

## Highlights

### Business Alignment

- 12, 24, or 48 Gigabit Ethernet ports
- 12, 24, or 48 IEEE 802.3at PoE port models
- 2 or 4 10GBase-X SFP+ ports
- Line rate performance on all ports
- Stacking of up to four switches with other 220 Series
- Comprehensive Layer 2 Edge feature set
- Layer 3 Static and RIP Routing with 64 routes for network segmentation
- Access control lists for granular security control
- Redundant Power Supply option
- Limited Lifetime Warranty

### Flexible Management Options

- ExtremeCloud cloud-based management
- Centralized enterprise management via ExtremeManagement
- Web browser-based management
- Industry-standard command line interface (CLI) with scripting capabilities



## ExtremeSwitching™ 220 Series

Stackable Managed Layer 3 Gigabit Switches for Enterprise.

### Product Overview

The ExtremeSwitching 220 Series is an economical, fixed-configuration family of Gigabit Ethernet Layer 2/3 switches designed for enterprises, branch offices and small to medium-sized businesses looking for key features in a flexible, yet easy-to-manage solution.

The series consists of six switches including 12-, 24-, and 48-port Gigabit Ethernet switches and 12-, 24-, and 48-port Gigabit PoE+ models. All models provide nonblocking Gigabit per port performance and include either 2 or 4 SFP+ ports for highspeed 10Gbps fiber connectivity. In addition, the 12-port PoE+ and non-PoE+ models can operate in fanless mode, making them ideal for office deployments.

In addition to a rich Layer 2 feature set, the 220 Series offers dynamic IPv4 RIP routing services, stacking of up to 4 switches with single IP management, and redundant power supply option.

The 220 Series also provides multiple management options, including cloud-based management via ExtremeCloud for wired and wireless network oversight through a single pane of glass. The switches can also be set-up via a web browser, or managed by ExtremeManagement for centralized provisioning, monitoring and troubleshooting. And for advanced users, the 220 Series offers an industry-standard CLI along with scripting capabilities.

All ExtremeSwitching 220 Series switches include a Limited Lifetime Warranty, which provides advanced hardware replacement with next business day shipment.

# Technical Specifications

## Hardware Summary

Switch Model	Ports	Performance	Power	PoE Power
220-12t-10GE2	<ul style="list-style-type: none"> <li>• 12 x 10/100/1000BaseT (RJ-45) ports</li> <li>• 2 x 10GBASE-X (SFP+) unpopulated ports</li> <li>• 1 x Serial console port RJ-45</li> <li>• 1 x 10/100Base-T out-of-band management port</li> </ul>	64 Gbps 47.6 Mpps	Internal	N/A
220-12p-10GE2	<ul style="list-style-type: none"> <li>• 12 x 10/100/1000BaseT PoE+ (RJ-45) ports</li> <li>• 2 x 10GBASE-X (SFP+) unpopulated ports</li> <li>• 1 x Serial console port RJ-45</li> <li>• 1 x 10/100Base-T out-of-band management port</li> </ul>	64 Gbps 47.6 Mpps	Internal	123W
220-24t-10GE2	<ul style="list-style-type: none"> <li>• 24 x 10/100/1000BaseT (RJ-45) ports</li> <li>• 2 x 10GBASE-X (SFP+) unpopulated ports</li> <li>• 1 x Serial console port RJ-45</li> <li>• 1 x 10/100Base-T out-of-band management port</li> </ul>	88 Gbps 65.5 Mpps	Internal, Optional RPS	N/A
220-24p-10GE2	<ul style="list-style-type: none"> <li>• 24 x 10/100/1000BaseT PoE+ (RJ-45) ports</li> <li>• 2 x 10GBASE-X (SFP+) unpopulated ports</li> <li>• 1 x Serial console port RJ-45</li> <li>• 1 x 10/100Base-T out-of-band management port</li> </ul>	88 Gbps 65.5 Mpps	Internal, Optional RPS	185W
220-48t-10GE4	<ul style="list-style-type: none"> <li>• 48 x 10/100/1000BaseT (RJ-45) ports</li> <li>• 4 x 10GBASE-X (SFP+) unpopulated ports</li> <li>• 1 x Serial console port RJ-45</li> <li>• 1 x 10/100Base-T out-of-band management port</li> </ul>	176 Gbps 130.9 Mpps	Internal, Optional RPS	N/A
220-48p-10GE4	<ul style="list-style-type: none"> <li>• 48 x 10/100/1000BaseT PoE+ (RJ-45) ports</li> <li>• 4 x 10GBASE-X (SFP+) unpopulated ports</li> <li>• 1 x Serial console port RJ-45</li> <li>• 1 x 10/100Base-T out-of-band management port</li> </ul>	176 Gbps 130.9 Mpps	Internal, Optional RPS	370W

*Note* RPS option is for redundant power only. It does not increase available PoE power budget.

## Physical

Switch Model	Weight	Dimensions
220-12t-10GE2	1.51 kg (3.33 lbs)	4.4 cm (H) x 20.9 cm (W) x 25.5 cm (D) 1.73" (H) x 8.23" (W) x 10.1" (D)
220-12p-10GE2	1.88 kg (4.14 lbs)	
220-24t-10GE2	3.21 kg (7.08 lbs)	4.4 cm (H) x 44.1 cm (W) x 25.4 cm (D) 1.73" (H) x 17.38" (W) x 10.0" (D)
220-24p-10GE2	3.69 kg (8.14 lbs)	
220-48t-10GE4	3.82 kg (8.42 lbs)	
220-48p-10GE4	4.50 kg (9.92 lbs)	

## Power

Switch Model	Minimum Heat Dissipation (BTU/HR)	Minimum Power Consumption (Watts)	Maximum* Heat Dissipation (BTU/HR)	Maximum* Power Consumption (Watts)
220-12t-10GE2	39	12	65	19
220-12p-10GE2	57	17	116	155
220-24t-10GE2	56	17	87	26
220-24p-10GE2	73	21	198	240
220-48t-10GE4	96	27	154	45
220-48p-10GE4	119	35	392	485

*Note* \*Based on Max PoE power load for PoE models

# Technical Specifications (Con't)

## Redundant Power Supply Specifications

RPS Model	Weight	Dimensions	Redundant Power
RPS 150-XT (for non-PoE models only)	3.22lb (1.75kg)	Height: 1.77" (4.50cm) Width: 6.07" (15.42cm) Depth: 13.0" (33.02cm)	150W
RPS-500P (for PoE+ models only)	8.06lb (3.66kg)	Height: 1.73" (4.4cm) Width: 17.4" (44.1cm) Depth: 7.9" (20.1cm)	500W

## Acoustics and Fan

Switch Model	Temp Range	Bystander Sound Pressure (dBA)	Declared Sound Power (BA)	Fan Speed	# of Fans in Switch
220-12t-10GE2	0C-40C	NA (Fan off)	3.0	Off	1
	40-50C	37.5	5.1	Low	
220-12p-10GE2	0C-35C	NA (Fan off)	3.0	Off	1
	35C-45C	37.5	5.1	Low	
	45C-50C	50.1	6.4	High	
220-24t-10GE2	0C-40C	43.5	5.6	Low	2
	40C-50C	52.9	6.7	High	
220-24p-10GE2	0C-35C	41	5.4	Low	3
	35C-50C	53.9	6.8	High	
220-48t-10GE4	0C-40C	43.5	5.6	Low	2
	40C-50C	52.9	6.7	High	
220-48p-10GE4	0C-40C	41.6	5.4	Low	3
	40C-50C	52.6	6.7	High	

# Features/Standards and Protocols

## CPU/Memory

- ARM Cortex-A9 32-bit processor, 1GHz clock
- 512MB DRAM
- 128MB Flash
- 1.5MB MAC buffer; 128K L2 Cache (CPU)

## Platform Specifications

- Maximum MAC Addresses: 16,000
- VLANs: Up to 1024
- MSTP instances: 4
- Link Access Groups (LAGs): 6
- ACLs: 100 with 1023 rules per list
- Traffic Classes (Queues): 8

## Switching

### Core Switching Features

- IEEE 802.1ab – Link Layer Discovery Protocol (LLDP)
- IEEE 802.1d – Spanning tree compatibility
- IEEE 802.1p – Ethernet priority with user provisioning and mapping
- IEEE 802.1s – Multiple spanning tree compatibility
- IEEE 802.1q – Virtual LANs with port-based VLANs
- IEEE 802.1x – Port-based authentication with Guest VLAN support
- IEEE 802.1w – Rapid spanning tree compatibility
- IEEE 802.3 – 10BASE-T
- IEEE 802.3u – 100BASE-T
- IEEE 802.3ab – 1000BASE-T

- IEEE 802.1ak - Virtual Bridged Local Area Networks
- IEEE 802.3ac - VLAN tagging
- IEEE 802.3ad - Link aggregation
- IEEE 802.3at - PoE+ Power over Ethernet
- IEEE 802.3az - Energy Efficient Ethernet on 10/100/1000 ports
- IEEE 802.3x - Flow control
- GARP - Generic Attribute Registration Protocol
- GMRP - Dynamic L2 multicast registration
- GVRP - Dynamic VLAN registration
- RFC 4541 - Considerations for Internet Group Management Protocol (IGMP) Snooping Switches
- ANSI/TIA-1057 - LLDP-Media Endpoint Discovery (MED)
- RFC 5171 - Unidirectional Link Detection (UDLD) Protocol

#### Advanced Layer 2 Features

- Authentication, Authorization, and Accounting (AAA)
- Broadcast/Multicast/Unknown unicast storm recovery
- DHCP Snooping
- IGMP Snooping Querier
- Multicast VLAN Registration (MVR)
- Industry Standard Discovery Protocol (CDP interoperability)
- IPv6 Classification APIs
- Jumbo Ethernet frame support
- Port MAC locking
- Port mirroring
- Protected ports
- Static MAC filtering
- Voice VLANs
- Unauthenticated VLAN
- Internal 802.1X Authentication Server
- 802.1x Monitor Mode

- 802.1x Client Scaling
- Link Dependency
- IPv6 RA Guard (Stateless)
- STP Loop Guard
- STP Root Guard
- BPDU Guard

#### Routing

- IPv4 Static and RIP Routing (up to 64 routes)
- ECMP
- ICMP Throttling
- Loopback interfaces
- Multinetting
- ARP and Proxy ARP
- VLAN and port-based routing
- UDP Relay/IP Helper
- Policy-Based Routing
- Bidirectional Forwarding Detection
- RFC 1027 Using ARP to implement transparent subnet gateways (Proxy ARP)
- RFC 1058 Routing Information Protocol (RIP)
- RFC 1256 ICMP router discovery messages
- RFC 1812 Requirements for IP version 4 routers
- RFC 2082 RIP-2 MD5 authentication
- RFC 2131 DHCP relay
- RFC 2453 RIP v2
- RFC 3021 Using 31-Bit Prefixes on IPv4 Point-to-Point Links

#### Advanced Stacking

- Single IP management of entire stack
- Cross-stack functionality such as LAGs, MSTP instances, VLANs, etc., spanning stack member units
- Centralized control plane
- Configuration and firmware synchronization

- Automatic stack initialization and unit addition/removal and master failover
- Four member units supported in a stack
- Serviceability features for monitoring and diagnosing unit status

## Quality of Service

### Access Control Lists (ACLs)

- Permit/deny actions for inbound IP and Layer-2 traffic classification based on:
  - Time-Based ACL
  - Source/Destination IP address
  - TCP/UDP Source/Destination port
  - IP Protocol Type
  - Type of Service (ToS) or differentiated services (DSCP) field
  - Source/Destination MAC address
  - EtherType
  - IEEE 802.1p user priority (outer and/ or inner VLAN tag)
  - VLAN ID (outer and/or inner VLAN tag)
- RFC 1858 – Security Considerations for IP Fragment Filtering

### Optional ACL Rule Attributes

- Assign flow to a specific Class of Service (CoS) queue
- Redirect matching traffic flows

### Differentiated Services (DiffServ)

- Classify traffic based on same criteria as ACLs and optionally:
  - Mark the IP DSCP or Precedence header fields
  - Police the flow to a specific rate with two-color aware support
- RFC 2474 – Definition of the differentiated services field (DS field) in the IPv4 and IPv6 headers
- RFC 2475 – An architecture for differentiated services
- RFC 2597 – Assured forwarding Per-Hop Behavior (PHB) group

- RFC 2697 – Single-rate policing
- RFC 3246 – An expedited forwarding PHB
- RFC 3260 – New terminology and clarifications for DiffServ

### Class of Service (CoS) Queue Mapping Configuration

- Auto-VoIP-Automatic CoS settings for VoIP
- IP DSCP-to-queue mapping
- Configurable interface trust mode (IEEE 802.1p, DSCP, or untrusted)
- Interface egress shaping rate
- Strict priority versus weighted scheduling per queue

### System Facilities

- Event and error logging facility
- Run-time and configuration download capability
- PING utility
- Xmodem
- FTP Transfers via IPv4/IPv6
- Malicious Code Detection
- TACACS+
- sFlow
- RFC 768 – UDP
- RFC 783 – TFTP
- RFC 791 – IP
- RFC 792 – ICMP
- RFC 793 – TCP
- RFC 826 – ARP
- RFC 894 – Transmission of IP datagrams over Ethernet networks
- RFC 896 – Congestion control in IP/TCP networks
- RFC 951 – BOOTP
- RFC 1034 – Domain names - concepts and facilities
- RFC 1035 – Domain names - implementation and specification
- RFC 1321 – Message digest algorithm

- RFC 1534 – Interoperability between BOOTP and DHCP
- RFC 2021 – Remote network monitoring management information base version 2
- RFC 2030 – Simple Network Time Protocol (SNTP)
- RFC 2131 – DHCP relay
- RFC 2132 – DHCP options and BOOTP vendor extensions
- RFC 2819 – Remote Network Monitoring Management Information Base
- RFC 2865 – RADIUS client
- RFC 2866 – RADIUS accounting
- RFC 2868 – RADIUS attributes for tunnel protocol support
- RFC 2869 – RADIUS Extensions
- RFC 3579 – RADIUS support for EAP
- RFC 3580 – IEEE 802.1X RADIUS usage guidelines
- RFC 3164 – The BSD syslog protocol
- RFC 3580 – 802.1X RADIUS Usage Guidelines
- RFC 5176 – Dynamic Authorization Server (Disconnect-Request processing only)
- RFC 5424 – The Syslog Protocol
- RFC 4251: SSH protocol architecture
- RFC 4716: SECSH public key file format
- RFC 4419: Diffie-Hellman group exchange for the SSH transport layer protocol
- SSL 3.0 and TLS 1.0
  - RFC 2246: The TLS protocol, version 1.0
  - RFC 2818: HTTP over TLS
  - RFC 3268: AES cipher suites for transport layer security
- Secure Copy (SCP)
- TACAS+
- Telnet
- Web
- Java Plug-in 1.6.0\_01 and Java Script 1.3

#### Advanced Management Features

- Industry Standard CLI with the following features:
  - Scripting capability
  - Command completion
  - Context sensitive help
- Optional user password encryption
- Multi-session Telnet server
- Remote Switch Port Analyzer (RSPAN)
- ExtremeCloud™ cloud-based management
- Extreme Management Center support
- Zero-touch provisioning with ExtremeCloud and ExtremeManagement

#### SNMP MIBs

- IEEE 802.1x MIB (IEEE 802.1-PAEMIB 2004 Revision)
- IEEE 802.3ad MIB (IEEE 802.3-ADMIB)
- IANAifType-MIB
- RFC 1213 – MIB II
- RFC 1493 – Bridge MIB

## Management

- Industry-standard CLI
- IPv6 management
- Password management
- E-mailing of alerts
- Auto-install support for firmware images and configuration files
- SNMP v1, v2, and v3
- SSH 1.5 and 2.0
  - RFC 4252: SSH authentication protocol
  - RFC 4253: SSH transport layer protocol
  - RFC 4254: SSH connection protocol

- RFC 1612 – DNS resolver MIB extensions
- RFC 1643 – Definitions of managed objects for the Ethernet-like interface types
- RFC 2233 – Interfaces group MIB using SMI v2
- RFC 2613 – SMON MIB
- RFC 2618 – RADIUS authentication client MIB
- RFC 2620 – RADIUS accounting MIB
- RFC 2674 – VLAN MIB
- RFC 2737 – Entity MIB version 2
- RFC 2819 – RMON groups 1, 2, 3, and 9
- RFC 2863 – IF-MIB
- RFC 2925 – Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
- RFC 3273 – RMON MIB for high capacity networks
- RFC 3291 – Textual conventions for Internet network addresses
- RFC 3434 – RMON MIB extensions for high capacity alarms
- RFC 4022 – TCP-MIB
- RFC 4113 – UDP-MIB
- RFC 2096 – IP forwarding table MIB
- RFC 3636 – MAU MIB
- RFC 3289 – Management information base for the DiffServ architecture (read only)

## Operating Conditions

- Operating Temp: °C to 50°C (32° F to 122° F)
- Operating Relative Humidity: 10% to 95% (non-condensing)
- Operating Altitude: 0-3000 meters (9,850 feet)\*  
*Note \*220-12p-GE2 is limited to 0-2000 meters (6,857 feet)*

## Packaging and Storage

- Storage Temp: -40° C to 70° C (-40° F to 158° F)
- Humidity: 10% to 95% relative humidity, non-condensing

- Packaged Shock (half sine): 180 m/s<sup>2</sup> (18 G), 6 ms, 600 shocks
- Packaged Vibration: 5 to 62 Hz at velocity 5 mm/s, 62 to 500 Hz at 0.2 G
- Packaged Random Vibration: 5 to 20 Hz at 1.0 ASD w/-3 dB/oct. from 20 to 200 Hz
- Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

## Environmental Specifications

- EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
- EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
- EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
- EN/ETSI 300 753 (1997-10) - Acoustic Noise
- ASTM D3580 Random Vibration Unpackaged 1.5 G

## Environmental Compliance

- EU RoHS 2011/65/EU
- EU WEEE 2012/19/EU
- China RoHS SJ/T 11363-2006

## Regulatory and Safety

### North American ITE

- UL 60950-1 2nd edition A2:2014, Listed Device (U.S.)
- CSA 22.2 No. 60950-1 2nd edition 2014(Canada)
- Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
- CDRH Letter of Approval (US FDA Approval)

### European ITE

- EN 60950-1:2006+A11:2009 + A1:2010 + A12:2011 + A2:2013 2nd Ed.
- EN 60825-1:2007 / IEC 60825-1:2007 Class 1 (Lasers Safety)
- 2014 / 35 / EU Low Voltage Directive

### International ITE

- CB Report & Certificate per IEC 60950-1: 2005 + A1:2009 + A2:2013 + National Differences
- AS/NZS 60950-1 (Australia /New Zealand)

## EMI/EMC Standards

### North American EMC for ITE

- FCC CFR 47 part 15 Class A (USA)
- ICES-003 Class A (Canada)

### European EMC Standards

- EN 55032:2015 Class A
- EN 55024:2012
- EN 61000-3-2,2014 (Harmonics)
- EN 61000-3-3 2013 (Flicker)
- EN 300 386 v1.6.1 (EMC Telecommunications)
- 2014/30/EU EMC Directive

### International EMC Certifications

- CISPR 32:2015, Class A (International Emissions)
- AS/NZS CISPR32: 2012
- CISPR 24: 2013 Class A (International Immunity)
- IEC 61000-4-2:2008/EN 61000-4-2:2009 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria A
- IEC 61000-4-3:2010/EN 61000-4-3:2006 +A1:2008 +A2:2010 Radiated Immunity 10V/m, Criteria A

- IEC 61000-4-4:2012. / EN 61000-4-4:2012 Transient Burst, 1 kV, Criteria A

- IEC 61000-4-5:2014 /EN 61000-4-5:2014 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria A
- IEC 61000-4-6:2013/EN 61000-4-6:2014 Conducted Immunity, 0.15-80 MHz, 10V/m unmod. RMS, Criteria A
- IEC/EN 61000-4-11:2004 Power Dips & Interruptions, >30%, 25 periods, Criteria C

### Country Specific

- VCCI Class A (Japan Emissions)
- ACMA RCM (Australia Emissions)
- CCC Mark
- KCC Mark, EMC Approval (Korea)
- Taiwan BSMI
- Brazil Anatel
- Russia EAC

## Ordering Information

Order Code	Product Name	Product Description
<b>ExtremeSwitching 220 Systems</b>		
16560	220-12t-10GE2	220 Series 12 port 10/100/1000BASE-T, 2 10GbE unpopulated SFP+ ports, 1 Fixed AC PSU, L2 Switching with RIP and Static Routes, 1 country-specific power cord*
16561	220-12p-10GE2	220 Series 12 port 10/100/1000BASE-T PoE+ (123W), 2 10GbE unpopulated SFP+ ports, 1 Fixed AC PSU, L2 Switching with RIP and Static Routes, 1 country-specific power cord*
16562	220-24t-10GE2	220 Series 24 port 10/100/1000BASE-T, 2 10GbE unpopulated SFP+ ports, 1 Fixed AC PSU, 1 RPS port, L2 Switching with RIP and Static Routes, 1 country-specific power cord*
16563	220-24p-10GE2	220 Series 24 port 10/100/1000BASE-T PoE+ (185W), 2 10GbE unpopulated SFP+ ports, 1 Fixed AC PSU, 1 RPS port, L2 Switching with RIP and Static Routes, 1 country-specific power cord*
16564	220-48t-10GE4	220 Series 48 port 10/100/1000BASE-T, 4 10GbE unpopulated SFP+ ports (2 LRM Capable), 1 Fixed AC PSU, 1 RPS port, L2 Switching with RIP and Static Routes, 1 country-specific power cord*
16565	220-48p-10GE4	220 Series 48 port 10/100/1000BASE-T PoE+ (370W), 4 10GbE unpopulated SFP+ ports (2 LRM Capable), 1 Fixed AC PSU, 1 RPS port, L2 Switching with RIP and Static Routes, 1 country-specific power cord*
16572	200 Series Dual Rack Mount Kit	Hardware kit for mounting two 12-port 200-Series switches (210 and/or 220) side-by-side in a 19-inch rack
16573	200 Series Wall Mount Kit	Hardware kit for wall mounting one 12-port 200-Series switch (either 210 or 220)
10923	RPS-500p	External redundant power supply unit 500 Watts with cable. Power cord ordered separately.
10932	RPS-150XT	External redundant power supply unit 150 Watts with cable. Power cord ordered separately.

**Note** All 200 Series units include rack-mount ears.

\*Country-specific power cords are included for the customer's ship-to country with the exception of Argentina, Brazil, Denmark, Greenland, Israel, Singapore and Taiwan.



## Transceiver Order Codes

Order Code	Product Name	Product Description
<b>220 Supported SFP Transceivers</b>		
10051H	1000BASE-SX SFP, Hi	1000BASE-SX SFP, MMF 220 & 550 meters, LC connector, Industrial Temp
10052H	1000BASE-LX SFP, Hi	1000BASE-LX SFP, MMF 220 & 550 meters, SMF 10km, LC connector, Industrial Temp
10053H	1000BASE-ZX SFP, Hi	1000BASE-ZX SFP, SMF 70km, LC connector, Industrial Temp
10056H	1000BASE-BX-D BiDi SFP, Hi	1000BASE-BX-D BiDi SFP, Hi
10057H	1000BASE-BX-U BiDi SFP, Hi	1000BASE-BX-U BiDi SFP, Hi
10070H	10/100/1000BASE-T SFP, Hi	10/100/1000BASE-T SFP module, CAT5 cable 100m link, RJ45-connector for Giga Bit Ethernet SFP Port, Industrial Temp
10071H	1000BASE-SX SFP 10 Pack, Hi	1000BASE-SX SFP 10 Pack, Industrial Temp
10072H	1000BASE-LX SFP 10 Pack, Hi	1000BASE-LX SFP 10 Pack, Industrial Temp
MGBIC-02	1000BASE-T, RJ45 MINI GBIC	1000BASE-T, RJ45 MINI GBIC
MGBIC-BX10-D	1000BASE-BX10-D BIDIRECTIONAL SFP	1000BASE-BX10-D BIDIRECTIONAL SFP
MGBIC-BX10-U	1000BASE-BX10-U BIDIRECTIONAL SFP	1000BASE-BX10-U BIDIRECTIONAL SFP
MGBIC-BX40-D	1000BASE-BX40-D SFP	1000BASE-BX40-D SFP
MGBIC-BX40-U	1000BASE-BX40-U BIDIRECTIONAL SFP	1000BASE-BX40-U BIDIRECTIONAL SFP
MGBIC-BX120-D	1000BASE-BX120-D SFP	1000BASE-BX120-D SFP
MGBIC-BX120-U	1000BASE-BX120-U SFP	1000BASE-BX120-U SFP
MGBIC-LC01	MINI GBIC 1000BASESX W/ 1 LC MM PORT	MINI GBIC 1000BASESX W/ 1 LC MM PORT
MGBIC-LC07	1GB,802.3 SM, 1550 NM, 110 KM, LC SFP	1GB,802.3 SM,1550 NM,110 KM,LC SFP
MGBIC-LC09	MINI GBIC 1000BASELX W/ 1 LC SM PORT	MINI GBIC 1000BASELX W/ 1 LC SM PORT
I-MGBIC-GLX	INDUSTRIAL 1000LX SFP	INDUSTRIAL 1000LX SFP
I-MGBIC-GSX	INDUSTRIAL 1000SX SFP	INDUSTRIAL 1000SX SFP
<b>220 Supported SFP+ Transceivers</b>		
10301	SR SFP+ module	10 Gigabit Ethernet SFP+ module, 850nm, MMF 26-300m link, LC connector
10302	LR SFP+ module	10 Gigabit Ethernet SFP+ module, 1310nm, SMF 10km link, LC connector
10304	1m SFP+ Cable	10 Gigabit Ethernet SFP+ passive cable assembly, 1m length.
10305	3m SFP+ Cable	10 Gigabit Ethernet SFP+ passive cable assembly, 3m length.
10309	ER SFP+ module	10 Gigabit Ethernet ER SFP+ module, 1550nm, SMF 40km link, LC connector
10310	ZR SFP+ module	10 Gigabit Ethernet ZR SFP+ module, 1550nm, SMF 80km, LC connector
10GB-BX10-U	10 GB, SINGLE FIBER SM, -D 10 KM	10 GB, SINGLE FIBER SM, -U 10 KM
10GB-BX10-D	10 GB, SINGLE FIBER SM, -U 10 KM	10 GB, SINGLE FIBER SM, -D 10 KM
10GB-BX40-U	10 GB, SINGLE FIBER SM, -D 40 KM	10 GB, SINGLE FIBER SM, -U 40 KM
10GB-BX40-D	10 GB, SINGLE FIBER SM, -U 40 KM	10 GB, SINGLE FIBER SM, -D 40 KM
10GB-C01-SFPP	SFP+ PLUGGABLE COPPER CABLE 1M	SFP+ PLUGGABLE COPPER CABLE 1M

## Transceiver Order Codes (Con't)

Order Code	Product Name	Product Description
<b>220 Supported SFP+ Transceivers</b>		
10GB-C03-SFPP	SFP+ PLUGGABLE COPPER CABLE 3M	SFP+ PLUGGABLE COPPER CABLE 3M
10GB-ER-SFPP	10GBASE ER SFP+ (40K)	10GBASE ER SFP+ (40K)
10GB-F10-SFPP	10 GB, ACTIVE OPTICAL DAC, 10 M	10 GB, ACTIVE OPTICAL DAC, 10 M
10GB-F20-SFPP	10 GB, ACTIVE OPTICAL DAC, 20 M	10 GB, ACTIVE OPTICAL DAC, 20 M
10GB-LR-SFPP	10 GBASE-LR SFP+ 10K SM OPTIC	10 GBASE-LR SFP+ 10K SM OPTIC
10GB-LRLX-SFPP	10GB, 1GB DUAL RATE LR LX SMF	10GB, 1GB DUAL RATE LR LX SMF - need to manually set to 1Gb
10GB-SR-SFPP	GBASE-SR SFP+ 33/82M MM OPTIC	10GBASE-SR SFP+ 33/82M MM OPTIC
10GB-SRSX-SFPP	10GB, 1GB DUAL RATE SR SX MMF	10GB, 1GB DUAL RATE SR SX MMF - need to manually set to 1Gb
10GB-ZR-SFPP	10GB 80KM SFP+	10GB 80KM SFP+

## Warranty

As a customer-centric company, Extreme Networks is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your product repaired or media replaced as soon as possible.

All 200-Series switches come with the Extreme Networks lifetime warranty against manufacturing defects. For full warranty details, visit: <http://www.extremenetworks.com/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

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