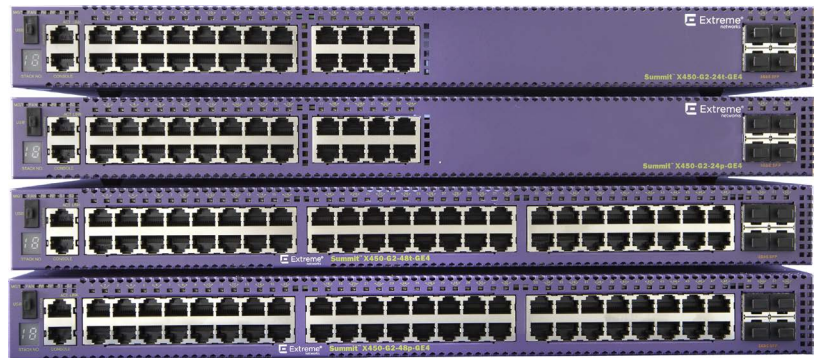## Highlights

- Scalable edge switches with ExtremeXOS operating system
- 24-port or 48-port Gigabit Ethernet connectivity
- Copper and PoE+ models
- 4 x 10Gb SFP+ uplink ports on front faceplate
- Built-in 21Gbps stacking ports on rear panel for all models (SummitStack-V84)
- Front-to-Back airflow
- Modular PoE power supplies
- Hot-swappable fan tray and PoE power supplies
- All configurations non-blocking full duplex
- Role-based policy and Fabric Attach for secure, automated access to network applications or services

Smart Management Choices

- ExtremeCloud™ IQ for powerful, simple and secure public or private cloud management
- Extreme Management Center for centralized, unified management capabilities

ExtremeSwitching™ X450-G2

Scalable edge switch with ExtremeXOS® modular operating system.

The ExtremeSwitching X450-G2 series is based on Extreme Networks ExtremeXOS, a highly resilient OS that provides continuous uptime, manageability and operational efficiency. Each switch offers the same high-performance, non-blocking hardware technology, The X450-G2 series switches provide high-performance routing and switching, flexible stacking, PoE+ support and comprehensive security, while extending the benefits of ExtremeXOS to the campus edge.

The X450-G2 Series easy-to-use, yet powerful, management options include ExtremeCloudTM IQ and Extreme Management Center for either cloud-based or on-premise oversight and configuration. The X450-G2 also supports role-based policies and Fabric Attach for secure, automated access to specific network resources and applications.

Extreme Elements™

ExtremeSwitching™ X450-G2

Built to Suit Your Business Needs

Extreme Elements are the building blocks that allow you to tailor your network to your specific business environment, goals, and objectives. They enable the creation of an Autonomous Network that delivers the positive experiences and business outcomes most important to your organization.

Combining architecture, automation, and artificial intelligence, Extreme Elements enable you to ensure that your users get what they need — when and where they need it. Providing these superior user experiences is as simple as mixing and matching the right elements.
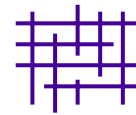
Learn more at extremenetworks.com/elements.

High-Performance Stacking

Up to eight X450-G2 switches can be stacked using two different methods of stacking: SummitStack-V, and SummitStack-V84. Each X450-G2 unit comes equipped with 2 ports of 21 Gigabit stacking ports via a QSFP interface. Standard passive 40Gb copper cables can be used for stacking X450-G2s together.

Fabric Attach

Fabric Attach on the X450-G2 can be used to automate the connection to Extreme's campus-based Fabric Connect solution. Fabric Attach not only provides zero-touch edge provisioning, it also allows the X450-G2 to take advantage of the virtualized services and inherent security capabilities of the Extreme Fabric Connect infrastructure.

Power over Ethernet

X450-G2 Series switches support both IEEE 802.3at PoE+ and IEEE 802.3af PoE to enable connection of standards compliant PoE devices. Power over Ethernet allows connection of Ethernet-powered devices, such as wireless access points, Voice over IP phones, and security cameras. The X450-G2 can support full PoE+ 30W power across all 24 or 48 ports using its internal power supplies.
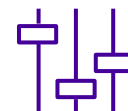
Audio Video Bridging

The X450-G2 series supports IEEE 802.1 Audio Video Bridging (AVB) to enable reliable, real-time audio/video transmission over Ethernet. AVB technology delivers the quality of service required for today's high-definition and time-sensitive multimedia streams.

Management

The X450-G2 can be managed in a variety of ways. Simple on-box management functions are delivered by a web-based GUI, and a generic CLI is available for manual configuration.

ExtremeCloudTM IQ along with Extreme Management Center (XMC) provide a comprehensive unified management capability with a consolidated view of users, devices and applications for wired and wireless networks. Zero-touch provisioning lets one quickly bring new X450-G2 switches online and a granular view of devices, ports and users enables efficient inventory and network topology management.

Role-Based Policy

The X450-G2 supports role-based policies that can be centrally administered through the ExtremeControl policy manager. This policy framework empowers network administrators to define distinct roles or profiles to represent specific operational groups that may exist in an enterprise. Each defined role can then be granted individualized access to specific network services and applications and these access privileges remain associated with users as they move across both wired and wireless network access points.

Product Specifications

Performance and Scale

Switch Model	Maximiu Active Gbe Ports	Maximiu Active 10Gbe Ports	21 Gbps Stacking Ports	Aggregated Switch Bandswitch*	Frame Forwarding Rate*
X450-G2-24t-10GE4	24	4	2	212 Gbps	157.7 Mpps
X450-G2-48t-10GE4	48	4	2	260 Gbps	193.4 Mpps
X450-G2-24p-10GE4	24	4	2	212 Gbps	157.7 Mpps
X450-G2-48p-10GE4	48	4	2	260 Gbps	193.4 Mpps
X450-G2-24t-GE4	28	0	2	140 Gbps	104.2 Mpps
X450-G2-48t-GE4	52	0	2	188 Gbps	139.9 Mpps
X450-G2-24p-GE4	28	0	2	140 Gbps	104.2 Mpps
X450-G2-48p-GE4	52	0	2	188 Gbps	139.9 Mpps

*Includes stacking ports

* 2 VLANs reserved for system use

- Less than 4 microsecond latency (64-byte)
- Layer 2/MAC Addresses: 68K
- IPv4 LPM Entries: 16K
- IPv6 LPM (64-bit) Entries: 8K
- IPv6 LPM (128-bit) Entries: 256
- 4096 VLAN/VMANs*
- 9216 Byte Max Packet Size (Jumbo Frame)
- 128 load sharing trunks, up to 32 members per trunk
- 1,024 ingress bandwidth meters
- Ingress and egress bandwidth policing/rate limiting per flow/ACL
- 8 QoS egress queues/port
- Egress bandwidth rate shaping per egress queue and per port
- Rate Limiting Granularity: 8 Kbps
- Rate Limiting: Per Class of Service
- All ports Full Duplex - half duplex operation is not supported

Policy Capabilities

- Policy Profiles: 63
- Rules per Profile: Up to 1464
- Authenticated Policy Users per Switch: Up to 1024
- Authenticated Policy Users per Port: Up to 1024
- Unique Permit/Deny Rules per switch: 1464
  - MAC Rules: 512
  - IPv4 Rules: 512
  - IPv6 Rules: 256
  - L2 Rules: 184

Note: Policy and rule limits here reflect support available in EXOS 22.1.

External Ports

Switch Hardware	Ports
X450-G2-24t-10GE4	• 24 x 10/100/1000BASE-T (RJ-45) • 4 x 10GBASE-X SFP+ (unpopulated ports) • 1 x Serial (console port RJ-45) with RTS/CTS modem control • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB 2.0 port for external USB flash • 2 dedicated QSFP-form factor 21Gbps stacking ports on the rear panel
X450-G2-48t-10GE4	• 48 x 10/100/1000BASE-T (RJ-45) • 4 x 10GBASE-X SFP+ (unpopulated ports) • 1 x Serial (console port RJ-45) with RTS/CTS modem control • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB 2.0 port for external USB flash • 2 dedicated QSFP-form factor 21Gbps stacking ports on the rear panel
X450-G2-24p-10GE4	• 24 x 10/100/1000BASE-T PoE-Plus • 4 x 10GBASE-X SFP+ (unpopulated ports) • 1 x Serial (console port RJ-45) with RTS/CTS modem control • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB 2.0 port for external USB flash • 2 dedicated QSFP-form factor 21Gbps stacking ports on the rear panel
X450-G2-48p-10GE4	• 48 x 10/100/1000BASE-T PoE-Plus • 4 x 10GBASE-X SFP+ (unpopulated ports) • 1 x Serial (console port RJ-45) with RTS/CTS modem control • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB 2.0 port for external USB flash • 2 dedicated QSFP-form factor 21Gbps stacking ports on the rear panel
X450-G2-24t-GE4	• 24 x 10/100/1000BASE-T (RJ-45) • 4 x 1GBASE-X SFP (unpopulated ports) • 1 x Serial (console port RJ-45) with RTS/CTS modem control • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB 2.0 port for external USB flash • 2 dedicated QSFP-form factor 21Gbps stacking ports on the rear panel
X450-G2-48t-GE4	• 48 x 10/100/1000BASE-T (RJ-45) • 4 x 1GBASE-X SFP (unpopulated ports) • 1 x Serial (console port RJ-45) with RTS/CTS modem control • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB 2.0 port for external USB flash • 2 dedicated QSFP-form factor 21Gbp stacking ports on the rear panel
X450-G2-24p-GE4	• 24 x 10/100/1000BASE-T PoE-Plus • 4 x 1GBASE-X SFP (unpopulated ports) • 1 x Serial (console port RJ-45) with RTS/CTS modem control • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB 2.0 port for external USB flash • 2 dedicated QSFP-form factor 21Gbps stacking ports on the rear panel
X450-G2-48p-GE4	• 48 x 10/100/1000BASE-T PoE-Plus • 4 x 1GBASE-X SFP (unpopulated ports) • 1 x Serial (console port RJ-45) with RTS/CTS modem control • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB 2.0 port for external USB flash • 2 dedicated QSFP-form factor 21Gbps stacking ports on the rear panel

Physical

Switch Model	Weight	Physical Dimension
X450-G2-24t-10GE4	13.71 lb (6.22 kg)	
X450-G2-48t-10GE4	14.22 lb (6.45 kg)	
X450-G2-24p-10GE4	13.71 lb (6.22 kg)	
X450-G2-48p-10GE4	14.22 lb (6.45 kg)	Height: 1 RU / 1.73 inches (4.4 cm)
X450-G2-24t-GE4	13.93 lb (6.32 kg)	Width: 17.4 inches (44.2 cm)
X450-G2-48t-GE4	14.51 lb (6.58 kg)	Depth: 19.2 inches (48.8 cm)
X450-G2-24p-GE4	13.93 lb (6.32 kg)	
X450-G2-48p-GE4	14.51 lb (6.58 kg)	
Front-to-Back fan module	1.0 lb (0.46 kg)	Height: 1.59 inches (4.04 cm) Width: 4.8 inches (12.2 cm) Depth: 6.2 inches (15.75 cm)

Note: Switch weights include installed fan module. PoE switches do not include PSUs.

Please refer to the Summit Family Switches Hardware Installation Guide for packaged weight and dimensions.

CPU/Memory

- 64-bit MIPS Processor, 1 GHz clock, dual core
- 1GB ECC DDR3 DRAM
- 4GB eMMC Flash
- 4MB packet buffer

LED Indicators

- Per port status LED including power status
- System Status LEDs: management, fan and power
- 7 segment display of stack number

Power

Switch Model	Minimum Heat Dissipation (BTU/HR)	Minimum Power Consumption (Watts)	Maximum Heat Dissipation (BTU/HR)	Maximum Power Consumption* (Watts)
X450-G2-24t-10GE4	149.4	43.8	244.6	71.1
X450-G2-48t-10GE4	178.1	52.2	290.0	85.0
X450-G2-24p-10GE4	214.3	62.8	604.7 (@720W PoE)	847.2
X450-G2-48p-10GE4	238.8	70.0	778 (@1440W PoE)	1668
X450-G2-24t-GE4	149.4	43.8	244.6	71.1
X450-G2-48t-GE4	178.1	52.2	290.0	85.0
X450-G2-24p-GE4	214.3	62.8	604.7 (@720W PoE)	847.2
X450-G2-48p-GE4	238.8	70.0	778 (@1440W PoE)	1668

* For PoE switches, the value includes maximum PoE load through the switch

The Non-PoE Switches

	Fixed Internal Power Supply
Voltage Input Range	100-240 VAC †
Line Frequency Range	47 to 64 Hz
Power Supply Input Socket	IEC 320 C14
Power Cord Input Plug	IEC 320 C13
Operating Temperature	0° C to 50° C Normal Operation

PoE Power Supply Units (Only Front-to-Back Supplis Are Supported)

	715W AC PSU (10951)	1100W AC PSU (10941)
Dimensions	Height 40 mm (1.56 inches) Width 82.5 mm (3.25 inches) Depth 287 mm (11.3 inches)	Height 40 mm (1.56 inches) Width 82.5 mm (3.25 inches) Depth 287 mm (11.3 inches)
Weight	1.16kg (2.55 lbs)	1.16kg (2.55 lbs)
Voltage Input Range	100-127/200-240 VAC †	100-127/200-240 VAC †
Line Frequency Range	47 to 63 Hz	47 to 63 Hz
Power Supply Input Socket	IEC 320 C16	IEC 320 C16
Power Cord Input Plug	IEC 320 C15	IEC 320 C15
Operating Temperature	0° C to 50° C Normal Operation	0° C to 50° C Normal Operation

† The power supplies will continue to operate +- 10% of the rated input to accommodate temporary loss of input voltage regulation

PoE Power Budget

Switch Model	1 PSU of 715W	1 PSU of 1100W	2 PSUS of 715W	1 PSU of 715W and 1 PSU of 1100W	2 PSUS of 1100W
X450-G2-24p-10GE4	490W	720W	720W	**720W**	720W
X450-G2-48p-10GE4	490W	840W	1021W	**1350W**	1440W
X450-G2-24p-GE4	490W	720W	720W	**720W**	720W
X450-G2-48p-GE4	490W	840W	1021W	**1350W**	1440W
X450-G2-24p-10GE4	16 ports @ 30W 24 ports @ 15.4W	24 ports @ 30W 24 ports @ 15.4W	24 ports @ 30W 24 ports @ 15.4W	24 ports @ 30W 24 ports @ 15.4W	24 ports @ 30W 24 ports @ 15.4W
X450-G2-48p-10GE4	16 ports @ 30W 31 ports @ 15.4W	24 ports @ 30W 48 ports @ 15.4W	34 ports @ 30W 48 ports @ 15.4W	45 ports @ 30W 48 ports @ 15.4W	48 ports @ 30W 48 ports @ 15.4W
X450-G2-24p-GE4	16 ports @ 30W 24 ports @ 15.4W	24 ports @ 30W 24 ports @ 15.4W	24 ports @ 30W 24 ports @ 15.4W	24 ports @ 30W 24 ports @ 15.4W	24 ports @ 30W 24 ports @ 15.4W
X450-G2-48p-GE4	16 ports @ 30W 31 ports @ 15.4W	28 ports @ 30W 48 ports @ 15.4W	34 ports @ 30W 48 ports @ 15.4W	45 ports @ 30W 48 ports @ 15.4W	48 ports @ 30W 48 ports @ 15.4W

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
- Taiwan RoHS: CNS 15663 (2013.7)

Operating Conditions

- Temp: 0° C to 50° C (32° F to 122° F)
- Humidity: 10% to 95% relative humidity, non-condensing
- Altitude: 0 to 5,000 meters (16,404 feet) –
- PoE switches
- Altitude: 0 to 2,000 meters (6,562 feet) – non-
- PoE switches
- Shock (half sine): 30 m/s2 (3 G), 11 ms, 6 shocks
- Random vibration: 3 to 500 Hz at 1.5 G rms

Packaging and Storing Specifications

- 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/s2 (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)

Regulatory and Safety

- North American ITE
  - UL 60950-1 2nd Ed., Listed Device (U.S.)
  - CSA 22.2 #60950-1-03 2nd Ed. (Canada)
  - Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
  - CDRH Letter of Approval (US FDA Approval)
- European ITE
  - EN 60950-1:2007 2nd Ed.
  - EN 60825-1:2007/IEC 60825 2007 Class 1
  - (Lasers Safety)
  - TUV-R GS Mark by German Notified Body
  - 2014/35/EU Low Voltage Directive
- International ITE
  - CB Report & Certificate per IEC 60950-1 2nd Ed. + National Differences
  - AS/NZX 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 55022:2006+A1:2007 Class A
  - EN 55024:A2-2003 Class A includes IEC 61000-4-2,
  - 3, 4, 5, 6, 11
  - EN 61000-3-2,8-2006 (Harmonics)
  - EN 61000-3-3 2008 (Flicker)
  - ETSI EN 300 386 v1.4.1, 2008-04
  - (EMC Telecommunications)
  - 2004/108/EC EMC Directive
- International EMC Certifications
  - CISPR 22: 2006 Ed 5.2, Class A
  - (International Emissions)
  - CISPR 24:A2:2003 Class A (International Immunity)
  - IEC 61000-4-2:2008/EN 61000-4-2:2009 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria A
  - IEC 61000-4-3:2008/EN 61000-4-3:2006+A1:2008 Radiated Immunity 10V/m, Criteria A
  - IEC 61000-4-4:2004 am1 ed.2./EN 61000-4-4:2004/A1:2010 Transient Burst, 1 kV, Criteria A
  - IEC 61000-4-5:2005 /EN 61000-4-5:2006 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria A
  - IEC 61000-4-6:2008/EN 61000-4-6:2009 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 (C-Tick) (Australia Emissions)
- CCC Mark
- KCC Mark, EMC Approval (Korea)

Telecom Standards

- ETSI EN 300 386:2001 (EMC Telecommunications)
- ETSI EN 300 019
- (Environmental for Telecommunications)
- CE 2.0 Compliant

IEEE 802.3 Media Access Standards

- IEEE 802.3ab 1000BASE-T
- IEEE 802.3z 1000BASE-X
- IEEE 802.3ae 10GBASE-X
- IEEE 802.3at PoE Plus
- IEEE 802.3az (EEE)

Fan and Acoustic Noise

Switch Model	Acoustic Information	
X450-G2-24t-10GE4	**Fixed AC PS with Front to Back (FB) Air Flow**	
	Bystander Sound Pressure* • 49.8 dB(A), 0C to 39C • 64.9 dB(A), 50C	Declared Sound Power (LWAd)** • 6.1 bels, 0C to 39C • 7.6 bels, 50C
X450-G2-48t-10GE4	**Fixed AC PS with Front to Back (FB) Air Flow**	
	Bystander Sound Pressure* • 49.9 dB(A), 0C to 39C • **64.8 dB(A), 50C**	Bystander Sound Pressure* • 49.9 dB(A), 0C to 39C • **64.8 dB(A), 50C**
X450-G2-24p-10GE4	**Dual 715W AC PS with Front to Back (FB) Air Flow**	
	Bystander Sound Pressure* • 51.1 dB(A), 0C to 39C • **65.5 dB(A), 50C**	Declared Sound Power (LWAd)** • 6.2 bels, 0C to 39C • **7.7 bels, 50C**
	Dual 715W AC PS with Front to Back (FB) Air Flow (with applied POE Load)	
	Bystander Sound Pressure* • 50.1 dB(A), 0C to 39C • **64.5 dB(A), 50C**	Declared Sound Power (LWAd)** • 6.1 bels, 0C to 39C • **7.6 bels, 50C**
X450-G2-48p-10GE4	**Dual 1100W AC PS with Front to Back (FB) Air Flow**	
	Bystander Sound Pressure* • 50.8 dB(A), 0C to 39C • **65.4 dB(A), 50C**	Declared Sound Power (LWAd)** • 6.2 bels, 0C to 39C • **7.6 bels, 50C**
	Dual 1100W AC PS with Front to Back (FB) Air Flow (with applied POE Load)	
	Bystander Sound Pressure* • 56.5 dB(A), 0C to 39C • **66.8 dB(A), 50C**	Declared Sound Power (LWAd)** • 6.8 bels, 0C to 39C • **7.8 bels, 50C**

* Sound Pressure is presented for comparison per ISO 7779

**Declared Sound Power is presented in accordance with ISO-7779, ISO 9296 per ETSI/EN 300 753

Accessories

Modular Fan Tray for All x450-G2 Switches
- X460/X450-G2 fan module FB
- Front-to-back airflow fan module for X460/X450-G2 series switches

External Redundant Power Supplies for Non-PoE Switches

All X450-G2 series non-PoE switches ship with one fixed internal power supply. If redundancy is required, an external RPS can be attached to the switch.

Modular Power Supplies for PoE X450-2 Switches

- STK-RPS-150PS
  - 150 watt non-PoE redundant power supply for X450-G2 switches
- EPS-C2
  - External Power System Chassis 2. Accepts up to three 750W AC PoE PSU 48V power supplies. Accepts up to 5 EPS-CBL-2x7 or up to 1 EPS-CBL- 2x9 cables.
- EPS-CBL-2x7
  - External Power System Cable (1M) that connects EPS to any X440 or X450-G2 non-PoE switch for providing redundant DC power.
- 750W AC PSU
  - AC Power Supply module for EPS-C2 Chassis Redundant Power Supply
- 715W PoE AC PSU FB
  - 715W PoE AC PSU with front-to-back airflow is compatible with X450-G2-24p/48p switches and provides 500 watts of PoE-plus power budget per one supply. When two PSUs are installed, the total PoE-plus power budget becomes 1031 watts.
- 1100W PoE AC PSU FB
  - 1100W PoE AC PSU with front-to-back airflow is compatible with X450-G2-24p/48p switches and provides 850 watts of PoE-plus power budget per one supply. When two PSUs are installed, the total PoE-plus power budget becomes 1440 watts.

The STK-RPS-150PS can be rack mounted into the two slot RPS chassis STK-RPS-150CH2 where the power supplies are horizontally mounted or the eight slot RPS chassis STK-RPS-150CH8 where the power supplies are vertically mounted.

All X450-G2 series PoE switches support modular power supplies and do NOT ship with a power supply. Either a 715 watt or 1100 watt power supply needs to be added.

Only front-to-back power supplies and fans are certified for use in the X450-G2 PoE switches.

Warranty

The X450-G2 Series is covered under Extreme's Limited Warranty Express. For warranty details, visit: http://www.extremenetworks.com/go/warranty.

Power Cords

In support of the Extreme Networks Green initiatives, power cords can be ordered separately, but need to be specified at time of ordering. Please refer to www.extremenetworks.com/product/powercords/ for details on power cord availability for this product.

Maintenance Services

Extreme's maintenance and support services with 100% in-sourced engineering experts and over 90% first-person resolution ensure efficient operations of your business-essential network. 24x7x365 phone support, advanced part replacement, and on-site support augment your staff with experienced resources that help you mitigate critical network issues fast. Visit Extreme Maintenance Services for more information.

Ordering Notes

The X450-G2 base switches do not ship with fan trays—these must be ordered separately. The X450-G2 PoE switches support modular power supplies and these must be ordered separately. The non-PoE X450-G2 switches have a fixed internal power supply so a power supply does not need to be ordered separately.

Non-PoE Switch - Fan Tray Must Be Ordered Separately

Ordered Empty   Shipped Empty

PoE Switch - Fan Tray and Power Supplies Must Be Ordered Separately

Ordered Empty   Ordered Empty

*Optional: Redundant or Additive Power Supply ordered separately
**Required: First Power Supply ordered separately

Ordering Information

Part Number	Name	Description
16172	X450-G2-24t-GE4-Base	X450-G2 24 10/100/1000BASE-T, 4 1000BASE-X unpopulated SFP, two 21Gb stacking ports, 1 Fixed AC PSU, 1 RPS port, fan module slot (unpopulated), ExtremeXOS Edge license
16173	X450-G2-24p-GE4-Base	X450-G2 24 10/100/1000BASE-T POE+, 4 1000BASE-X unpopulated SFP, two 21Gb stacking ports, 2 unpopulated power supply slots, fan module slot (unpopulated), ExtremeXOS Edge license
16174	X450-G2-48t-GE4-Base	X450-G2 48 10/100/1000BASE-T, 4 1000BASE-X unpopulated SFP, two 21Gb stacking ports (QSFP), 1 Fixed AC PSU, 1 RPS port, fan module slot (unpopulated), ExtremeXOS Edge license
16175	X450-G2-48p-GE4-Base	X450-G2 48 10/100/1000BASE-T POE+, 4 1000BASE-X unpopulated SFP, two 21Gb stacking ports, 2 unpopulated power supply slots, fan module slot (unpopulated), ExtremeXOS Edge license
16176	X450-G2-24t-10GE4-Base	X450-G2 24 10/100/1000BASE-T, 4 10GBASE-X unpopulated SFP+, two 21Gb stacking ports, 1 Fixed AC PSU, 1 RPS port, fan module slot (unpopulated), ExtremeXOS Edge license
16177	X450-G2-24p-10GE4-Base	X450-G2 24 10/100/1000BASE-T POE+, 4 10GBASE-X unpopulated SFP+, two 21Gb stacking ports), 2 unpopulated power supply slots, fan module slot (unpopulated), ExtremeXOS Edge license
16178	X450-G2-48t-10GE4-Base	X450-G2 48 10/100/1000BASE-T, 4 10GBASE-X unpopulated SFP+, two 21Gb stacking ports, 1 Fixed AC PSU, 1 RPS port, fan module slot (unpopulated), ExtremeXOS Edge license
16179	X450-G2-48p-10GE4-Base	X450-G2 48 10/100/1000BASE-T POE+, 4 10GBASE-X unpopulated SFP+, two 21Gb stacking ports, 2 unpopulated power supply slots, fan module slot (unpopulated), ExtremeXOS Edge license
16177T	X450-G2-24p-10GE4-FB-715-TAA	TAA 24 10/100/1000BASE-T POE+, 4 10GBASE-X unpopulated SFP+, two 21Gb stacking ports (QSFP), 2 power supply slots populated with 715W PS, fan module Front-to-Back, ExtremeXOS Edge license
16179T	X450-G2-48p-10GE4-FB-1100-TAA	TAA 48 10/100/1000BASE-T POE+, 4 10GBASE-X unpopulated SFP+, two 21Gb stacking ports (QSFP), 2 power supply slots populated with 1100W PS, fan module Front-to-Back, ExtremeXOS Edge license
16172T	X450-G2-24t-GE4-FB-TAA	TAA 24 10/100/1000BASE-T, 4 1000BASE-X unpopulated SFP, two 21Gb stacking ports (QSFP), 1 Fixed AC PSU, 1 RPS port, fan module Front-to-Back, ExtremeXOS Edge license
16173T	X450-G2-24p-GE4-FB-715-TAA	TAA 24 10/100/1000BASE-T POE+, 4 1000BASE-X unpopulated SFP, two 21Gb stacking ports (QSFP), 2 power supply slots populated with 715W PS, fan module Front-to-Back, ExtremeXOS Edge license
Firmware Licenses		
16190	X450-G2 Edge to Advanced Edge Lic	ExtremeXOS Advanced Edge License for X450 series switches
16191	X450-G2 Core Lic from Edge Lic	ExtremeXOS Advanced Core License upgrade from Edge License for ExtremeSwitching X450-G2 series switches
16192	X450-G2 Core Lic from Adv Edge	ExtremeXOS Advanced Core License upgrade from Advanced Edge License for ExtremeSwitching X450-G2 series switches
11011	Direct Attach Feature Pack	Direct Attach Feature Pack
16200	X450-G2 OpenFlow Feature Pack	ExtremeXOS SDN - OpenFlow Feature Pack for X450 series switches
16169	X450-G2 Multimedia(AVB) Feature Pack	ExtremeXOS Multimedia Service (Audio Video Bridging) Feature Pack for X450 series switches
Accessories		
10941	1100W PoE AC PSU FB	1100 Watt AC PoE Power Supply module for X460-G2 and X450-G2 series switches with Front-to-Back airflow
10951	715W AC PSU FB	715W AC PoE Power Supply Module for X460-G2 and X450-G2 series switches with front to back airflow
10945	X460/X450-G2 fan module FB	Fan Module for X460-G2/X450-G2 Series Switches - front to back airflow
16777	Four Piece Rack Mount Kit, Spare	Spare Four Piece Rack Mount Kit compatible with X450-G2
STK-RPS-150PS	150W Non-PoE RPS	150 watt non-PoE redundant power supply for A, B, C and X450-G2 switches
STK-RPS-150CH2	2-Slot Modular Shelf for 150W RPS	2 slot modular shelf for rack-mounting STK-RPS-150PS external redundant power supplies horizontally
STK-RPS-150CH8	8-Slot Modular Shelf for 150W RPS	8 slot modular shelf for rack-mounting STK-RPS-150PS external redundant power supplies vertically
10936	EPS-C2	External Power System Chassis 2. Accepts up to three
10939	EPS-CBL-2x7	External Power System Cable (1M) that connects EPS to any Summit X440 for providing redundant DC power
10931	Summit 750W AC PSU	AC Power Supply module for EPS-C2 Chassis Redundant Power Supply
16777	Four Piece Rack Mount Kit, Spare	Spare Rack Mount Kit for X450-G2

Ordering Information (cont.)

Part Number	Name	Description
		Optical Transceivers and Direct Attach Cables
10301	10GBASE-SR SFP+	10GBASE-SR SFP+, 850nm, LC Connector, transmission length of up to 300m on MMF
10302	10GBASE-LR SFP+	10GBASE-LR SFP+, 1310nm, LC Connector, transmission length of up to 10km on SMF
10309	10GBASE-ER SFP+	10GBASE-ER SFP+, 1550nm, LC connector, transmission length of up to 40km on SMF
10303	SFP+ LRM Module	10 Gigabit Ethernet SFP+ module, 1310nm, legacy MMF 220m link, LC connector
10325	Tunable DWDM SFP+	10 Gigabit Ethernet SFP+ Tunable DWDM module, SMF 80km, LC connector
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 SFP, 1490-nm TX/1310-nm RX wavelength, Industrial Temp
10057H	1000BASE-BX-U BiDi SFP, Hi	1000BASE-BX-U SFP, 1310-nm TX/1490-nm RX wavelength, Industrial Temp
10060H	100LX/1000LX SFP, Hi[1]	Dual-speed 100 LX / 1000 LX SFP, LC connector, Industrial Temp[1]
10064	LX100 mini-GBIC	Mini-GBIC, SFP, Extra long distance SMF 100 Km/30 dB budget, LC connector
10065	10/100/1000BASE-T SFP	10/100/1000BASE-T SFP module, CAT5 cable 100m link, RJ45-connector for Gigabit Ethernet SFP Port.
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-BX40-D	1000BASE-BX40-D SFP	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-BX120-D	1000BASE-BX120-D SFP	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	1000BASE-BX120-U SFP	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
10310	ZR SFP+ module	10 Gigabit Ethernet SFP+ module, 1550nm, SMF 80km, LC connector
10311	QSFP+ passive copper cable, 0.5M	QSFP+ passive copper cable, 0.5M
10312	QSFP+ passive copper cable, 1.0M	QSFP+ passive copper cable, 1.0M
10313	QSFP+ passive copper cable, 3.0M	QSFP+ passive copper cable, 3.0M
10323	QSFP+ passive copper cable, 5.0M	QSFP+ passive copper cable, 5.0M
10338	10Gb SFP+ 10GBASE-T[2]	10Gb SFP+, 10GBASE-T RJ45, 30m with Cat6a[2]
10GBBX10-U	10KM 10 GB, SINGLE FIBER SM, -U 10 KM	10Gb, Single Fiber SM, Bidirectional, 1330nm Tx / 1270nm RX, 10Km, Simplex LC SFP+ (must be paired with 10GB-BX10-D)
10GB-BX10-D	10KM 10 GB, SINGLE FIBER SM, -D 10 KM	10Gb, Single Fiber SM, Bidirectional, 1330nm Tx / 1270nm RX, 10Km, Simplex LC SFP+ (must be paired with 10GB-BX10-U)
10GB-BX40-U	10KM 10 GB, SINGLE FIBER SM, -U 40 KM	10Gb, Single Fiber SM, Bidirectional, 1330nm Tx / 1270nm RX, 40Km, Simplex LC SFP+ (must be paired with 10GB-BX40-D)
10GB-BX40-D	10KM 10 GB, SINGLE FIBER SM, -D 40 KM	10Gb, Single Fiber SM, Bidirectional, 1330nm Tx / 1270nm RX, 40Km, Simplex LC SFP+ (must be paired with 10GB-BX40-U)
10GB-F10 SFPP	10 GB, ACTIVE OPTICAL DAC, 10 M	10Gb, Active optical direct attach cable with 2 integrated SFP+ transceivers, 10m
10GB-F20-SFPP	10 GB, ACTIVE OPTICAL DAC, 20 M	10Gb, Active optical direct attach cable with 2 integrated SFP+ transceivers, 20m
40GB-C0.5-QSFP	QSFP+ passive copper cable, 0.5M	40 Gb, Copper Direct Attach Cable with integrated QSPF+ transceivers, 0.5m
40GB-C01-QSFP	QSFP+ passive copper cable, 1.0M	40 Gb, Copper Direct Attach Cable with integrated QSPF+ transceivers, 1m
40GB-C03-QSFP	QSFP+ passive copper cable, 3.0M	40 Gb, Copper Direct Attach Cable with integrated QSPF+ transceivers, 3m
10304	10GBASE-CR SFP+ 1m	10GBASE-CR SFP+ pre-terminated twin-ax copper cable with link lengths of 1m
10305	10GBASE-CR SFP+ 3m	10GBASE-CR SFP+ pre-terminated twin-ax copper cable with link lengths of 3m
10306	10GBASE-CR SFP+ 5m	10GBASE-CR SFP+ pre-terminated twin-ax copper cable with link lengths of 5m
10307	10GBASE-CR SFP+ 10m	10GBASE-CR SFP+ pre-terminated twin-ax copper cable with link lengths of 10m

Ordering Information (cont.)

Part Number	Name	Description
Optical Transceivers and Direct Attach Cables (cont.)		
10336	3m QSFP+ Active Optical Cable	40 Gigabit QSFP+ active optical cable, 3m
10337	5m QSFP+ Active Optical Cable	40 Gigabit QSFP+ active optical cable, 5m
10315	10m QSFP+ Active Optical Cable	40 Gigabit Ethernet QSFP+ active optical cable assembly, 10m length
10316	20m QSFP+ Active Optical Cable	40 Gigabit Ethernet QSFP+ active optical cable assembly, 20m length
10318	100m QSFP+ Active Optical Cable	40 Gigabit Ethernet QSFP+ active optical cable assembly, 100m length
ExtremeCloud IQ Pilot Licenses		
XIQ-PIL-S-C-EW	XIQ Pilot SAAS Subscription and EW support (1 device)	ExtremeCloud IQ Pilot SaaS Subscription and EW SaaS support for one (1) device
XIQ-PIL-S-C-PWP	XIQ Pilot SAAS Subscription and PWP support (1 device)	ExtremeCloud IQ Pilot SaaS Subscription and PWP SaaS support for one (1) device
XIQ-PIL-S-OP-EW	XIQ Pilot RTU license and EW support (1 device)	ExtremeCloud IQ Pilot SW Subscription (RTU license, EW SW support for one (1) device
XIQ-PIL-S-OP-PWP	XIQ Pilot RTU License and PWP support (1 device)	ExtremeCloud IQ Pilot SW Subscription (RTU license, PWP SW support for one (1) device

Note: PoE Power Supplies and fan tray MUST be ordered separately. Only non-PoE switches ships with a fixed internal power supply

1 1Gb Mode Only

2 Supported configuration is to populate every other SFP+ port in system, with a maximum of half the 10Gb SFP+ ports configured with 10GBASE-T transceivers. An adjacent SFP+ port should remain unused for every 10GBASE-T SFP+ installed.