

# SFP Transceivers



## Product Highlights

- Used for wide range of fiber applications
- Optimal performance on EtherWAN switches
- Fast Ethernet, Gigabit Ethernet, and 10-Gigabit Ethernet options available
- Multi-mode and Single-mode fiber modules available
- Hot-pluggable for instant operation
- Enhanced Digital Diagnostic Monitoring available for models marked "DDM" to provide real-time diagnostic information

## Hardware Specifications

<b>Regulatory Compliance</b>	+
Compliant with Multi-Sourcing Agreement (MSA) Small Form Factor Pluggable (SFP)	
Eye Safety: Compliant with Class 1 laser safety requirements EN 60825-1	
Environmental: RoHS compliant, lead-free	
EMC: FCC part 15, CENELEC EN 55022	
<b>Power Supply Voltage</b>	+
Single +3.3V	
<b>Operating Temperature</b>	+
Hardened: -40 to 85°C (-40 to 185°F)	
Non-Hardened: 0 to 70°C (32 to 158°F)	
<b>Warranty</b>	+
Go to <a href="http://www.etherwan.com/support/warranty-policy">www.etherwan.com/support/warranty-policy</a> for more details	

# Ordering Information

## 100BASE SFP Series\*

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

Models	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPMIM02C (DDM)	2Km	62.5/125µm, MM	Duplex LC	1310nm	12dBm	-19 to -12dBm	-31dBm
EX-LM38-A3S-TC-N-B3	2Km	62.5/125µm/50/125µm, MM	Single LC	TX: 1310nm RX: 1550nm	18dBm	-10 to 0dBm	-28dBm
EX-LM48-A3S-TC-N-B5	2Km	62.5/125µm/50/125µm, MM	Single LC	TX: 1550nm RX: 1310nm	18dBm	-10 to 0dBm	-28dBm
EX-0155TSP-MB5L	15Km	9/125µm, SM	Duplex LC	1310nm	19dBm	-15 to -8dBm	-34dBm
EX-0155TBP-MB5L	20Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	18dBm	-14 to -8dBm	-32dBm
EX-0155TBP-LB5L	20Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	18dBm	-14 to -8dBm	-32dBm
EX-0155TSP-MB6L	40Km	9/125µm, SM	Duplex LC	1310nm	30dBm	-5 to 0dBm	-35dBm
SFPMXT1AC	100m	Cat. 5 or better	RJ-45	-	-	-	-

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

Models	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-0155NSP-MB2L-A	2Km	62.5/125µm/50/125µm, MM	Duplex LC	1310nm	13dBm	-19 to -14dBm	-32dBm
EX-LM38-A3S-TI-N-B3	2Km	62.5/125µm/50/125µm, MM	Single LC	TX: 1310nm RX: 1550nm	18dBm	-10 to 0dBm	-28dBm
EX-LM48-A3S-TI-N-B5	2Km	62.5/125µm/50/125µm, MM	Single LC	TX: 1550nm RX: 1310nm	18dBm	-10 to 0dBm	-28dBm
SFPMIS20M (DDM)	20Km	9/125µm, SM	Duplex LC	1310nm	19dBm	-15 to -8dBm	-34dBm
SFPMYS20M (DDM)	20Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	18dBm	-14 to -8dBm	-32dBm
SFPMZS20M (DDM)	20Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	18dBm	-14 to -8dBm	-32dBm
EX-0155TSP-MB6L-A	40Km	9/125µm, SM	Duplex LC	1310nm	29dBm	-5 to 0dBm	-34dBm
EX-0155TBP-MB6L-A	40Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	26dBm	-8 to -3dBm	-34dBm
EX-0155TBP-KB6L-A	40Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	26dBm	-8 to -3dBm	-34dBm

\* 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 to 70°C/32 to 158°F)

Models	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPGIM5AC (DDM)	275m 550m	62.5/125µm/50/125µm, MM	Duplex LC	850nm	7.5dBm	-19 to -14dBm	-17dBm
EX-1250TBP-MB1LS	550m	62.5/125µm/50/125µm, MM	Single LC	TX: 1310nm RX: 1550nm	7dBm	-10 to -4dBm	-17dBm
EX-1250TBP-LB1LS	550m	62.5/125µm/50/125µm, MM	Single LC	TX: 1550nm RX: 1310nm	7dBm	-10 to -4dBm	-17dBm
SFPGIM02C (DDM)	2Km	62.5/125µm, MM	Duplex LC	1310nm	13.5dBm	-9.5 to -3dBm	-23dBm
SFPGIS10C (DDM)	10Km	9/125µm, SM	Duplex LC	1310nm	11.5dBm	-9.5 to -3dBm	-21dBm
EX-1250TBP-MB4LS	10Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	12dBm	-9 to -3dBm	-21dBm
EX-1250TBP-KB4LS	10Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	12dBm	-9 to -3dBm	-21dBm
EX-1250TSP-MB5LS	20Km	9/125µm, SM	Duplex LC	1310nm	15dBm	-9 to -3dBm	-24dBm
EX-1250TBP-MB5LS	20Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	15dBm	-8 to -3dBm	-23dBm
EX-1250TBP-KB5LS	20Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	15dBm	-8 to -3dBm	-23dBm
EX-LS38-C3L-TC-N-EB (DDM)	40Km	9/125µm, SM	Duplex LC	1310nm	20dBm	-3 to +2dBm	-23dBm
EX-LS38-C3L-TC-N-CE (DDM)	40Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	20dBm	-3 to +2dBm	-23dBm
EX-LS48-C3L-TC-N-CE (DDM)	40Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	20dBm	-3 to +2dBm	-23dBm
EX-LS38-C3U-TC-N-CE (DDM)	60Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	24dBm	0 to +5dBm	-24dBm
EX-LS48-C3U-TC-N-CE (DDM)	60Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	23dBm	-2 to +4dBm	-25dBm
EX-LS48-C3U-TC-N-EB (DDM)	70Km	9/125µm, SM	Duplex LC	1550nm	23dBm	0 to +5dBm	-23dBm
EX-LS48-C3U-TC-N51-CE (1510nm) (DDM)	80Km	9/125µm, SM	Single LC	TX: 1510nm RX: 1570nm	24dBm	-2 to +3dBm	-26dBm
EX-LS48-C3U-TC-N57-CE (1570nm) (DDM)	80Km	9/125µm, SM	Single LC	TX: 1570nm RX: 1510nm	24dBm	-2 to +3dBm	-26dBm
SFPGIS90C (DDM)	90Km	9/125µm, SM	Duplex LC	1550nm	27dBm	0 to +5dBm	-27dBm

## Gigabit SFP Series\*

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

Models	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPGXT1AM	100m	Cat. 5 or better	RJ-45	-	-	-	-
SFPGIM5AM (DDM)	275m 550m	62.5/125µm/50/125µm, MM	Duplex LC	850nm	7.5dBm	-9.5 to -4dBm	-17dBm
EX-1250TBP-MB1L-AS	550m	62.5/125µm/50/125µm, MM	Single LC	TX: 1310nm RX: 1550nm	7dBm	-10 to -4dBm	-17dBm
EX-1250TBP-LB1L-AS	550m	62.5/125µm/50/125µm, MM	Single LC	TX: 1550nm RX: 1310nm	7dBm	-10 to -4dBm	-17dBm
EX-LM38-C3S-TI-N-CE (DDM)	550m	62.5/125µm, MM	Single LC	TX: 1310nm RX: 1550nm	8dBm	-10 to +2dBm	-18dBm
EX-LM48-C3S-TI-N-CE (DDM)	550m	62.5/125µm, MM	Single LC	TX: 1550nm RX: 1310nm	10dBm	-8 to 0dBm	-18dBm
SFPGIM02M (DDM)	2Km	50/125µm, MM	Duplex LC	1310nm	13.5dBm	-9.5 to -3dBm	-23dBm
SFPGIS10M (DDM)	10Km	9/125µm, SM	Duplex LC	1310nm	11.5dBm	-9.5 to -3dBm	-21dBm
EX-1250TBP-MB4L-AS	10Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	12dBm	-9 to -3dBm	-21dBm
EX-1250TBP-KB4L-AS	10Km	9/125µm, SM.	Single LC	TX: 1550nm RX: 1310nm	12dBm	-9 to -3dBm	-21dBm
EX-1250TBP-MB5L-AS	20Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	15dBm	-8 to -3dBm	-23dBm
SFPGIS20M (DDM)	20Km	9/125µm, SM	Duplex LC	1310nm	15dBm	-8 to -3dBm	-23dBm
EX-1250TBP-KB5L-AS	20Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	15dBm	-8 to -3dBm	-23dBm
SFPGYS20M (DDM)	20Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	15dBm	-8 to -2dBm	-23dBm
SFPGZS20M (DDM)	20Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	15dBm	-8 to -2dBm	-23dBm
EX-LS38-C3L-TI-N-CE (DDM)	40Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	20dBm	-3 to +2dBm	-23dBm
EX-LS48-C3L-TI-N-CE (DDM)	40Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	20dBm	-3 to +2dBm	-23dBm
EX-LS38-C3U-TI-N-CE (DDM)	60Km	9/125µm, SM	Single LC	TX: 1310nm RX: 1550nm	24dBm	0 to +5dBm	-24dBm
EX-LS48-C3U-TI-N-CE (DDM)	60Km	9/125µm, SM	Single LC	TX: 1550nm RX: 1310nm	23dBm	-2 to +4dBm	-25dBm
EX-LS38-C3L-TI-N-EB (DDM)	40Km	9/125µm, SM	Duplex LC	1310nm	20dBm	-3 to +2dBm	-23dBm
EX-LS48-C3U-TI-N-EB (DDM)	70Km	9/125µm, SM	Duplex LC	1550nm	23dBm	0 to +5dBm	-23dBm

\* 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 to 70°C/32 to 158°F)

Models	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPTIM3AE (DDM)	300m	62.5/125µm/50/125µm, MM	Duplex LC	850nm	2.8dBm	-7.1 to -1dBm	-9.9dBm
SFPTIS10E (DDM)	10Km	9/125µm, SM	Duplex LC	1310nm	8.4dBm	-6 to +0.5dBm	-14.4dBm
SFPTIS20C (DDM)	20Km	9/125µm, SM	Duplex LC	1310nm	9.4dBm	-5 to +1dBm	-14.4dBm
SFPTIS40C (DDM)	40Km	9/125µm, SM	Duplex LC	1310nm	15dBm	-0.5 to +5dBm	-15.5dBm

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

Models	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPTIM3AM (DDM)	300m	62.5/125µm/50/125µm, MM	Duplex LC	850nm	2.8dBm	-7.1 to -1dBm	-9.9dBm
SFPTIS10M (DDM)	10Km	9/125µm, SM	Duplex LC	1310nm	6.4dBm	-8 to +0.5dBm	-14.4dBm
SFPTIS20M (DDM)	20Km	9/125µm, SM	Duplex LC	1310nm	9.4dBm	-5 to +1dBm	-14.4dBm
SFPTIS40M (DDM)	40Km	9/125µm, SM	Duplex LC	1310nm	15dBm	0.5 to +5dBm	-15.5dBm

\* More SFP options upon the request.

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