Summit X460 Series

Summit® X460 series switches—providing high availability, control and simplified management of your network with ExtremeXOS®.

Features

- High availability to reduce or eliminate network outages
- Voice-grade SummitStack™ 40 Gbps and SummitStack-V80 80 Gbps high-speed stacking plus SummitStack-V low-cost, longer distance stacking
- Flexible Power over Ethernet Plus (PoE-plus) to meet the growing demand of converged network applications
- Advanced Layer 2 - 3 switching with MPLS/H-VPLS support
- Policy-based routing to customize traffic flow
- Comprehensive security
- Ease of management

Target Applications

- Advanced edge switch for campus networks or core switch for small networks
- Aggregation switch in a traditional three-tiered network
- Top-of-rack switch for data centers with optional high-speed 80 Gbps cross-rack stacking at up to 100 meters
- Interconnect switch providing low latency connections for High Performance Cluster Computing (HPCC)
- DSLAM aggregation, active Ethernet access or access aggregation device in a Carrier Ethernet network
- Access or access aggregation switch in a business E-Line or E-LAN over VPLS network

Extreme Networks® Summit X460 series switches are based on ExtremeXOS, the revolutionary core-class operating system. Whether deployed at the network core or edge, or as an aggregation device, the Summit X460 series benefits from the highly robust and modular architecture of ExtremeXOS and provides high levels of availability, resilience and simplified management of your entire network.

As an edge switch offering optimum support for converged applications, the Summit X460 series provides low latency line-rate performance and supports IEEE 802.3at standards-based PoE-plus. Summit X460 switches are highly flexible and scalable, making them ideal aggregation switches or a top-of-rack switch solution offering cross-rack stacking within data centers and longer-reach stacking options among data centers. Summit X460 switches are good choices for DSLAM or CMTS aggregation or active Ethernet access.

The versatile Summit X460 series supports a full range of Layer 2 – 4 features on each port. Each switch supports optional 40 or 80 Gigabits per second (Gbps) stacking modules and optional two-port 10 Gigabit Ethernet in a compact 1RU format. The switches also support the new SummitStack-V capability to utilize 10 GbE ports as stacking ports, enabling low-cost and long-distance stacking of up to 40 km. In addition, Summit X460 switches support optional dual, hot-swappable AC/DC power supplies and a hot swappable fan tray to ensure continuous network operation that is crucial to meeting your business needs.

With the Summit X460 series, Extreme Networks continues its tradition of simplifying network deployment through consistent use of common architecture, delivering line-rate IPv6 capabilities for Gigabit Ethernet LAN environments.

High Availability

The Summit X460 series provides high availability by employing a modular operating system, incorporating resilient software features and supplying hardware redundancies. High availability protocols such as Ethernet Automatic Protection Switching (EAPS) that failover in less than 50 milliseconds provide toll-quality voice and picture-perfect video. Layer 2 and Layer 3 resiliency protocols such as Open Shortest Path First (OSPF), Extreme Standby Router Protocol™ (ESRP) and Virtual Router Redundancy Protocol (VRRP) add to enhanced availability.

Summit X460 switches offer dual SummitStack stacking interfaces with flexible bandwidth choices to support converged services such as video and Voice over IP through its highly available architecture. SummitStack supports 40 Gbps with up to eight units in a stack that can be a mixture of compatible switches.

Using QSFP+ technology, SummitStack-V80 supports 80 Gbps for applications where a high volume of traffic traverses the stacking links, or when stacking across longer distances or across data center racks is needed.

The new SummitStack-V capability utilizes 10 GbE ports as stacking ports, enabling the use of standard cabling and optics technologies used for 10 GbE. SummitStack-V enables long-distance stacking connectivity of up to 40 km while reducing the cable complexity of implementing a stacking solution.

Redundancies in AC/DC power supplies, uplink ports (at both GbE and 10 GbE levels), operating system and configuration images further contribute to continuous network availability.

Flexible PoE with Automatic VoIP Provisioning

Summit X460 switches support the IEEE 802.3 at PoE-plus standard and provide up to 30 watts to power standards-compliant PoE devices. The switches provide advanced traffic management capabilities and allow large-scale rollout of equipment such as Voice over IP phones, wireless access points, security cameras and other devices that require power from the LAN connection.

Supporting Universal Port and LLDP, a Summit X460 switch allows enterprises to add new access devices in a non-disruptive plug-and-play fashion while simplifying troubleshooting and minimizing complexities that arise from convergence-driven network changes. It allows dynamic configuration of voice VLANs and Quality of Service (QoS).

Carrier Ethernet Service Delivery

Summit X460 switches meet dual service delivery requirements as an Ethernet access central office switch which can reduce the provider's operational expense. By supporting granular traffic classification and metering incoming packets at line rate, the switches are ideal solutions for carrier deployments. The switches support Extreme Networks vMAN tag stacking mechanism, compliant with the IEEE 802.1ad Provider Bridging standard, as well as MPLS/H-VPLS. Additional purpose-built features include multicast and MAC address scalability and advanced buffer control for consistent toll-quality service.

Comprehensive Security

User authentication and host integrity checking enforce admission and usage policies on dedicated and shared ports at the edge of the network. The powerful technologies sFlow® and IPFIX offer continuous and simultaneous monitoring of application-level traffic flows on all interfaces.

The Universal Port dynamic scripting framework available in Summit X460 switches lets you implement security profiles to create fine-grained and robust security policies. Upon authentication, the switch can load dynamic ACL/QoS for a user or group of users, to deny/allow the access to the application servers or segments within the network.

Policy-based routing on Summit X460 switches provides a flexible mechanism for network administrators to customize the flow of traffic. Access Control Lists (ACLs) configured on the switch can redirect packets away from their normal path to another physical switch port.

Summit X460 switches complement perimeter firewalls by protecting the "soft interior" of the network that is often unprotected. Utilizing the industry's most advanced CLEAR-Flow Security Rules Engine, Summit X460 switches can be programmed to automatically detect and mitigate security threats in seconds.

Ease of Management

Extreme Networks has developed tools that save you time and resources in managing your network. EPICenter® provides fault, configuration, accounting, performance and security functions for a converged network. Ridgeline™ Service Advisor provides powerful service management software that enables carriers to monetize their networks by shifting from reactive circuit monitoring to proactive service management.

Features	Summit X460 Series Switches		
Copper 10/100/1000BASE-T	Summit X460-24t	Summit X460-24p	Summit X460-24tDC
	Summit X460-48t	Summit X460-48p	Summit X460-48tDC
		Summit X460-24x	Summit X460-24xDC
Fiber 100/1000BASE-X	Summit X460-48x	Summit X460-48xDC	
Power over Ethernet Plus	Summit X460-24p	Summit X460-48p	
Stacking Modules (40 Gbps or 80 Gbps)	2-port 20 Gbps SummitStack module		
	2-port 40 Gbps SummitStack-V80 module (QSFP+)		
10 Gigabit Ethernet	2-port 10 Gbps XGM3-2sf (SFP+)		
Simultaneous Dual 10 GbE and Stacking Modules	Yes		
Internal Dual, Hot-swappable AC/DC Power Supplies	Summit 300W AC PSU Summit 300W DC PSU		
	Summit 750W AC PoE PSU		
Hot Swappable Fan Tray	Yes		
IPv6 Routing in hardware	Yes		
Policy-Based Routing	Yes		
ExtremeXOS Core License	Optional		
ExtremeXOS Advanced Edge License	Optional		
ExtremeXOS L3 Edge License	Default		
Network Timing Feature Pack	Optional for Summit X460-24x, Summit X460-24xDC,		
	Summit X460-48x,and Summit X460-48xDC		
MPLS Feature Pack	Optional (requires advanced edge license or above)		