edge
OPTICAL SOLUTIONS

Product Data Sheet

4 Data Channels Single Fiber Passive CWDM Mux/Demux
SCMD-4B-E

Product Description:

We designed EDGE Optics xWDM Series products to allow easy, gradual, logical and cost efficient expansion of network bandwidth using industry leading passive WDM technology. Main advantage of xWDM is its passive nature – no power supply or cooling necessary, robustness – no special micro-climate requirements and as passive element, it has MTBF 100+ Years. xWDM is – it is fully data rate or line protocol neutral – it is possible to use with colored transceivers supporting such applications as 1G/10G Ethernet, SDH/SONET and 8/4/2/1G Fiber Channel. It's simple to install, requires no configuration or maintenance.

SCMD-4B-E is passive multiplexer/De-multiplexer package based on Thin-Film Filter (TFF) technology, allowing organize 4 duplex and parallel protocol independent ITU-T G.694.2 compatible Coarse Wavelength Division Multiplex (CWDM) data streams over single fibre of single mode optical fiber. With our focus to provide maximally low insertion loss, SCMD-4B-E is equipped with band-pass or skip filters extending maximum distance of CWDM connections. SCMD-4B-E is manufactured as LGX type B module, installed in 19" 1U sub rack fitting any standard equipment rack. SCMD-4B-E is used together with counterpart SCMD-4A-E module in other end of line. Monitor port(1%) ensures easy troubleshooting without downtime. SCMD-4B-E is equipped with Upgrade port, with is usable with legacy BiDi optical transceivers operating within 1260-1460 nm range or with Low-Band CWDM Multiplexers, such as SCMD-4B-L or SCMD-2B-L.

Key Highlights:

- 4 CWDM Data Streams over Single SMF
- Fully Passive: No Power Supply or Cooling
- MTBF: 100+ Years
- Protocol & Data Rate neutral
- Low Insertation Loss - 2.2 dB
- Band-Pass / Skip filters Installed
- Upgrade Port Supporting 1260-1460 nm
- Compact: LGX Type B package
- Easy Installation & Expansion
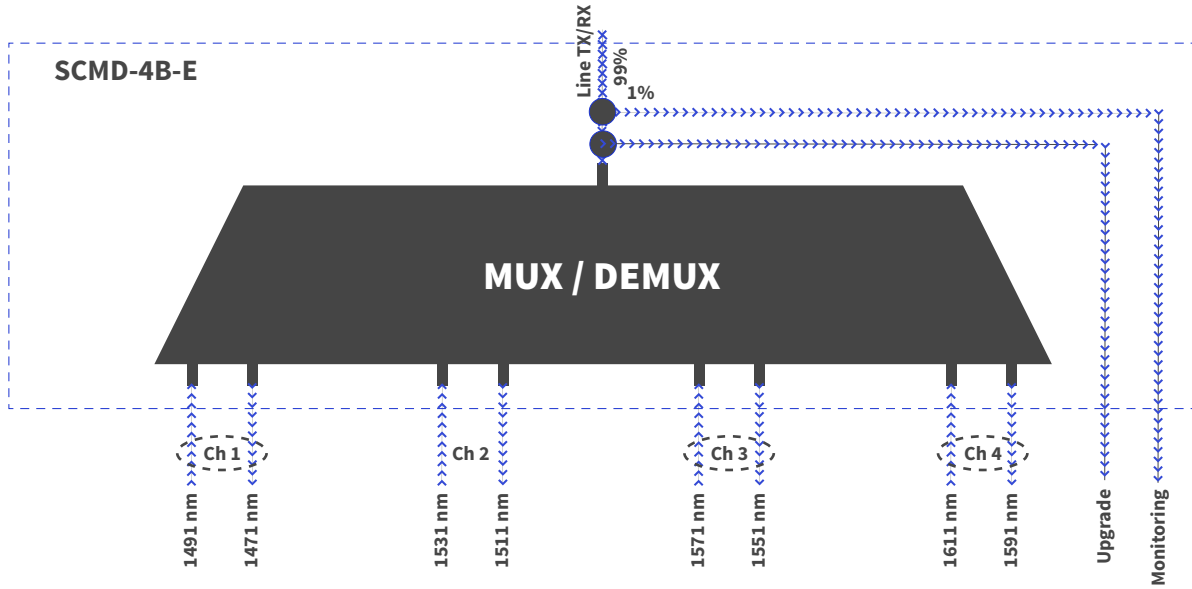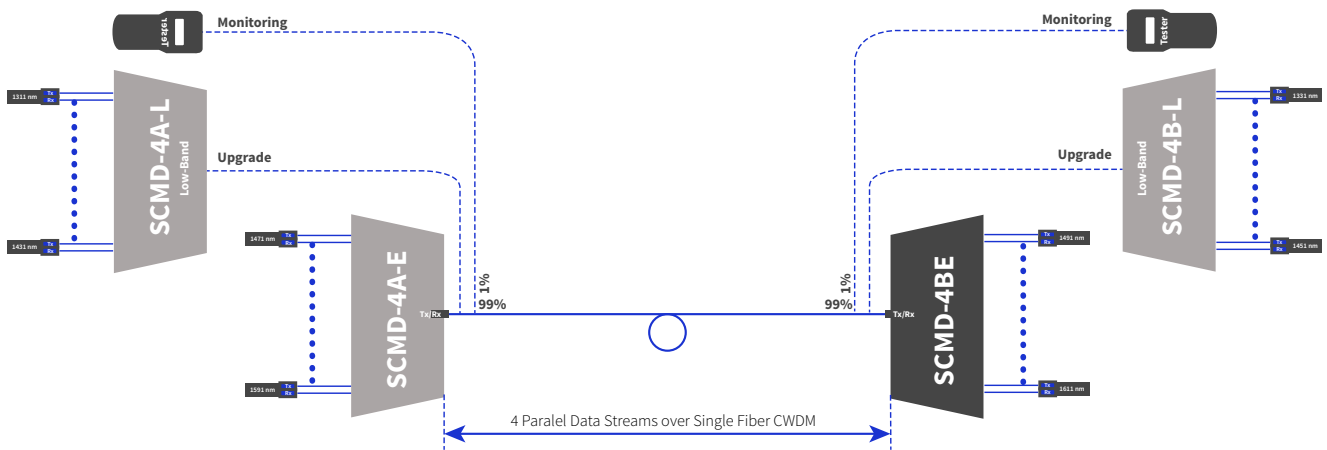- Monitoring Port for easy troubleshooting
- 5 Year Warranty

EDGE Technologies Ltd.
Plienciema Street 33, Marupe
Latvia, LV-2167
sales@edgeoptic.com
www.edgeoptic.com

Product Data Sheet

Product Specification:

Parameter		Unit	Value
Product Type:			CWDM MUX/DEMUX Unit
Number of Data Streams:			4
Number of Channels:		Ch	8 CWDM Channels According ITU-T G.694.2
Transport Media:			Single Fiber Single Mode Fiber (SMF)
Operating Wavelengths:	center	nm	Ch1-Tx:1491nm Ch4-Rx:1591nm Ch1-Rx:1471nm Ch2-Tx:1531nm Ch2-Rx:1511nm Ch3-Tx:1571nm Ch3-Rx:1551nm Ch4-Tx:1611nm
Filter Technology:			TFF (Thin Film Filter)
Passband:	λ_{center}	nm	± 6.5 nm
Channel Spacing:		nm	20 nm
Band-Pass ("Skip") Filters:			Yes
Insertion Loss Passband:	Max	dB	2.2 dB
Insertion Loss Upgrade:	Max	dB	0.8 dB
Insertion Loss 1% Monitor Port:	Max	dB	23.8 dB
Monitoring Port Type:			1% Monitoring Port
Isolation Adjacent Channels:	Min	dB	30 dB
Isolation Non-Adjacent Channels:	Min	dB	40 dB
Channel Passband Ripple:	Min	dB	0.3 dB
Plarization Dependant Los (PDL):	Max	dB	<0.15 dB
Polarization Mode Dispersion (PMD):	Max	ps/nm	< 0.15 ps/nm
Directivity:	Min	dB	>50 dB
Return Loss:	Min	dB	>45 dB
Maximum Power Handling:	Max	mW	< 300 mW
Connectors:			LC Adapters for use with 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%

edge
OPTICAL SOLUTIONS
Product Data Sheet

Functional Diagram:

SCMD-4B-E

Line TX/RX

99%
1%

MUX / DEMUX

Ch 1   Ch 2   Ch 3   Ch 4

1491 nm   1471 nm   1531 nm   1511 nm   1571 nm   1551 nm   1611 nm   1591 nm   Upgrade   Monitoring

Network Diagram:

Monitoring   Monitoring

SCMD-4A-L Low-Band   SCMD-4B-L Low-Band

1311 nm   1331 nm

Upgrade   Upgrade

1431 nm   1451 nm

1471 nm   SCMD-4A-E   SCMD-4BE   1491 nm

1%
99%   1%
99%

Tx/Rx   Tx/Rx

1591 nm   1611 nm

4 Paralel Data Streams over Single Fiber CWDM

EDGE Technologies Ltd.
Plienciema Street 33, Marupe
Latvia, LV-2167
sales@edgeoptic.com
www.edgeoptic.com

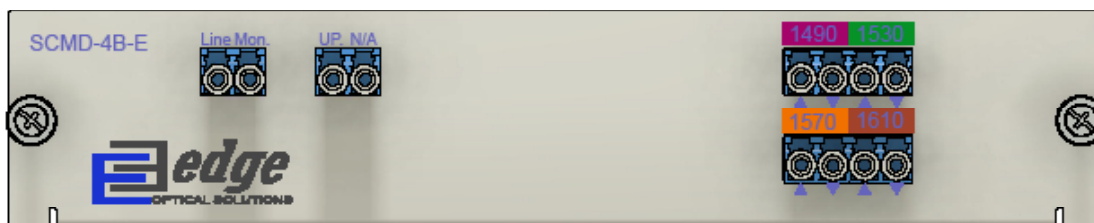# Product Data Sheet

Front Panel:

Line: Line interface for common signal
Mon. Interface for in-service performance testing

1270-1610: CWDM Channel colored transceivers interfaces
UP: Upgrade port supporting 1260-1460nm

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.**

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.

EDGE Technologies Ltd.
Plienciema Street 33, Marupe
Latvia, LV-2167
sales@edgeoptic.com
www.edgeoptic.com