

OPCOM100-2 Series 2-Channel CWDM System

OPCOM100-2 series are Raisecom's 2-channel Coarse Wavelength Division Multiplexing devices. The CWDM product line is developed and designed for fully utilizing the existing fiber resources in metropolitan area and carrier's access networks. Since optical fiber has become the most popular means of telecom transportation, incumbent carriers would like to use fiber to access and aggregate users, providing flexibility and bandwidth on demand. OPCOM series CWDM systems are capable

of transporting multiple independent services from 2, 4, to 8 in one single pair of fiber (single-strand fiber can provide 4 service channels), without interference to each other. They have enabled carriers to expand their transportation capability smoothly and conveniently, in terms of removing works of digging holes and planting new fibers. Also, from the economy prospective, deploying two equipment point to point will be more cost effective than planting new fibers at metropolitan area.

Feature

| | |
|---------------------|--|
| Service Channel | 2 |
| Typical Application | Point to point |
| Engineering | Plug and play, no need for configuration |
| Enclosure | Compact metal enclosure |
| Working Wavelength | 1310/1490(1491)/1550nm |
| Data Rate | 155M~2.5Gbps per channel |
| Transmission Mode | Transparent transmission, service independent |
| Scalability | One expansion slot for accommodation of wavelength converting card |

Ordering Information

| Part Number | Description |
|-------------|--|
| OPCOM100-2 | Standard 2-channel CWDM system with one slot. 1310nm and 1550nm wavelengths are used for traffic transportation |
| OPCOM100-2S | Mini type 2-channel CWDM system. 1310nm and 1550nm wavelengths are used for traffic transportation |
| OPCOM100-2E | Enhanced 2 channel CWDM system with one expansion slot. 1310/1550nm or 1490/1550nm (long-haul design) wavelengths are used for traffic transportation. |



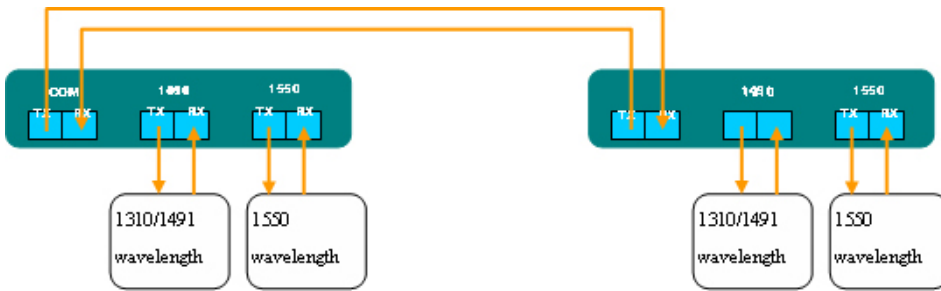
OPCOM100-2
OPCOM100-2S
OPCOM100-2E
2-Channel CWDM System

Specification

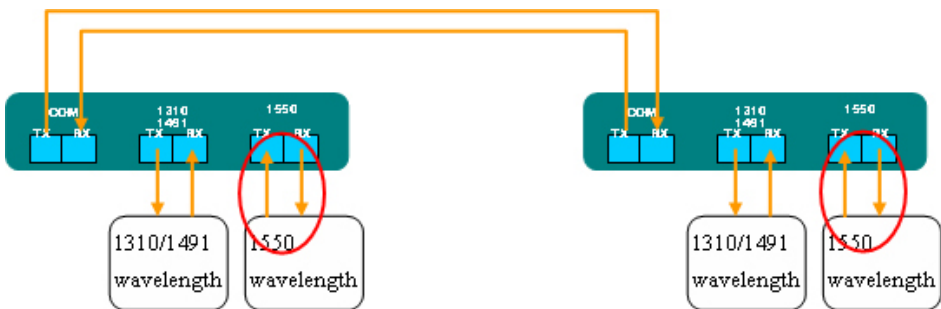
| | |
|---------------------------|---|
| Connector Type | SC/PC |
| Optical Fibre Type | G.652 single mode |
| Data Rate | 155M~2.5Gbps |
| Physical Network Topology | Point to point |
| Operating Temperature | 0~65 Celsius (Customizing is possible) |
| Channel Bandwidth | 1310nm channel: ±40nm 1490nm channel: ±10nm 1550nm channel: ±10nm |
| Insertion Loss | < 1.5dB |
| Channel Isolation | 1310/1490nm: > 18dB 1550nm: > 35dB |
| Directionality | > 40dB |
| Central Wavelength | 1310/1490nm, 1550nm |
| Dimensions | 320(W)*200(D)*34(H) mm |
| Relative Humidity | 5%~90% non-condensing |
| Safety Compliance | CE marking FCC Class A |

Typical Application

1. Co-directional point-to-point application



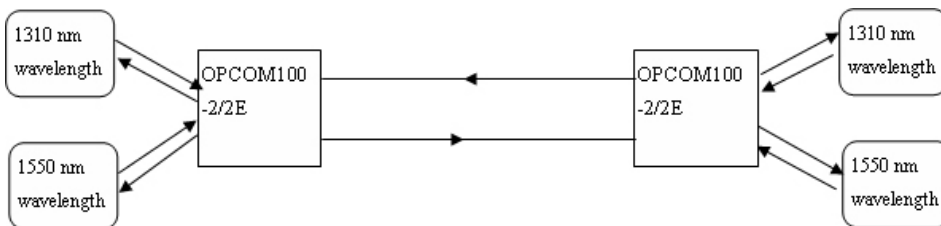
2. Counter-directional point-to-point application



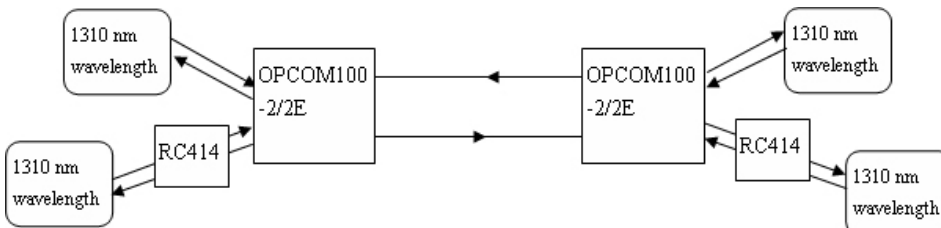
The most typical application of OPCOM100-2 series 2-channel CWDM is point-to-point application, as shown above. There are two types of point-to-point modes, co-directional and counter-directional. Both of the applications

can achieve exactly the same purpose of transporting two independent services simultaneously. However, with counter-directional mode, it is believed that less interference will be caused in fiber optics.

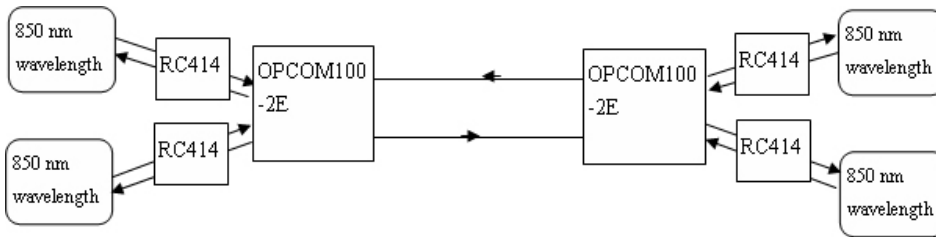
Solution A. 1310nm and 1550nm optical traffics can be directly fed into OPCOM100-2 for transmission.



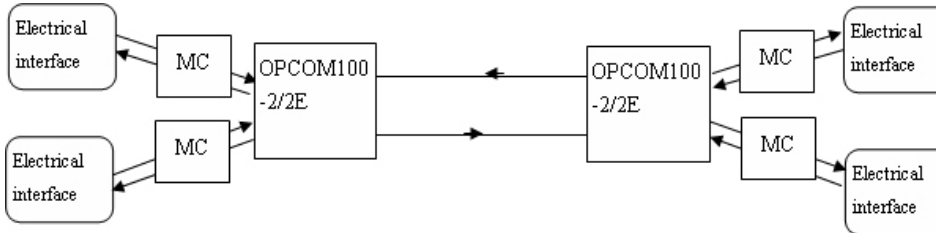
Solution B. In case of 2 traffics on 1310nm or 850nm, one traffic can be converted into 1550nm and then fed into OPCOM100-2 for transmission.



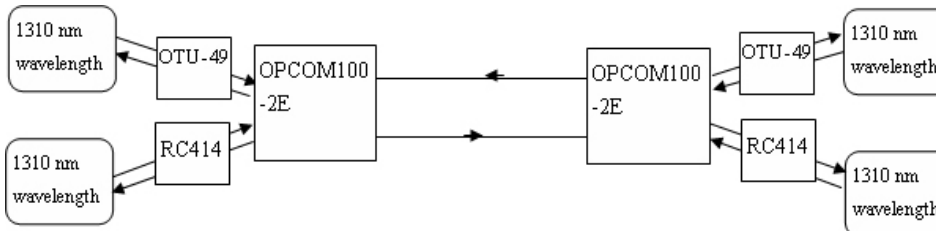
Typical Application



Solution C. In case of traffics on electrical interfaces, one or both traffics shall be converted to optical signals using Media Converter (MC).



Solution D In case of long distance transmission requirement (80~100km), OPCOM100-2E with 1491nm and 1550nm wavelengths shall be used because of much less dispersion than 1310nm wavelength on G.652 fiber. (OTU is Raisecom's wavelength converting card.)



Appendix A

Wavelength Converting Card (OTU1)

| Part Number | Description |
|----------------------------|--|
| OPCOM200-OTU1-3R-CSFP-USFP | SFP module based wavelegnth converting card |
| CSFP-S1/L1/W | S1 = 03 (155Mbps), GB (1.25Gbps), 48 (2.5Gbps) L1 = S (≤ 40 km), L (≤ 80 km) (Line side transmission distance) W = 47, 49, 51, 53, 55, 57, 59, 61 (wavelength) |
| USFP-S2/L2 | S2 = 03 (155Mbps), GB(1.25Gbps), 48 (2.5Gbps) L2 = M (0~2km), S1 (0~25km), S2 (10~60km), S3 (25~120km) (Client side transmission distance) |

Wavelength Converting Card (OTU2)

| Part Number | Description |
|----------------------------|---|
| OPCOM200-OTU2-3R-S/L1/L2/W | Fixed optical port wavelength converting card S = 03 (155Mbps), GB (1.25Gbps) L1 = S (≤ 40 km), L (≤ 80 km) (Line side transmission distance) L2 = M (0~2km), S1 (0~25km), S2 (10~60km), S3 (25~120km) (Client side transmission distance) W = 47, 49, 51, 53, 55, 57, 59, 61 (wavelength) |

Appendix B

CWDM Wavelength Media Converter (FEU1, FEU2)

| Part Number | Description |
|--------------------|---|
| OPCOM200-FEU1-L1/W | SFP module based CWDM wavelength media converter card L1 = S (≤ 40 km), L (≤ 80 km) (Line side transmission distance) W = 47, 49, 51, 53, 55, 57, 59, 61 (wavelength) |
| OPCOM200-FEU2-L1/W | Fixed optical port CWDM wavelength media converter card L1 = S (≤ 40 km), L (≤ 80 km) (Line side transmission distance) W = 47, 49, 51, 53, 55, 57, 59, 61 (wavelength) |