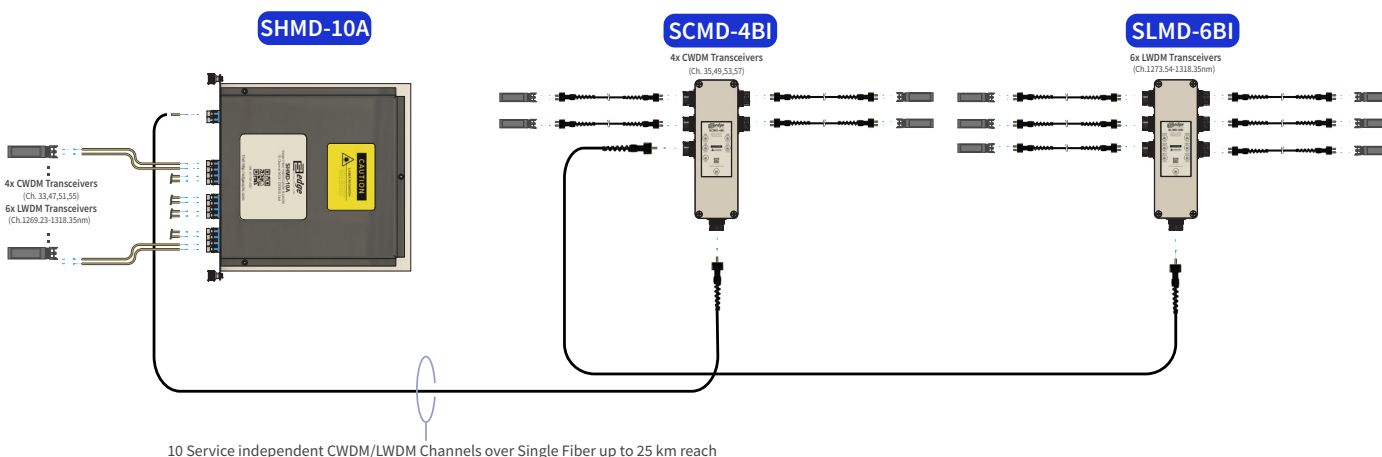


Functional Diagram:

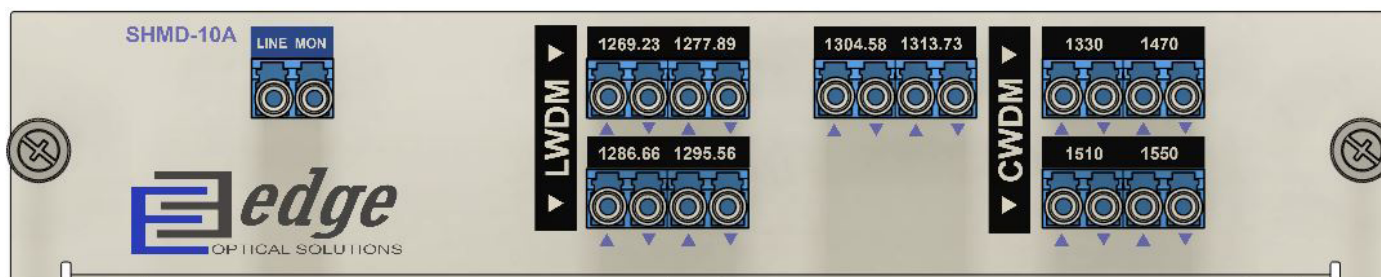


Network Diagram:

SHMD-10A is part of our Passive xWDM filter product line, which is designed with primary focus on wireless fronthaul applications - optimized to carry 25G services, however it is compatible with legacy 10G services as well. In order to create 10 x 25G services capacity Hybrid WDM line over single fiber, it's possible to use SCMD-10A at one end and both - SCMD-4BI CWDM Outdoor industrial MUX with upgrade port and SLMD-6BI LWDM Outdoor industrial MUX on other end:



Front Panel:



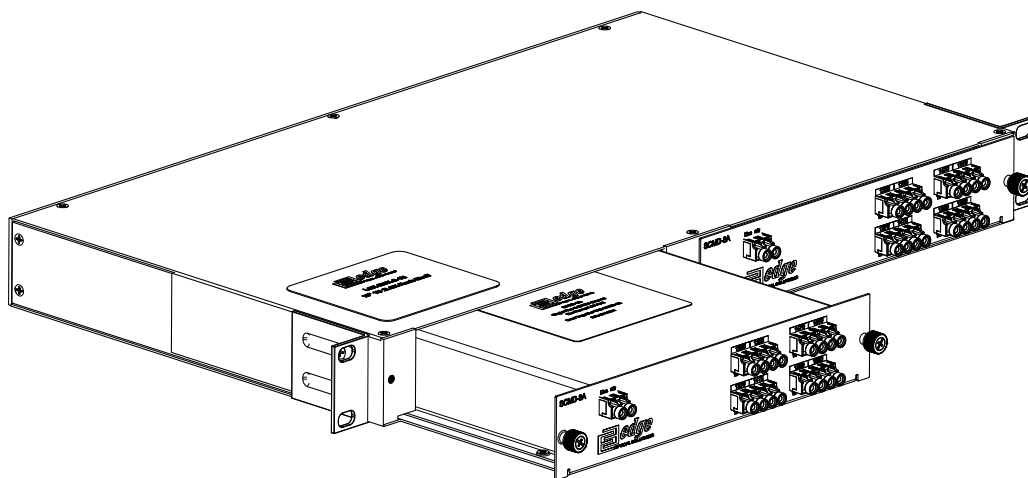
LINE: Line interface for common signal

MON: 1% Monitoring Port

1269.23 - 1313.73: LWDM Channel colored interfaces

1330 - 1550: CWDM Channel colored interfaces

Installation:



In order to install CWDM LGX Module in 19" rack, please order 19" 1U sub-rack supporting up to two LGX modules. Product code **LGX-RCK-2-1U**.



Ordering Information:

PN	Description
SHMD-10A	10 Channel Hybrid CWDM/LWDM Single Fiber 25G Ready Passive Mux/Demux, 10 Channels CWDM ITU-T G.694.2 1331-1571nm, 12 Channels LWDM 1269.23-1318.35nm, IL below 4 dB with Monitor port, Temp. 0-70C, LGX Type

Warranty:

EDGE Optic's provides a limited warranty for **sixty (60)** months from Purchaser's receipt of the Equipment represented in this data sheet against defective design or workmanship.

