

# SFP-10G-MR80-AT50

## 10G Auto Tunable SFP+ Transceiver, C-band, Negative Chirp, 80km Reach

### DESCRIPTION

This Fiberworks 10 Gigabit Small Form Factor Pluggable (SFP+) transceiver is compliant with the current SFP Multi-Source Agreement (MSA) specification, and simultaneously comply with 10 Gigabit Ethernet 10GBASE-ZR/ZW, STM-64 and 10G Fibre Channel, both with and without FEC.

The transceiver consists of two sections: The transmitter section incorporates a c-band tunable negative-chirp laser and wavelength/frequency tuning is automatic in accordance with SFF-8690. The receiver section consists of an APD receiver with a limiting amplifier. For optimum system performance in noise loaded applications, support is provided for external control of the receiver decision threshold.

### APPLICATIONS

- Supports 80km link distances
- 10Gb/s Gigabit Ethernet 10GBASE-ER/EW
- 10G Fibre Channel
- OTU2 with FEC
- Dispersion limited or noise limited
- High/low OSNR Metro
- Link with or without amplification

### FEATURES

- ITU-T C-band 50 GHz spacing Tunable DWDM SFP+ Transceiver
- Auto-tuning within 191.35 - 196.1 THz
- Data rate 9.95- 11.3 Gbit/s
- Support 80 km link distances
- Negative chirp transmitter with ILMZ (Integrated Laser Mach Zehnder) TOSA
- Tx dither for use in high-power links
- APD receiver with limiting amplifier
- Adjustable Rx determination threshold value
- Low power consumption: < 1.5 W
- Positive power supply lines: 3.3 V
- Operating case temperature range: -40 to +85 °C
- RoHS 6 compliant



### LASER SAFETY

This singlemode transceiver is a Class 1 laser product. It complies with IEC-60825-1 and FDA 21 CFR 1040.10 and 1040.11. The transceiver must be operated within the specified temperature and voltage limits. The optical ports of the module need to be terminated with an optical connector or a dust plug.

### ORDERING INFORMATION

Part no.	Description
SFP-10G-MR80-AT50	SFP+, 9.9-11.3G, 80km, Auto-Tunable, DWDM 50GHz ITU, 23dB, SM, I-temp

### OPTICAL PARAMETERS

Part no.	Wavelength [nm]	Opt. Output Power [dBm]	Opt. Receiver Sensitivity [dBm]	Power Budget [dB]
SFP-10G-MR80-AT50	1528.77 - 1566.72	-1 to +3	-7 to -24 (BER < 10 <sup>-12</sup> , OSNR > 35 dB)	23

## Auto Tuning

- Lasers on both sides scan through the available DWDM (ITU) channels to find the right frequency related to the port it is connected to on the DWDM multiplexer.
- For every new attempt, the frequency used is coded into the signal.
- When one of the transceivers find the correct frequency, the signal is received by the receiver on the other end.
- The transceiver on the other end will then report which frequency it received and continue to scan for the correct frequency on the other side.
- When the second transceiver find the right frequency, the first transceiver will know what the correct frequency is and can let the second transceiver know that the process can stop.
- The process can take up to 5 minutes depending on how many channels that needs to be scanned before the correct is found.