

## 4 Data Channels Single Fiber Passive CWDM Mux/Demux SCMD-2A-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-2A-E is passive multiplexer/De-multiplexer package based on Thin-Film Filter (TFF) technology, allowing organize 2 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. SCMD-2A-E is manufactured as LGX type B module, installed in 19" 1U sub rack fitting any standard equipment rack. SCMD-2A-E is used together with counterpart SCMD-2B-E module in other end of line. Monitor port(1%) ensures easy troubleshooting without downtime. SCMD-2A-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-4A-L or SCMD-2A-L.

### Key Highlights:

- 2 CWDM Data Streams over Single SMF
- Fully Passive: No Power Supply or Cooling
- MTBF: 100+ Years
- Protocol & Data Rate neutral
- Low Insertion Loss - 1.4 dB
- Upgrade Port Supporting 1260-1460 nm
- Compact: LGX Type B package
- Easy Installation & Expansion
- Monitoring Port for easy troubleshooting
- 5 Year Warranty

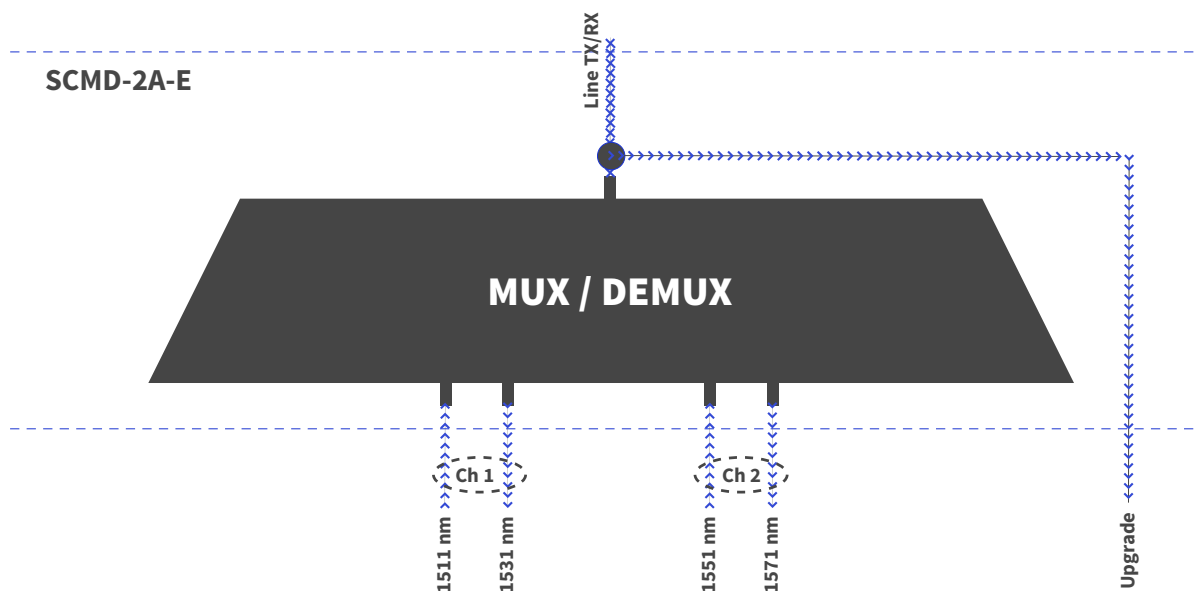


## Product Specification:

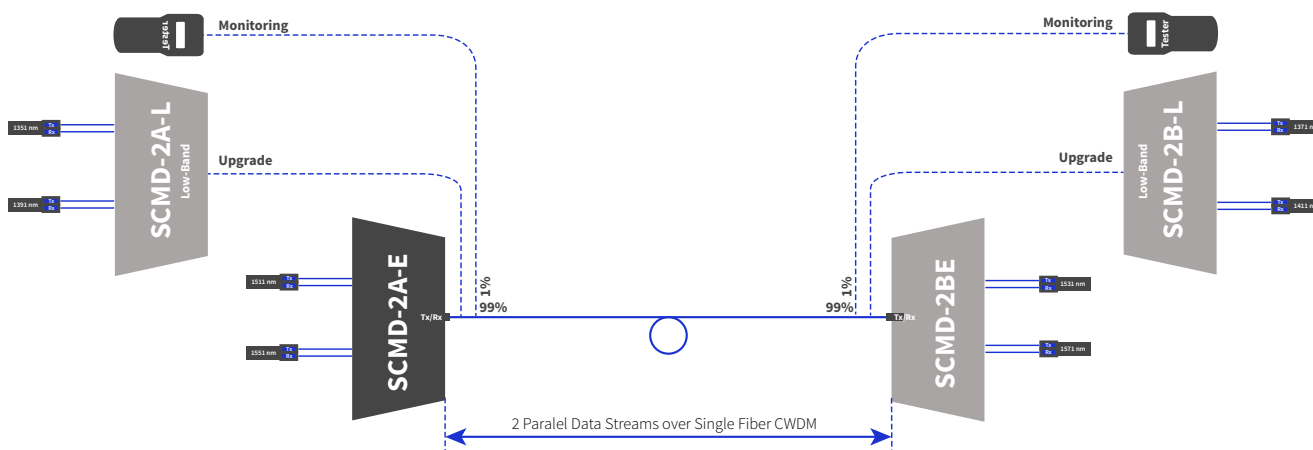
| Parameter  |                    | Unit  | Value   |
|--|--------------------|-------|---|
| Product Type:                                    |                    |       | CWDM MUX/DEMUX Unit   |
| Number of Data Streams:                          |                    |       | 2   |
| Number of Channels                               |                    | Ch    | 4 CWDM Channels According ITU-T G.694.2                             |
| Transport Media:                                 |                    |       | Single Fiber Single Mode Fiber (SMF)                                |
| Operating Wavelengths:                           | center             | nm    | Ch1-Tx:1511nm<br>Ch1-Rx:1531nm<br>Ch2-Tx:1551nm<br>Ch2-Rx:1571nm    |
| Filter Technology:                               |                    |       | TFF (Thin Film Filter)  |
| Passband:  | $\lambda_{center}$ | nm    | $\pm 6.5$ nm  |
| Channel Spacing:                                 |                    | nm    | 20 nm   |
| Band-Pass ("Skip") Filters:                      |                    |       | Yes   |
| Insertation Loss <small>Passband:</small>        | Max                | dB    | 1.4 dB  |
| Insertation Loss <small>Upgrade:</small>         | Max                | dB    | 0.8 dB  |
| Insertation Loss <small>1% Monitor Port:</small> | 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  |
| Polarization 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%   |



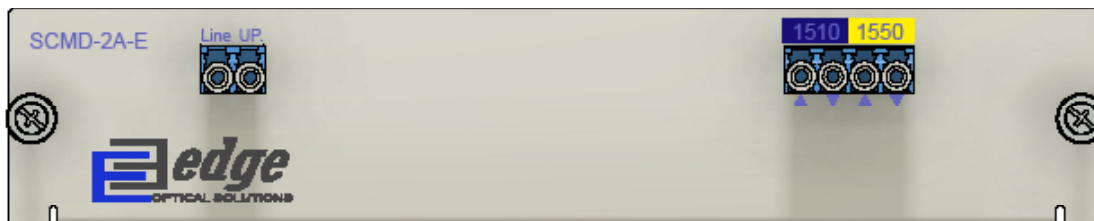
## Functional Diagram:



## Network Diagram:



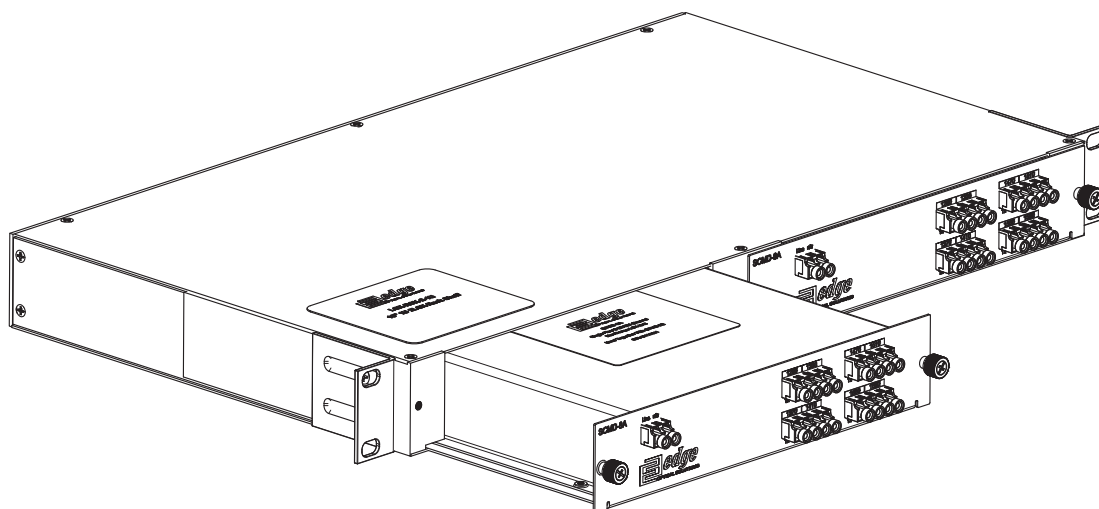
## Front Panel:



**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.

