

Summit® X450a and Summit X450e Series



Summit X450a and Summit X450e series switches—providing high availability, control and simplified management of your entire network with ExtremeXOS®.

Features

- High availability to prevent network outages
- SummitStack™ 40 Gbps high-speed stacking
- Flexible Power over Ethernet (PoE) to meet growing demand of converged network applications
- Metro Ethernet service delivery
- Policy-based routing to customized traffic flow
- Comprehensive security using defense-in-depth
- Ease of management

Target Applications

- Core switch for a small network
- Aggregation switch in a traditional three-tiered network that requires high availability and ExtremeXOS advanced features
- Customer Edge (CE) or Provider Edge (PE) device in a Metro Ethernet network, compliant with UNI 1.0 Metro Ethernet Forum (MEF) specification, supporting all service parameters of MEF 6, the traffic management specification
- Interconnect switch providing low latency connections for High Performance Cluster Computing (HPCC)
- Edge PoE switch providing high-density gigabit PoE to the desktop in a network running ExtremeXOS from the core to the edge

Extreme Networks® Summit X450a and Summit X450e series switches are based on ExtremeXOS, the revolutionary core-class operating system. Whether deployed at the network core, edge or as an aggregation device, the Summit X450 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, Summit X450e series provides low latency line-rate performance and supports the 802.3af standards-based PoE on every port.

Summit X450a series is highly flexible and scalable, making it an ideal aggregation switch for traditional small core enterprise networks and a first level aggregation device for DSLAMs at a local central office before traffic is passed on to Extreme Networks BlackDiamond® 12804R core switch at the Point of Presence (POP).

Extreme Networks continues its tradition in simplifying network deployment through consistent use of common hardware and software. Summit X450a and Summit X450e switches utilize the same proven non-blocking hardware technology found in Extreme Networks BlackDiamond 8800 series switches, delivering line-rate IPv6 capabilities for Gigabit Ethernet LAN deployments.

The versatile Summit X450a and Summit X450e series supports a full range of Layer 2 – 4 features on each port. Each switch offers 40 Gigabits per Second (Gbps) stacking interfaces and optional 10 Gigabit Ethernet in a compact 1RU format. Optional redundant power supplies are provided with each switch to secure against power anomalies, allowing a continuous operational network that is crucial in meeting your business needs.



High Availability

The Summit X450a and Summit X450e series provides high availability by employing a modular operating system, incorporating resilient software features and supplying hardware redundancies.

High availability protocols such as the 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 X450a and Summit X450e switches offer dual stacking interfaces to provide high-speed 40 Gbps stacking bandwidth. SummitStack is designed to support converged services such as video and Voice-over-IP by its highly available architecture providing rapid failover capability. SummitStack supports up to eight units in a stack, and can be a mixture of the units with Summit X250e, Summit X450, Summit X450a and Summit X450e switches.

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

Flexible PoE with Automatic VoIP Provisioning for Converged Networks

Summit X450e switches provide advanced traffic management capabilities and allows large scale rollout of equipment such as IP

telephones, wireless APs and other devices that require power from the LAN connection.

Supporting Universal Port and LLDP, a Summit X450e 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). This auto configuration capability helps you to configure VoIP phone settings such as voice VLAN settings, call server IP address configuration, etc. This level of simplicity in managing network changes can greatly reduce operating expenses.

Metro Ethernet Service Delivery

Summit X450a switches meet dual service delivery requirements as a CE device and as an aggregation switch at the PE, 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 metro deployments. When deployed as a CE device, advanced traffic management features provide triple play delivery of voice, video and data services.

The switches support Extreme Networks vMAN tag stacking mechanism, compliant with IEEE 802.1ad Provider Bridging standard used for aggregating subscribers when deployed at the PE.

Summit X450a switches provide WAN PHY connectivity compliant with the 10 gigabit-based LW standard making it compatible with existing SONET OC-192 transport networks.

Comprehensive Security Using Defense-in-Depth

User authentication and host integrity checking enforces admission and usage policies on dedicated and shared ports at the edge of the network. The powerful technology, sFlow®, offers continuous and simultaneous monitoring of application-level traffic flows on all interfaces. In the event of an attack, network managers can dynamically reconfigure the switches to close vulnerabilities, hardening the network without shutting down network operation.

The Universal Port scripting framework available in Summit X450a and Summit X450e switches let you implement Dynamic Security Profiles that help you implement 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 X450a and Summit X450e 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. Packets are selected according to their ACL match conditions such as class of service, VLAN, IP addresses, protocol, port number or other criteria.

Summit X450a switches complement perimeter firewalls by protecting the "soft interior" of the network that is currently unprotected. Utilizing the industry's most advanced CLEAR-Flow Security Rules Engine, Summit X450a 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, allowing effective management of Extreme Networks' multi-layer switching equipment in a converged network.

Features	Summit X450a Series Switches	Summit X450e Series Switches
Copper 10/100/1000BASE-T	Summit X450a-24t Summit X450a-48t	Summit X450e-24p Summit X450e-48p
Fiber 1000BASE-X	Summit X450a-24x	NA
Power over Ethernet	NA	Yes
Optional 2 Port 10 Gigabit Ethernet Module	XGM2-2xn (for XENPAK) XGM2-2xf (for XFP)	XGM2-2xn (for XENPAK) XGM2-2xf (for XFP)
DC PSU Version	Yes	No
External Redundant Power Supply	Yes	Yes
IPv6 Routing	Yes	Yes
Policy-Based Routing	Yes	Yes
ExtremeXOS Advanced Edge License	Included	Optional
ExtremeXOS Core License	Optional	NA



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