

# SFP-10GE

## 10G Ethernet SFP+ Family

### DESCRIPTION

The SFP-10GE transceiver family are small form factor pluggable modules for bi-directional serial optical data communications such as 10GBASE Ethernet. The modules are compliant to the SFP+ MSA and are hot pluggable. Digital diagnostic functions are available via an I2C serial bus specified in the SFP MSA SFF-8472. The modules meet the requirements of the IEEE 802.3 10GBASE-SR/LR/LRM/LW/ER/ZR Ethernet standard and are suitable for interconnections in 10G Ethernet environments.

The transceivers can also be used for a wide range of other protocols with bitrates between 600 Mbps and 11.1 Gbps.

The family covers a wide range of applications, with 850 nm and 1310 nm versions available for multimode fiber and 1310 nm and 1550 nm versions are available for singlemode fiber.

### APPLICATIONS

- 10GBASE-SR/LR/LRM/LW/ER/ZR
- 10G Fibre Channel
- OTN OTU2/OTU2e
- SDH STM-64
- Other protocols such as CPRI, OBSAI, SMPTE SDI

### FEATURES

- Up to 400 m transmission on OM4/OM5 multimode fiber, 4700 MHz\*km<sup>1</sup>
- Up to 300 m transmission on OM3 multimode fiber, 2000 MHz\*km<sup>1</sup>
- Up to 40 km transmission on singlemode fiber at 1310 nm<sup>1</sup>
- Up to 80 km transmission on singlemode fiber at 1550 nm<sup>1</sup>
- Data Rate 0.6 - 11.1 Gbps
- Hot-Pluggable SFP footprint
- Duplex LC interface for fiber pair operation
- Small Form-Factor Pluggable (SFP) MSA compatible
- SFF-8472 Digital Diagnostics Monitoring
- Operating case temperature: Standard: 0°C to 70°C

**FIBERWORKS**

### LASER SAFETY

This transceiver is a Class 1 laser product. It complies with IEC-60825 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.

<sup>1</sup> Valid for 10.3125Gbps

**OPTICAL PARAMETERS**

Part no.	Fiber type	Wavelength [nm]	Opt. Output Power [dBm]	Opt. Receiver Sensitivity [dBm] <sup>1</sup>	Power Budget [dB]
SFP-10GE-SR	MM	850	-6 to -1	-10 to 0	4
SFP-10GE-LRM	MM	1310	-6 to -1	-10 to 0	4
SFP-10GE-LR	SM	1310	-6 to 1	-15 to 1	9
SFP-10GE-LR40	SM	1310	-1 to 4	-16 to 0	15
SFP-10GE-ER	SM	1550	-1 to 4	-16 to 0	15
SFP-10GE-ZR	SM	1550	0 to 5	-23 to -8	23

**ORDERING INFORMATION**

Part no.	Description
SFP-10GE-SR	SFP+, 10G Ethernet, 850nm, MM, DDM, 4dB, (300m for OM3 2000 MHz*km, 82m for OM2 500MHz*km, and 33 m for OM1 200MHz*km MMF)
SFP-10GE-LRM	SFP+, 10G Ethernet, 1310nm, MM, DDM, 4dB, (220m for OM3 2000 MHz*km, 220m for OM2 500MHz*km, and 220 m for OM1 200MHz*km MMF), requires EDC at host board
SFP-10GE-LR	SFP+, 10G Ethernet, 1310nm, SM, DDM, 9dB, 10km
SFP-10GE-LR40	SFP+, 10G Ethernet, 1310nm, SM, DDM, 15dB, 40km
SFP-10GE-ER	SFP+, 10G Ethernet, 1550nm, SM, DDM, 15dB, 40km
SFP-10GE-ZR	SFP+, 10G Ethernet, 1550nm, SM, DDM, 23dB, 80km

<sup>1</sup> Valid for 10.3125Gbps