

## Key Highlights:

- **Type:** SFP+
- **Compatibility:** Multi-Vendor MSA Compatible
- **Tx Wavelength:** 1310 nm
- **Rx Wavelength:** 1310 nm
- **Media Type:** Single-Mode Fiber (SMF)
- **Optical Budget:** 9 dB
- **Max. Distance:** 20 km
- **Data Rate:** 1.228-10.138 Gbps
- **Temperature:** Industrial -45°C - +85°C



## Optical Transceiver: 10GFH-SFP-20I

## Product Description:

10GFH-SFP-20I is Multi-Vendor MSA Compatible SFP+ (Small Form factor Pluggable) Transceiver, operating over Double Fiber Single-Mode Fiber (SMF) optical cable. It has minimum guaranteed optical budget of 9 dB, with in most cases is enough to reach about 20 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 1310 nm and 1310 nm PIN Photodiode receiver. It support DDM/DOM optical diagnostics, with provide diagnostic information about the present operating conditions. 10GFH-SFP-20I operates in Industrial -45°C - +85°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). 10GFH-SFP-20I SFP+ Double Fiber 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 Frounhaul, OBSAI LTE 4G RRU and BBU Interconnections in C-RAN Frounhaul and other optical links.

Transceiver is CE/RoHS certified and it is Compliant with product safety standards. 10GFH-SFP-20I 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:

Parameter	Value
Media Type:	Single-Mode Fiber (SMF)
Tx Wavelength:	1310 nm
Rx Wavelength:	1310 nm
Minimum Optical Budget:	9 dB
Maximum Distance:	20 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:	Support
Temperature Range:	Industrial -45°C - +85°C
Connectors:	Double LC
Tx Wavelength Bandwidth:	100 nm (1260-1360 nm)
Rx Wavelength Bandwidth:	100 nm (1260-1360 nm)
Minimum Transmitting Power:	-5 dB
Maximum Transmitting Power:	1 dB
Receiver Sensitivity:	-14 dBm
Receiver Overload:	0.5 dBm
Dispersion:	140-160 ps/nm
Transmitter Type:	DFB Laser
Receiver Type:	PIN Photodiode
Sidemode Suppression Ratio:	35 dB
Max. Receiver Reflectance:	- 12 dB
Power:	+3.3V single power supply
Power Consumption:	220mA
MTBF value at 35 °C:	1'000'000 Hours.
Chip-set:	MAXIM MINDSPEED SEMTECH
Compliance:	CE Class 1 FDA and IEC60825-1 Laser Safety Compliant RoHS SFF-8431 SFP MSA



## Compatibility:

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more than 50 vendor brands in data and telecom communications industry:

**MS** - General MSA  
**AD** - ADVA  
**AL** - Alcatel-Lucent  
**AR** - Arista  
**AV** - Avaya  
**BR** - Brocade  
**CN** - Ciena  
**CI** - Cisco  
**DL** - Dell & Force10  
**DK** - D-Link  
**EM** - EMC2  
**ET** - Enterasys

**ER** - Ericsson  
**EX** - Extreme Networks  
**F5** - F5 Networks  
**FO** - Fortinet  
**FU** - Fujitsu  
**H3** - H3C  
**HI** - Hirschmann  
**HP\*** - HP Networking  
**HS\*** - HP Storage  
**HU** - Huawei  
**IB** - IBM  
**IF** - Infinera

**IN** - Intel  
**JU** - Juniper Networks  
**LI** - Linksys  
**ML** - Mellanox  
**ME** - Meraki (Cisco)  
**MT** - MikroTik  
**MO** - Moxa  
**MR** - MRV  
**NG** - Netgear  
**NS** - NSN  
**PA** - Palo Alto Network  
**QL** - Qlogic

**RD** - RAD  
**RU** - Ruijie Networks  
**SM** - Supermicro  
**SY** - Synology  
**TC** - Telco Systems  
**TP** - TP-LINK  
**TN** - Trendnet  
**WG** - WatchGuard  
**ZT** - ZTE  
**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.

