

# Pluggable Transceivers

Industry-Standard Pluggable Transceivers and Direct Attach Cables

## BENEFITS

### BUSINESS ALIGNMENT

- Standards-based technology.
- Flexible interface options for 100Mbps, 1Gbps, 10Gbps, and 40Gbps.

### OPERATIONAL EFFICIENCY

- Variety of connectivity options to match specific interface requirements.
- Small form factor packages enables high density deployments.

### INTEROPERABILITY AND QUALITY

- Designed and manufactured to stringent standards.
- Highest quality transceivers technology to ensure long life cycle and reliability.

### SUPPORT AND SERVICES

- Industry leading customer satisfaction and first call resolution rates.



- Modular Ethernet interfaces from 100Mbps to 40Gbps
- Support for a large variety of cable types and transmission distances
- Compliant with industry standards
- High quality transceiver technology for extended life cycle and improved ROI

## Product Overview

Extreme Networks pluggable transceivers deliver speed and media flexibility for Extreme Networks product platforms that support pluggable transceiver technology. All Extreme Networks transceivers are of the highest quality and conform to industry standards and manufacturer multi-source agreements for interoperability. Extreme Networks fully tests our transceivers with all product platforms to ensure compatibility and compliance.

## Transceiver Summary

### MULTIPLE MEDIA TYPES, PORT SPEEDS AND TRANSMISSION DISTANCES TO FIT ANY ENVIRONMENT

The wide range of pluggable transceiver and direct attach cables from Extreme Networks means that you can deploy your Extreme Networks Ethernet switches, wireless Access Points, and Controllers to utilize a variety of physical media types. Extreme Networks transceivers provide connectivity options for Ethernet over twisted pair copper and fiber optic cables with speeds from 100 Megabits per second to 40 Gigabits per second. Twisted pair copper transceivers support transmission distances of up to 100 meters and fiber optic transceivers support multi-mode and single-mode fiber optic cable types with transmission distances up to 120 kilometers. Direct connect copper and fiber cable solutions with integrated transceivers provide low cost options for 10 and 40 Gigabit Ethernet connectivity at distances from 0.5 meter to 20 meters.

The Extreme Networks portfolio of transceiver products consists of a wide range of technology options:

- SFP 100Mb Ethernet Transceivers
- SFP Gigabit Ethernet Transceivers
- SFP+ 10 Gigabit Ethernet Transceivers
- XFP 10 Gigabit Ethernet Transceivers
- QSFP+ 40 Gigabit Ethernet Transceivers
- 10 Gigabit Direct Attach Cables with integrated transceivers
- 40 Gigabit Direct Attach Cables with integrated transceivers

Extreme Networks transceivers are rigorously qualified and tested for operation in Extreme Networks equipment. When used as part of an Extreme Networks system, the system is ensured to comply with all critical safety and regulatory requirements for operation by end users. High reliability ensures a long service life and reduces total cost of ownership over the lifetime of deployment.

# Transceiver Specifications

	TYPE	CONNECTOR TYPE	CABLE TYPE	MAX DISTANCE*	WAVELENGTH nm	TX POWER MIN/MAX dBm	RX MIN/MAX dBm	NOTES
<b>40 GIGABIT ETHERNET</b>								
<b>40GB TRANSCEIVERS</b>								
40GB-LR4-QSFP	QSFP+	LC Duplex	SMF	10 km	4 Lane WDM 1271/1291/ 1311/1331	-4.0 / 2.3	-11.5 / 3.3	Tx and Rx power per lane
40GB-ESR4-QSFP	QSFP+	MPO Parallel Fiber	Parallel 8 Multi-mode Fiber OM3 50 µm OM4 50 µm	300 m 400 m	850	-7.5 / 0.5	-9.9 / 2.4	Requires 8 or 12 parallel fiber female MPO cable. Tx and Rx power per lane
40GB-SR4-QSFP	QSFP+	MPO Parallel Fiber	Parallel 8 Multi-mode Fiber OM3 50 µm OM4 50 µm	100 m 150 m	850	-7.6 / 2.4	-9.5 / 2.4	Requires 8 or 12 parallel fiber female MPO cable. Tx and Rx power per lane
<b>40GB DIRECT ATTACH CABLES AND ADAPTERS</b>								
40GB-C0.5-QSFP	QSFP+	QSFP+	Copper	0.5 m	-	-	-	Direct attach cables with integrated QSFP+ transceivers on each end
40GB-C01-QSFP	QSFP+	QSFP+	Copper	1 m	-	-	-	
40GB-C03-QSFP	QSFP+	QSFP+	Copper	3 m	-	-	-	
40GB-C07-QSFP	QSFP+	QSFP+	Copper	7 m	-	-	-	
40GB-F10-QSFP	QSFP+	QSFP+	Fiber	10 m	850	-	-	
40GB-F20-QSFP	QSFP+	QSFP+	Fiber	20 m	850	-	-	
10GB-4-C03-QSFP	QSFP+ SFP+	1 x QSFP+ 4 x SFP+	Copper	3 m	-	-	-	Supports 4 x 10Gb Ethernet SFP+ to one QSFP+ port
10GB-4-F10-QSFP	QSFP+ SFP+	1 x QSFP+ 4 x SFP+	Fiber	10 m	850	-	-	
10GB-4-F20-QSFP	QSFP+ SFP+	1 x QSFP+ 4 x SFP+	Fiber	20 m	850	-	-	
QSFP-SFP-ADPT	QSFP+	1 x SFP+	Adapter supports 1 x SFP+ transceiver in QSFP+ port		-	-	-	10GB-LRMSFP not supported
<b>10 GIGABIT ETHERNET</b>								
<b>10GB TRANSCEIVERS</b>								
10GB-ZR-SFPP	SFP+	LC Duplex	SMF	80 km	1550	-1.0 / 4.0	-25 / -7.0	Min 11dB link attenuation required
10GBASE-ZR-XFP	XFP					0 / 4.0	-25 / -7.0	
10GB-ER-SFPP	SFP+	LC Duplex	SMF	40 km	1550	-1 / 2	-16 / -1	Min 3dB link attenuation required
10GBASE-ER-XFP	XFP							
10GB-LR-SFPP	SFP+	LC Duplex	SMF	10 km	1310	-8.2 / 0.5	-14.4 / 0.5	Minimum 2m cable length recommended
10GBASE-LR-XFP	XFP							
10GB-SR-SFPP	SFP+	LC Duplex	MMF OM1 62.5 µm OM2 50 µm OM3 50 µm OM4 50 µm	33 m 82 m 300 m 550 m	850	-4.3 / -1	-11.1 / -1	-
10GBASE-SR-XFP	XFP							
10GB-USR-SFPP	SFP+	LC Duplex	MMF OM3 50 µm OM4 50 µm	100 m 150 m	850	-5 / -1.3	-11.1 / -1	Interoperable with 10GBSR-SFPP up to 100m on OM3 and 150m on OM4
10GBASE-LRM-XFP	XFP	LC	MMF OM1 62.5 µm OM2 50 µm OM3/OM4 50 µm	220 m 220 m 220 m	1310	-4.5 / 1.5	-6.5 / 1.5	XFP - OM1 and OM2 requires MCP
10GB-LRM-SFPP	SFP+					SFP+ - No Mode Conditioning Patch cord (MCP) required		
10GBASE-SR-XFP	XFP	LC	MMF OM1 62.5 µm OM2 50 µm OM3 50 µm OM4 50 µm	33 m 82 m 300 m 550 m	850	-7.3 / -1.0	-9.9 / -1.0	
10GB-SR-SFPP	SFP+	LC						
10GBASE-CX4-XFP	XFP	CX4						

## Transceiver Specifications (cont.)

	TYPE	CONNECTOR TYPE	CABLE TYPE	MAX DISTANCE*	WAVELENGTH nm	TX POWER MIN/MAX dBm	RX MIN/MAX dBm	NOTES
<b>10GB BIDIRECTIONAL SINGLE FIBER TRANSCEIVERS</b>								
10GB-BX40-D	SFP+	LC Simplex	SMF Single Fiber	40 km	Tx 1330/Rx 1270	2/7	-14/0.5	Min 6.5dB link attenuation required Use in-D/-U pairs
10GB-BX40-U					Tx 1270/Rx 1330			
10GB-BX10-D	SPF+	LC Simplex	SMF Single Fiber	10 km	Tx 1330/Rx 1270	-5/0	-14/0.5	Use in-D/-U pairs
10GB-BX10-U					Tx 1270/Rx 1330			
<b>10 GB CWDM TRANSCEIVERS</b>								
10GB-LR271-SFPP	SPF+	LC	SMF	10km	1271	-3/3	-12.6/0.5	Compatible with 40GB-LR4-QSFP when used with MUX-CWDM-01 and supports distances of up to 7km
10GB-LR291-SFPP	SPF+	LC	SMF	10km	1291	-3/3	-12.6/0.5	
10GB-LR311-SFPP	SPF+	LC	SMF	10km	1311	-3/3	-12.6/0.5	
10GB-LR331-SFPP	SPF+	LC	SMF	10km	1311	-3/3	-12.6/0.5	
<b>CWDM MUX / DEMUX</b>								
MUX-CWDM-01	-	LC	SMF	-	4 Channels: 1271/1291/1311/1331	2.5 dB insertion loss (add + drop)	-	4 channel O-Band CWDM mux/demux compatible with 10GB-LRxxx-SFPP transceivers
<b>DUAL RATE 10GB / GIGABIT TRANSCEIVERS</b>								
10GB-LRLX-SFPP	SPF+	LC Duplex	SMF	10 km	1310	10Gb -8.2/0.5 11Gb -11/-3	10Gb -14.2/0.5 1Gb -19/-3	SFP+ ports only Dual rate 10Gb/1Gb
10GB-SRSX-SFPP	SPF+	LC Duplex	MMF OM1 62.5 µm OM2 50 µm OM3 50 µm OM4 50 µm	10Gb Mode 33 m 82 m 300 m 550 m	850	10Gb -5/-1	10Gb -11.1/0.5	SFP+ ports only Dual rate 10Gb/1Gb
			MMF OM1 62.5 µm OM2/OM3/OM4 50 µm	1Gb Mode 220 m 550 m		1Gb -9.5/-1	1Gb -17/.05	Note distance differences between 10Gb and 1Gb mode of operation
<b>10GB DIRECT ATTACH CABLES</b>								
10GB-C01-SFPP	SFP+	SFP+	Copper	1 m	-	-	-	Direct attach cables with integrated SFP+ transceivers on each end
10GB-C03-SFPP	SFP+	SFP+	Copper	3 m	-	-	-	
10GB-C10-SFPP	SFP+	SFP+	Copper	10 m	-	-	-	
10GB-F10-SFPP	SFP+	SFP+	Fiber	10m	850	-	-	
10GB-F20-SFPP	SFP+	SFP+	Fiber	20m	850	-	-	
<b>GIGABIT ETHERNET</b>								
<b>GIGABIT TRANSCEIVERS</b>								
MGBIC-LC07	SFP	LC Duplex	Single Mode Fiber	110 km	1550	0/+5	-30/-9	Min 14dB link attenuation
MGBIC-08	SFP	LC Duplex	Single Mode Fiber	80 km	1550	0/+5	-24/-3	Min 8dB link attenuation I-MGBIC -40° to +60 ° C
I-MGBIC-GZX**	SFP	LC Duplex						
MGBIC-LC09	SFP	LC Duplex	Single Mode Fiber	10 km	1310	-9.5/-3	-20/-3	I-MGBIC -40° to +60 ° C
I-MGBIC-GLX	SFP	LC Duplex						
MGBIC-LC03	SFP	LC Duplex	MMF OM1 62.5 µm OM2/OM3/OM4 50 µm	2 km	1310	-9/-1	-19/-1	I-MGBIC -40° to +60 ° C
I-MGBIC-LC03	SFP	LC Duplex		1 km				
MGBIC-LC01	SFP	LC Duplex	MMF OM1 62.5 µm OM2/OM3/OM4 50 µm	220 m	850	-9.5/-3	-17/0	I-MGBIC -40° to +60 ° C
I-MGBIC-GSX	SFP	LC Duplex		550 m				
MGBIC-MT01**	SFP	MTRJ	Category 5E / Class D or better	100 m	-	-	-	Gigabit Ethernet only I-MGBIC -40° to +60 ° C
MGBIC-02	SFP	RJ45						
I-MGBIC-GTX**	SFP	RJ45						

## Transceiver Specifications (cont.)

	TYPE	CONNECTOR TYPE	CABLE TYPE	MAX DISTANCE*	WAVELENGTH nm	TX POWER MIN/MAX dBm	RX MIN/MAX dBm	NOTES
<b>GIGABIT ETHERNET</b>								
<b>GIGABIT BIDIRECTIONAL SINGLE FIBER TRANSCEIVERS</b>								
MGBIC-BX120-D	SFP	LC Simplex	SMF Single Fiber	120 km	Tx 1590 Rx 1490	-1/+4	-32/-7	Use in -D/-U pairs Min 11 dB link attenuation -40° to +60° C
MGBIC-BX120-U					Tx 1490 Rx 1590			
MGBIC-BX40-D	SFP	LC Simplex	SMF Single Fiber	40 km	Tx 1490 Rx 1310	-5/0	-22/0	Use in -D/-U pairs -40° to +60° C
MGBIC-BX40-U					Tx 1310 Rx 1490			
MGBIC-BX10-D	SFP	LC Simplex	SMF Single Fiber	10 km	Tx 1490 Rx 1310	-9/-3	-22/-3	Use in -D/-U pairs
MGBIC-BX10-U					Tx 1310 Rx 1490			
<b>100 MEGABIT ETHERNET</b>								
<b>100MB TRANSCEIVERS</b>								
MGBIC-LC05	SPF	LC Duplex	SMF	10 km	1310	-15/-8	-28/-8	-
MGBIC-LC04	SPF	LC Duplex	MMF	2 km	1310	-20/-15	-30/-14	Same as MGBIC-N-LC04
MGBIC-100BT	SPF	RJ45	Category 5	100 m	-	-	-	100Mb only auto-MDIX not supported

\* Transmission distances are provided as a nominal guide only. Refer to the optical specifications and the specific characteristics of your fiber installation to determine achievable distances.

\*\* Discontinued product. Specifications for reference only.

## Transceiver Compatibility

### GIGABIT ETHERNET

		<b>1 GIGABIT INTERFACES</b>														
		<b>SFP MODULES</b>														
<b>PRODUCT PORTFOLIO</b>		MGBIC-LC01	MGBIC-NT01	MGBIC-02	MGBIC-LC03	MGBIC-LC09	MGBIC-LC07	MGBIC-08	MGBIC-BX10-	MGBIC-BX40-	MGBIC-BX120-	I-MGBIC-GTX	I-MGBIC-GSX	I-MGBIC-LC03	I-MGBIC-GLX	I-MGBIC-GZX
A-Series	A2	√	√	√	√	√	√	√	√							
	A4	√	√	√	√	√	√	√	√							
B-Series	B2	√	√	√	√	√	√	√	√							
	B3	√	√	√	√	√	√	√	√							
	B5	√	√	√	√	√	√	√	√	√	√					
C-Series	C2	√	√	√	√	√	√	√	√							
	C3	√	√	√	√	√	√	√	√							
	C5	√	√	√	√	√	√	√	√	√	√					
D-Series		√	√	√	√	√	√	√	√	√	√					
G-Series		√	√	√	√	√	√	√	√	√	√					

# Transceiver Compatibility (cont.)

## GIGABIT ETHERNET

PRODUCT PORTFOLIO		1 GIGABIT INTERFACES														
		SFP MODULES														
		MGIBIC-LC01	MGIBIC-MT01	MGIBIC-02	MGIBIC-LC03	MGIBIC-LC09	MGIBIC-LC07	MGIBIC-08	MGIBIC-BX10-	MGIBIC-BX40-	MGIBIC-BX120-	1-MGIBIC-GTX	1-MGIBIC-GSX	1-MGIBIC-LC03	1-MGIBIC-GLX	1-MGIBIC-GZX
800-Series		√		√	√	√	√	√								
I-Series									√	√	√	√	√	√	√	√
N-Series		√	√	√	√	√	√	√	√	√	√					
S-Series		√	√	√	√	√	√	√	√	√	√					
K-Series		√	√	√	√	√	√	√	√	√	√					
X-Series		√	√	√	√	√	√	√	√	√	√					
E1		√	√	√	√	√		√	√							
NAC SFP Controller		√	√	√	√	√	√	√	√							
Wireless	WS-AP3767e												√	√	√	
	C5210	√		√	√											
7100-Series	SFP+ Ports	√		√	√	√	√	√	√							
	QSFP-SFPP-ADPT	√				√										

Compatibility matrices are provided as a guide for which product platforms support which transceivers. These indicate the transceivers which have been tested and verified on specific products. Refer to the release notes for the products to determine what transceivers a specific release supports.

## 10 GIGABIT ETHERNET

PRODUCT PORTFOLIO		10 GIGABIT INTERFACES																	
		SFP+MODULES										SFP+ DIRECT ATTACH CABLES					LASERWIRE ADAPTERS		
		10GB-USR-SFPP	10GB-SR-SFPP	10GB-LR-SFPP	10GB-LRM-SFPP	10GB-ER-SFPP	10GB-ZR-SFPP	10GB-LRLX-SFPP	10GB-SRSX-SFPP	10GB-BX10-D /-U	10GB-BX40-D /-U	10GB-LRXXX-SFPP CWDMM	10GB-C01-SFPP	10GB-C03-SFPP	10GB-C10-SFPP	10GB-F10-SFPP	10GB-F20-SFPP	10GB-LW-SFPP	10GB-LW-XFP
B-Series	B5	√	√	√	√	√	√			√	√	√	√	√	√	√	√		
C-Series	C5	√	√	√	√	√	√			√	√	√	√	√	√	√	√		
S-Series		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
K-Series		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
Wireless	C5210	√	√	√								√	√	√				√	
7100-Series		√	√	√	√	√	√			√	√	√	√	√	√	√	√		
QSFP-SFPP-ADPT Port Adapter		√	√	√		√	√			√	√		√	√	√			√	

## 10 GIGABIT ETHERNET (CONT.)

PRODUCT PORTFOLIO		10 GIGABIT INTERFACES (CONT.)											
		XFP MODULES						LASERWIRE ADAPTERS		XENPAK MODULES			
		10GBASE-SR-XFP	10GBASE-LRM-XFP	10GBASE-LR-XFP	10GBASE-ER-XFP	10GBASE-ZR-XFP	10GBASE-CX4-XFP	10GB-LW-SFP	10GB-LW-XFP	10GBASE-SR	10GBASE-LX4	10GBASE-LR	10GBASE-ER
C-Series	C2	√	√	√	√	√	√		√				
	C3	√	√	√	√	√	√		√				
G-Series		√	√	√	√	√	√		√				
N-Series	DFE XENPAK									√	√	√	√
	DFE XFP	√	√	√	√	√	√		√				
X-Series		√	√	√	√	√	√		√				

## 40 GIGABIT ETHERNET

PRODUCT PORTFOLIO		40 GIGABIT INTERFACES													
		QSFP+ MODULES		QSFP+ DIRECT ATTACH CABLES AND PORT ADAPTERS											
		40GB-SR4-QSFP	40GB-LR4-QSFP	40GB-ESR4-QSFP	40GB-CO-5-QSFP	40GB-CO1-QSFP	40GB-CO3-QSFP	40GB-CO7-QSFP	40GB-F10-QSFP	40GB-F20-QSFP	10GB-4-CO3-QSFP	10GB-4-F10-QSFP	10GB-4-F20-QSFP	QSFP-SFP-ADPT	
7100-Series		√	√	√	√	√	√	√	√	√	√	√	√	√	
S-Series		√	√	√	√	√	√	√	√	√	√	√	√	√	

## 100 MB FAST ETHERNET

PRODUCT PORTFOLIO		100 MBPS INTERFACES			
		SFP MODULES			
		MGBIC-LC04	MGBIC-N-LC04	MGBIC-LC05	MGBIC-100BT
C3 - C3K Models Only		√	√	√	
B5		√	√	√	
C5		√	√	√	

## 100 MB FAST ETHERNET

PRODUCT PORTFOLIO		100 MBPS INTERFACES			
		SFP MODULES			
		MGBIC-LC04	MGBIC-N-LC04	MGBIC-LC05	MGBIC-100BT
N-Series	7G-6MGBIC-B	✓	✓	✓	
	N-Series	✓	✓	✓	
S-Series		✓	✓	✓	✓
K-Series		✓	✓	✓	✓
G-Series		✓	✓	✓	
D-Series		✓	✓	✓	
800-Series		✓	✓	✓	

## Ordering Information

PART NUMBER	DESCRIPTION
<b>40 GIGABIT TRANSCEIVERS</b>	
40GB-SR4-QSFP	40 Gb, 40GBASE-SR4, MM, 100m OM3 / 150m OM4, MPO QSFP+
40GB-ESR4-QSFP	40Gb, Extended Reach SR4, MM, 300m OM3, MPO QSFP+
40GB-LR4-QSFP	40 Gb, 40GBASE-LR4, SM, 10km, LC QSFP+
<b>40 GIGABIT DIRECT ATTACH CABLES AND ADAPTERS</b>	
40GB-C0.5-QSFP	40 Gb, Copper Direct Attach Cable with integrated QSPF+ transceivers, 0.5m
40GB-C01-QSFP	40 Gb, Copper Direct Attach Cable with integrated QSPF+ transceivers, 1m
40GB-C03-QSFP	40 Gb, Copper Direct Attach Cable with integrated QSPF+ transceivers, 3m
40GB-C07-QSFP	40 Gb, Copper Direct Attach Cable with integrated QSPF+ transceivers, 7m
40GB-F10-QSFP	40 Gb, Active Optical Direct Attach Cable with integrated QSPF+ transceivers, 10m
40GB-F20-QSFP	40 Gb, Active Optical Direct Attach Cable with integrated QSPF+ transceivers, 20m
10GB-4-C03-QSFP	10 Gb, Copper Direct Attach Fan out Cable with 4 integrated SFP+ and 1 QSFP+ transceivers, 3m
10GB-4-F10-QSFP	10 Gb, Active Optical Direct Attach Cable with 4 integrated SFP+ and 1 QSFP+ transceivers, 10m
10GB-4-F20-QSFP	10 Gb, Active Optical Direct Attach Cable with 4 integrated SFP+ and 1 QSFP+ transceivers, 20m
QSFP-SFPP-ADPT	QSFP+ to SFP+ Adapter, supports a single 10Gb Ethernet SFP+ transceiver in a QSFP+ port (10GB-LRM-SFPP not supported)
9380014-5M	MPO 8 parallel fiber to 4 x LC duplex connectors, OM3 MM patch cord, 5 m
<b>10 GIGABIT TRANSCEIVERS</b>	
10GB-ZR-SFPP	10 Gb, 10GBASE-ZR, SM, 1550 nm, 80 km, LC SFP+
10GB-ER-SFPP	10 Gb, 10GBASE-ER, IEEE 802.3 SM, 1550 nm Long Wave Length, 40 km, LC SFP+
10GB-LR-SFPP	10 Gb, 10GBASE-LR, IEEE 802.3 SM, 1310 nm Long Wave Length, 10 km, LC SFP+
10GB-LRM-SFPP	10 Gb, 10GBASE-LRM, IEEE 802.3 MM, 1310 nm Short Wave Length, 220 m, LC SFP+
10GB-SR-SFPP	10 Gb, 10GBASE-SR, IEEE 802.3 MM, 850 nm , 33/82/300/550 m, LC SFP+
10GB-USR-SFPP	10 Gb, Ultra Short Reach MM, 850 nm, 100m on OM3 / 150 m on OM4, LC SFP+
10GB-USR-48PK	10GB-USR-SFPP, multi-pack bundle of 48 transceivers
10GB-BX40-D	10Gb, Single Fiber SM, Bidirectional, 1330nm Tx / 1270nm Rx, 40 Km, Simplex LC SFP+ (must be paired with 10GB-BX40-U)
10GB-BX40-U	10Gb, Single Fiber SM, Bidirectional, 1270nm Tx / 1330nm Rx, 40 Km, Simplex LC SFP+ (must be paired with 10GB-BX40-D)
10GB-BX10-D	10Gb, Single Fiber SM, Bidirectional, 1330nm Tx / 1270nm Rx, 10 Km, Simplex LC SFP+ (must be paired with 10GB-BX10-U)
10GB-BX10-U	10Gb, Single Fiber SM, Bidirectional, 1270nm Tx / 1330nm Rx, 10 Km, Simplex LC SFP+ (must be paired with 10GB-BX10-D)
10GBASE-ZR-XFP	10 Gb, 10GBASE-ZR, SM, 1550 nm Long Wave Length, 80 km, LC XFP
10GBASE-ER-XFP	10 Gb, 10GBASE-ER, IEEE 802.3 SM, 1550 nm Long Wave Length, 40 km, LC XFP
10GBASE-LR-XFP	10 Gb, 10GBASE-LR, IEEE 802.3 SM, 1310 nm Long Wave Length, 10 km, LC XFP

## Ordering Information (cont.)

PART NUMBER	DESCRIPTION
<b>10 GIGABIT TRANSCEIVERS</b>	
10GBASE-SR-XFP	10 Gb, 10GBASE-SR, IEEE 802.3 MM, 850 nm Short Wave Length, 33/82 m, LC XFP
10GBASE-CX4-XFP	10 Gb, 10GBASE-CX4, IEEE 802.3 TwinAxial, Copper SFF-8470, 15 m, LC XFP
<b>10 GIGABIT / GIGABIT DUAL RATE TRANSCEIVERS</b>	
10GB-LRLX-SFPP	10GB / 1GB Dual Rate, SM 1310 nm 10GBASE-LR / 1000BASE-LX, 10 km LC SFP+
10GB-SRSX-SFPP	10GB / 1GB Dual Rate, MM 850 nm 10GBASE-SR / 1000BASE-SX, LC SFP+
<b>10 GIGABIT DIRECT ATTACH CABLES</b>	
10GB-C10-SFPP	10 Gb, pluggable copper cable assembly with integrated SFP+ transceivers, 10 meters
10GB-C03-SFPP	10 Gb, pluggable copper cable assembly with integrated SFP+ transceivers, 3 meters
10GB-C01-SFPP	10 Gb, pluggable copper cable assembly with integrated SFP+ transceivers, 1 meter
10GB-F10-SFPP	10Gb, Active optical direct attach cable with 2 integrated SFP+ transceivers, 10m
10GB-F20-SFPP	10Gb, Active optical direct attach cable with 2 integrated SFP+ transceivers, 20m
<b>10 GIGABIT CWDM</b>	
10GB-LR271-SFPP	10Gb, CWDM SM, 1271 nm, 10 km, LC SFP+
10GB-LR291-SFPP	10Gb, CWDM SM, 1291 nm, 10 km, LC SFP+
10GB-LR311-SFPP	10Gb, CWDM SM, 1311 nm, 10 km, LC SFP+
10GB-LR331-SFPP	10Gb, CWDM SM, 1331 nm, 10 km, LC SFP+
MUX-CWDM-01	Coarse Wave Division Mux/Demux (CWDM), 4 Channel, 1271/1291/1311/1331 nm
MUX-RACK-01	MUX rack mount panel, 2 slot, 1U
<b>GIGABIT TRANSCEIVERS</b>	
MGBIC-LC07	1 Gb, 802.3 SM, 1550 nm, 110 km, LC SFP
MGBIC-08	1 Gb, 1000BASE-LX/LH, IEEE 802.3 SM, 1550 nm Long Wave Length, 80 km, LC SFP
MGBIC-LC09	1 Gb, 1000BASE-LX, IEEE 802.3 SM, 1310 nm Long Wave Length, 10 km, LC SFP
MGBIC-LC03	1 Gb, 1000BASE-LX, MM, 1310 nm Long Wave Length, 2 km, LC SFP
MGBIC-LC01	1 Gb, 1000BASE-SX, IEEE 802.3 MM, 850 nm Short Wave Length, 220/550 m, LC SFP
MGBIC-02	1 Gb, 1000BASE-T, IEEE 802.3 Cat5, Copper Twisted Pair, 100 m, RJ 45 SFP
I-MGBIC-GLX	-40°C to +60°C, 1 Gb, 1000BASE-LX, MM - 550 m, SM - 10 km, 1310 nm Long Wave Length, LC SFP
I-MGBIC-LC03	-40°C to +60°C, 1 Gb, 1000BASE-LX, MM, 1310 nm, 2 km with 62.5 MMF, 1 km with 50 MMF, LC SFP
I-MGBIC-GSX	-40°C to +60°C, 1 Gb, 1000BASE-SX, IEEE 802.3 MM, 850 nm Short Wave Length, 220/550 m, LC SFP
MGBIC-BX10-D	1 Gb, 1000Base-BX10-D Single Fiber SM, Bidirectional, 1490nm Tx / 1310nm Rx, 10 km, Simplex LC SFP (must be paired with MGBIC-BX10-U)
MGBIC-BX10-U	1 Gb, 1000Base-BX10-U Single Fiber SM, Bidirectional 1310nm Tx / 1490nm Rx, 10 km, Simplex LC SFP (must be paired with MGBIC-BX10-D)
MGBIC-BX40-D	1 Gb, 1000Base-BX40-D Single Fiber SM, Bidirectional, 1490nm Tx / 1310nm Rx, 40 Km, Simplex LC SFP (must be paired with MGBIC-BX40-U), -40°C to +60°C
MGBIC-BX40-U	1 Gb, 1000Base-BX40-U Single Fiber SM, Bidirectional, 1310nm Tx / 1490nm Rx, 40 Km, Simplex LC SFP (must be paired with MGBIC-BX40-D), -40°C to +60°C
MGBIC-BX120-D	1 Gb, 1000Base-BX120-D Single Fiber SM, Bidirectional, 1590nm Tx / 1490nm Rx, 120 Km, Simplex LC SFP (must be paired with MGBIC-BX120-U), -40°C to +60°C
MGBIC-BX120-U	1 Gb, 1000Base-BX120-U Single Fiber SM, Bidirectional, 1490nm Tx / 1590nm Rx, 120 Km, Simplex LC SFP (must be paired with MGBIC-BX120-D), -40°C to +60°C
<b>100 MEGABIT TRANSCEIVERS</b>	
MGBIC-LC05	100 Mb, 100BASE-LX10, IEEE 802.3 SM, 1310 nm Long Wave Length, 10 km, LC SFP
MGBIC-LC04	100 Mb, 100BASE-FX, IEEE 802.3 MM, 1310 nm Long Wave Length, 2 km, LC SFP
MGBIC-100BT	100 Mb, 100BASE-T Copper twisted pair, 100 m, RJ45 SFP



## Standards

IEEE 802.3  
SFP MSA INF 8074i  
SFP+ MSA SFF-8431  
XFP MSA INF-8077i  
QSFP MSA INF-8438i  
QSFP+ MSA SFF-8436

## Laser Safety

### CLASS I LASER EYE SAFETY COMPLIANCE:

IEC 60825  
FDA/CFR Title 21  
OSHA TED 01-00-015

### ADDITIONAL EYE SAFETY NOTICE:

Fiber optic transceivers operate in the infrared spectrum, outside of the visible spectrum. Users should always avoid looking directly into any laser transmission path.

## Extreme Networks 3rd Party Transceiver Policy

Extreme Networks provides a wide range of fully tested and interoperable transceivers for use in our product platforms. Extreme Networks makes no claim or guarantee that any third party transceiver will operate correctly or at all when used in an Extreme Networks product. Extreme Networks strongly advises our customers to always use Extreme Networks transceivers in our product platforms to ensure compatibility with the product platform and interoperability with other industry standard transceiver devices.

Extreme Networks is not liable for and will not support Extreme Networks products that are found to be defective if the cause of the product failure is due to the use of a third party transceiver. Extreme Networks does not express or imply any warranty or support obligations for any third party transceivers.

## Warranty

Extreme Networks Transceivers come with a one year hardware warranty.

For full warranty terms and conditions please go to:

<http://www.extremenetworks.com/support/extreme-support/policies/>.

## Service and Support

Extreme Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Extreme Networks account executive for more information about Extreme Networks Service and Support.



<http://www.extremenetworks.com/contact> / Phone +1-408-579-2800

©2014 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks please see <http://www.extremenetworks.com/company/legal/trademarks>. Specifications and product availability are subject to change without notice. 7927-0714