

## Key Highlights:

- **Type:** SFP+
- **Tx Wavelength:** Ch. 27 to Ch. 61 (1270nm – 1610nm)
- **Rx Wavelength:** G.694.2 CWDM Grid (1270-1610nm)
- **Media Type:** Single- Mode Fiber
- **Fiber Type:** Single-Mode Fiber (SMF)
- **Optical Budget:** 9 dB
- **Max. Distance:** 10 km
- **Data Rate:** 1.228-10.138 Gbps
- **Temperature:** Standard 0°-70°C



## Optical Transceiver : CWDM-10GFH-SFP-10-XX

### Product Description:

CWDM-10GFH-SFP-10-XX is Multi-Vendor MSA Compatible SFP+ (Small Form factor Pluggable) Transceiver, operating over Double Fiber CWDM Single-Mode Fiber (SMF) optical cable. It has minimum guaranteed optical budget of 9 dB, with in most cases is enough to reach about 10 km distance. However, distance is just indicative parameter calculated for comfort of identification. Eventually we calculate distance taking in account minimal optical budget and average attenuation of optical cabling in industry. This transceiver use top quality DFB Laser transmitter with operating at nominal wavelength Ch. 27 – Ch. 61 (1270nm – 1610nm) PIN Photodiode receiver. It support DDM/DOM optical diagnostics, with provide diagnostic information about the present operating conditions. CWDM-10GFH-SFP-10-XX operates in Standard 0°-70°C temperature range and has Double LC interface. SFP+ support 1.228-10.138 Gbps data rate and such applications as CPRI option 2 (1228.8 Mbps)|CPRI option 3 (2.458 Gbps)|CPRI option 5 (4.915 Gbps)|CPRI option 6 (6.144 Gbps)|CPRI option 7 (9.830 Gbps)|CPRI option 8 (10.138 Gbps)|OBSAI RP3 x 2 (1.536 Gbps)|OBSAI RP3 x 4 (3.072 Gbps)|OBSAI RP3 x 8 (6.144 Gbps).



CWDM-10GFH-SFP-10-XX SFP+ Double Fiber CWDM optical transceiver is multi-purpose module used in number of different places of today's networking. Consequently, most popular applications are CPRI LTE 4G RRU and BBU Interconnections in C-RAN Fronthaul, OBSAI LTE 4G RRU and BBU Interconnections in C-RAN Fronthaul, and other optical links.

Transceiver is CE/RoHS certified and it is Compliant with product safety standards. CWDM-10GFH-SFP-10-XX SFP+ Transceiver is fully compliant to SFP+ Multi Source Agreement SFF-8431. Consequently, it means that module is compatible with 80% of networking equipment, where is not implemented a special algorithm for protection against third party modules. However – we can provide SFP+ transceiver with custom-encoded firmware in order to make it work almost in any equipment. Therefore, we will be glad to know what your requirement is. Because our focus is providing top quality service, we are performing serious quality checks before delivery of our products. As a result, we do optical parameter measurements, connector cleanness tests and SFP+ transceiver EEPROM memory data validation tests.

## Product Specification:

| General parameter             | Value  |
|-------------------------------|--|
| Media Type:                   | Single-Mode Fiber (SMF)  |
| Connectors:                   | Double LC  |
| TX Wavelength:                | Ch. 27 to Ch. 61 (1270nm – 1610nm)   |
| RX Wavelength:                | G.694.2 CWDM Grid (1270-1610nm)  |
| Minimum Optical Budget:       | 9 dB   |
| Maximum Distance:             | 10 km  |
| Supported Data Rate:          | 1.228-10.138 Gbps  |
| Supported Applications:       | CPRI option 2 (1228.8 Mbps) CPRI option 3 (2.458 Gbps) CPRI option 5 (4.915 Gbps) CPRI option 6 (6.144 Gbps) CPRI option 7 (9.830 Gbps) CPRI option 8 (10.138 Gbps) OBSAI RP3 x 2 (1.536 Gbps) OBSAI RP3 x 4 (3.072 Gbps) OBSAI RP3 x 8 (6.144 Gbps) |
| DDM/DOM:                      | Supported  |
| Temperature Range:            | Standard 0°-70°C   |
| Power Supply Voltage Typical: | +3.3V single power supply  |
| Compliance:                   | CE Class 1 FDA and IEC60825-1 Laser Safety Compliant RoHS SFF-8431 SFP MSA   |



## Product Specification:

| Transmitter Parameters:     | Value                 |
|-----------------------------|-----------------------|
| Transmitter Type:           | DFB Laser             |
| Tx Wavelength Bandwidth:    | 20 nm (1260nm-1280nm) |
| Minimum Transmitting Power: | -6 dBm                |
| Maximum Transmitting Power: | 1 dBm                 |

| Receiver Parameters:     | Value                      |
|--------------------------|----------------------------|
| Receiver Type:           | PIN Photodiode             |
| Rx Wavelength Bandwidth: | G.694.2 grid: 1270-1610 nm |
| Receiver Sensitivity:    | -15 dBm                    |
| Receiver Overload:       | 0.5 dBm                    |



## Compatibility:

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more than 100 vendor brands in data and telecom communications industry:

**MS** - General MSA**AD** - ADVA**AE** - Advantech**AL** - Alcatel (Nokia)**AT** - Allied Telesis**AR** - Arista**AS** - Arris**AV** - Avaya**BC** - Barracuda**BR** - Broadcom**QL** - Cavium (Qlogic)**CR** - Ceragon**CP** - Checkpoint**CH** - Chelsio**CN** - Ciena**CI** - Cisco**LI** - Cisco (Linksys)**CE** - Comnet**CO** - Coriant**DH** - Dahua**DC** - DCN**DL** - Dell & Force10**DK** - D-Link**DZ** - DZS(Dasan-Zhone)**EI** - ECI**EC** - EdgeCore**EW** - EdgeWare**EL** - Eltex**EM** - EMC2**EN** - Enterasys**ER** - Ericsson**EF** - EXFO**EX** - Extreme Networks**F5** - F5 Networks**FI** - Finisar**FO** - Fortinet**FU** - Fujitsu**H3** - H3C**HI** - Hirschmann**HU** - Huawei**IB** - IBM**IF** - Infinera**IN** - Intel**IX** - Ixia**JU** - Juniper Networks**KM** - KeyMile**KY** - KyLand**LN** - Lenovo**ML** - Mellanox**ME** - Meraki (Cisco)**MT** - MikroTik**MO** - Moxa**MR** - MRV**NC** - NEC**NG** - Netgear**NK** - Nokia**NT** - Nortel**NS** - NSN**OR** - Oracle**PA** - Palo Alto Network**PL** - Planet**QC** - QCT(Quanta)**QN** - QNAP**RD** - RAD**RW** - RadWare**RC** - Raisecom**RK** - Ruckus**RU** - Ruijie Networks**SG** - Samsung**SV** - Sandvine**SC** - Silicom**SF** - SolarFlare**SW** - Sonicwall**SM** - Supermicro**SY** - Synology**TC** - Telco Systems**TP** - TP-LINK**TN** - Trendnet**UN** - Ubiquiti Networks**VX** - VeEx**WG** - WatchGuard**WS** - Waystream**WT** - Westermo**ZT** - ZTE**ZX** - Zyxel**HP** - HP**AG** - Avago**OC** - Oclaro**EU** - Emulex**TM** - Transmode**AU** - HP Aruba**XX** - Other

## 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.

## Ordering Information:

| Part Number           | Data Rate         | Applications | Temperature Range | Available DWDM Channels                            |
|-----------------------|-------------------|--------------|-------------------|--|
| CWDM-10GFH-SFP-10-XX* | 1.228-10.138 Gbps | Up to 10 km  | 0°-70°C           | <b>27 to 61</b><br>G.694.2 CWDM Grid (1270-1610nm) |

\*XX represents the chosen channel, thus Ch.27 would be CWDM-10GFH-SFP-10-27 (1270nm)

