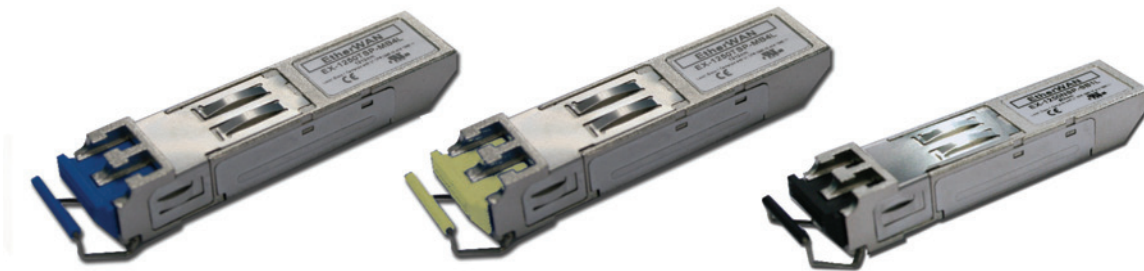


# SFP Fiber Transceiver Series



## Spotlight

- All SFPs have been tested with the best operating performance on EtherWAN switches
- The characteristics are performed in accordance with Telcordia Specification GR-468-CORE
- Single +3.3V Power Supply
- RoHS Compliant and Lead-free
- AC/AC Differential Electrical Interface
- Eye Safety Designed to meet Laser Class 1 compliant with EN60825-1
- Compliant with Multi-Source Agreement (MSA) Small Form Factor Pluggable (SFP)
- EMC requirement meets FCC in the United States and CENELEC EN55022 (CISPR 22) in Europe

## Ordering Information

### 100BASE SFP Series\*

Non-Hardened (Operating Temperature : 0°C to 70°C / 32°F to 158°F)

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget **	Optical Output Power	Sensitivity
EXFE-R1S4-05H1	100 m	-	TX	-	-	-	-
EX-0155NSP-MB2L	2 Km	62.5 / 125 μm, MM	Duplex LC	1310 nm	13 dbm	-19 to -14 dBm	-32 dbm
EX-LM38-A3S-TC-N-B3	2 Km	62.5 / 125 μm / 50 / 125 μm, MM	Single LC	TX:1310 nm / RX:1550 nm	18 dBm	-10 to 0 dbm	-28 dbm
EX-LM48-A3S-TC-N-B5	2 Km	62.5 / 125 μm / 50 / 125 μm, MM	Single LC	TX:1550 nm / RX:1310 nm	18 dBm	-10 to 0 dbm	-28 dbm
EX-0155TSP-MB5L	15 Km	9 / 125 μm, SM	Duplex LC	1310 nm	17 dbm	-15 to -8 dBm	-32 dbm
EX-0155TBP-MB5L	20 Km	9 / 125 μm, SM	Single LC	TX:1310 nm / RX:1550 nm	18 dBm	-14 to -8 dBm	-32 dbm
EX-0155TBP-LB5L	20 Km	9 / 125 μm, SM	Single LC	TX:1550 nm / RX:1310 nm	18 dBm	-14 to -8 dBm	-32 dbm
EX-0155TSP-MB6L	40 Km	9 / 125 μm, SM	Duplex LC	1310 nm	29 dBm	-5 to 0 dBm	-34 dbm
EX-0155TBP-MB6L	40 Km	9 / 125 μm, SM	Single LC	TX:1310 nm / RX:1550 nm	26 dBm	-8 to -3 dbm	-34 dbm
EX-0155TBP-KB6L	40 Km	9 / 125 μm, SM	Single LC	TX:1550 nm / RX:1310 nm	26 dBm	-8 to -3 dbm	-34 dbm

## 100BASE SFP Series\*

Hardened (Operating Temperature : -40°C to 85°C / -40°F to 185°F)

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget **	Optical Output Power	Sensitivity
EX-0155NSP-MB2L-A	2 Km	62.5 / 125 µm, MM	Duplex LC	1310nm	13 dBm	-19 to -14 dbm	-32 dbm
EX-LM38-A3S-TI-N-B3	2 Km	62.5 / 25 µm / 50 / 125 µm, MM	Single LC	TX: 1310 nm / RX:1550 nm	18 dbm	-10 to 0 dbm	-28 dbm
EX-LM48-A3S-TI-N-B5	2 Km	62.5 / 125 µm / 50 / 125 µm, MM	Single LC	TX: 1550 nm / RX:1310 nm	18 dbm	-10 to 0 dbm	-28 dbm
EX-0155TSP-MB5L-A	15 Km	9 / 125 µm, SM	Duplex LC	1310nm	19 dbm	-15 to -8 dbm	-34 dbm
EX-0155TBP-MB5L-A	20 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX:1550 nm	18 dBm	-14 to -8 dbm	-32 dbm
EX-0155TBP-LB5L-A	20 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX:1310 nm	18 dBm	-14 to -8 dbm	-32 dbm
EX-0155TSP-MB6L-A	40 Km	9 / 125 µm, SM	Duplex LC	1310nm	30 dbm	-5 to 0 dbm	-35 dbm
EX-0155TBP-MB6L-A	40 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX:1550 nm	26 dbm	-8 to -3 dbm	-34 dbm
EX-0155TBP-KB6L-A	40 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX:1310 nm	26 dbm	-8 to -3 dbm	-34 dbm

\* More SFP options upon the request

\*\* Link Budget data is based on pair of the same SFP modules

## Gigabit SFP Series\*

Non-Hardened (Operating Temperature : 0°C to 70°C / 32°F to 158°F)

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget **	Optical Output Power	Sensitivity
EX-1250NSP-SB1L S	275 m / 550 m	62.5 / 125 µm / 50 / 125 µm, MM	Duplex LC	850 nm	7.5 dBm	-9.5 to -4 dBm	-17 dBm
EX-1250TBP-MB1L S	550 m	62.5 / 125 µm / 50/125 µm, MM	Single LC	TX: 1310 nm / RX: 1550 nm	7 dBm	-10 to -4 dBm	-17 dBm
EX-1250TBP-LB1L S	550 m	62.5 / 125 µm / 50 / 125 µm, MM	Single LC	TX: 1550 nm / RX: 1310 nm	7 dBm	-10 to -4 dBm	-17 dBm
EX-1250TSP-MB2L S	2 Km	62.5 / 125 µm, MM	Duplex LC	1310 nm	13.5 dBm	-9.5 to -3 dBm	-23 dBm
EX-1250TSP-MB4L S	10 Km	9 / 125 µm, SM	Duplex LC	1310 nm	11.5 dBm	-9.5 to -3 dBm	-21 dBm
EX-1250TBP-MB4L S	10 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	12 dBm	-9 to -3 dBm	-21 dBm
EX-1250TBP-KB4L S	10 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	12 dBm	-9 to -3 dBm	-21 dBm
EX-1250TSP-MB5L S	20 Km	9 / 125 µm, SM	Duplex LC	1310 nm	15 dBm	-9 to -3 dBm	-24 dBm
EX-1250TBP-MB5L S	20 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	15 dBm	-8 to -3 dBm	-23 dBm
EX-1250TBP-KB5L S	20 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	15 dBm	-8 to -3 dBm	-23 dBm
EX-LS38-C3L-TC-N-EB (DDM)	40 Km	9 / 125 µm, SM	Duplex LC	1310 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS38-C3L-TC-N-CE (DDM)	40 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS48-C3L-TC-N-CE (DDM)	40 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS38-C3U-TC-N-CE (DDM)	60 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	24 dBm	0 to +5 dBm	-24 dBm
EX-LS48-C3U-TC-N-CE (DDM)	60 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	23 dBm	-2 to +4 dBm	-25 dBm
EX-LS48-C3U-TC-N-EB (DDM)	70 Km	9 / 125 µm, SM	Duplex LC	1550 nm	23 dBm	0 to +5 dBm	-23 dBm
EX-LS48-C3U-TC-N51-CE (1510 nm) (DDM)	80 Km	9 / 125 µm, SM	Single LC	TX: 1510 nm / RX: 1570 nm	24 dBm	-2 to +3 dBm	-26 dBm
EX-LS48-C3U-TC-N57-CE (1570 nm) (DDM)	80 Km	9 / 125 µm, SM	Single LC	TX: 1570 nm / RX: 1510 nm	24 dBm	-2 to +3 dBm	-26 dBm

## Gigabit SFP Series\*

**Hardened (Operating Temperature : -40°C to 85°C / -40°F to 185°F)**

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget **	Optical Output Power	Sensitivity
EXGT-R154-05H3	100 m	TX	TX	-	-	-	-
EX-1250NSP-SB1L-A S	275 m / 550 m	62.5 / 125 µm / 50/125 µm, MM	Duplex LC	850 nm	7.5 dBm	-9.5 to -4 dBm	-17 dBm
EX-1250TBP-MB1L-A S	550 m	62.5 / 125 µm / 50/125 µm, MM	Single LC	TX: 1310 nm / RX: 1550 nm	7 dBm	-10 to -4 dBm	-17 dBm
EX-1250TBP-LB1L-A S	550 m	62.5 / 125 µm / 50/125 µm, MM	Single LC	TX: 1550 nm / RX: 1310 nm	7 dBm	-10 to -4 dBm	-17 dBm
EX-LM38-C3S-TI-N-CE (DDM)	550 m	62.5 / 125 µm, MM	Single LC	TX: 1310 nm / RX: 1550 nm	8 dBm	-10 to +2 dBm	-18 dBm
EX-LM48-C3S-TI-N-CE (DDM)	550 m	62.5 / 125 µm, MM	Single LC	TX: 1550 nm / RX: 1310 nm	10 dBm	-8 to 0 dBm	-18 dBm
EX-1250TSP-MB2L-A S	2 Km	62.5 / 125 µm, MM	Duplex LC	1310 nm	13.5 dBm	-9.5 to -3 dBm	-23 dBm
EX-1250TSP-MB4L-A S	10 Km	9 / 125 µm, SM	Duplex LC	1310 nm	11.5 dBm	-9.5 to -3 dBm	-21 dBm
EX-1250TBP-MB4L-A S	10 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	12 dBm	-9 to -3 dBm	-21 dBm
EX-1250TBP-KB4L-A S	10 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	12 dBm	-9 to -3 dBm	-21 dBm
EX-1250TSP-MB5L-A S	20 Km	9 / 125 µm, SM	Duplex LC	1310 nm	15 dBm	-9 to -3 dBm	-24 dBm
EX-1250TBP-MB5L-A S	20 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	15 dBm	-8 to -3 dBm	-23 dBm
EX-1250TBP-KB5L-A S	20 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	15 dBm	-8 to -3 dBm	-23 dBm
EX-LS38-C3L-TI-N-CE (DDM)	40 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS48-C3L-TI-N-CE (DDM)	40 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS38-C3U-TI-N-CE (DDM)	60 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	24 dBm	0 to +5 dBm	-24 dBm
EX-LS48-C3U-TI-N-CE (DDM)	60 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	23 dBm	-2 to +4 dBm	-25 dBm
EX-LS38-C3L-TI-N-EB (DDM)	40 Km	9 / 125 µm, SM	Duplex LC	1310 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS48-C3U-TI-N-EB (DDM)	70 Km	9 / 125 µm, SM	Duplex LC	1550 nm	23 dBm	0 to +5 dBm	-23 dBm

\* More SFP options upon the request

\*\* Link Budget data is based on pair of the same SFP modules

## 10GBASE SFP Series\*

**Non-Hardened (Operating Temperature : 0°C to 70°C / 32°F to 158°F)**

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget **	Optical Output Power	Sensitivity
EX-LM28-H3S-TC-N	30 m / 80 m	662.5 / 125 µm / 50 / 125 µm, MM	Duplex LC	850nm	2.8 dBm	-7.1 to -1 dBm	-9.9 dBm
EX-LS38-H3S-TC-N	10 Km	SMF	Duplex LC	1310nm	8.4 dBm	-6 to 0.5 dBm	-14.4 dBm

\* More SFP options upon the request

\*\* Link Budget data is based on pair of the same SFP modules