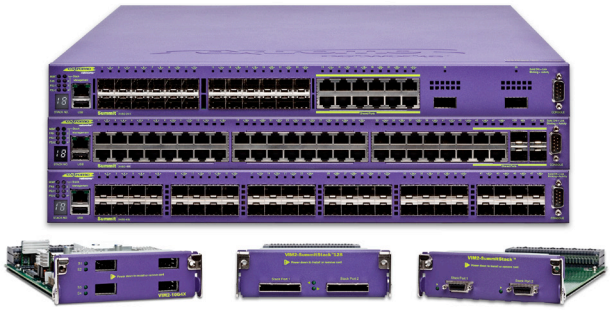
Summit X480 Series



Summit® X480 Series—The highly scalable and versatile gigabit and 10 Gigabit Ethernet switch.

High-Performance Switching and Routing

- 48-port Gigabit Ethernet or 24-port gigabit and 2-port 10 Gigabit Ethernet connectivity in 1RU form factor
- Optional 4-port 10 Gigabit Ethernet to provide 40 Gbps uplinks
- Optional 40 Gbps stacking for up to eight switches in a stack to provide up to 384 Gigabit Ethernet in one logically integrated unit
- Optional 128 Gbps stacking for up to eight switches in a stack to provide high-speed stacking
- Supports Layer 2 and Layer 3 switching, as well as MPLS/VPLS

High Scalability in 1RU Compact Switch

- Up to 512k MAC address support for highly scalable Layer 2 networks
- Up to 512k IPv4 routes for highly scalable Layer 3 networks
- Up to 60k Access Control Lists (ACLs) for highly secure networks

High Availability

- ExtremeXOS® modular OS for a highly available network operation
- Carrier-grade redundant networking protocol including Ethernet Automatic Protection Switching (EAPS), internal redundant AC/DC power supply and field replaceable/ hot swappable fan tray

The Summit X480 series switch is a versatile, high-end ethernet switch for data center, enterprise aggregation, and Carrier Ethernet deployments. Summit X480 helps optimize application performance for a variety of network deployments with its rich features and high scalability.

Summit X480 provides high density for Gigabit Ethernet in a very small 1RU form factor for up to 48 ports in one system and 384 ports in a stacked system using backward compatible SummitStack™ or high-speed SummitStack128 running at 128 gigabit per second. Summit X480 also offers ten Gigabit Ethernet connectivity for up to six ports in one system and 16 ports in a stacked system with the industry standard XFP interface.

For emerging demands from data, storage, voice, and data convergence, Summit X480 provides highly scalable Layer 2/3 switching and MPLS/H-VPLS by supporting up to 512k Layer 2 MAC addresses or 512k IPv4 Longest Prefix Match routing tables. Summit X480 enables data center, enterprise and Carrier Ethernet aggregation and core backbone deployment in AC-powered and DC-powered environments.

Summit X480 simplifies network operation with ExtremeXOS modular OS, available across Extreme Networks Ethernet switches. The ExtremeXOS operating system provides high availability and simplicity with one OS everywhere in the network.

Target Applications

- Top-of-rack switch for servers in enterprise data centers
- High-performance core switch for a small network
- High-performance gigabit aggregation switch in a traditional three-tiered network
- Carrier Ethernet network switch that can aggregate connectivity for first mile access concentrators such as DSLAM and CMTS

High Performance Switching and Routing

Summit X480 is available in three different port configuration options: 24-port Gigabit Ethernet and 2-port 10 Gigabit Ethernet (Summit X480-24x), 48-port copper Gigabit Ethernet (Summit X480-48t), or 48-port fiber Gigabit Ethernet (Summit X480-48x). All front panel ports run at non-blocking, wire-speed performance and can carry wire-rate traffic towards the Versatile Interface Module-2 (VIM2) slot. Summit X480 offers flexible configuration by using optional VIM2 modules which are: 4-port 10 Gigabit Ethernet Module (VIM2-10G4X), 2-port SummitStack Module (VIM2-SummitStack) and 2-port SummitStack128 Module (VIM2-SummitStack128)

High Scalability in 1RU Compact Switch

Summit X480 supports highly scalable Layer 2 or Layer 3 networks, as well as highly secure networks. Summit X480 has expansion memory called TCAM built inside which can be partitioned by application types or by deployment scenarios. For larger Layer 2 network deployments, Summit X480 can support up to 512k MAC addresses. Similarly for larger Layer 3 routing environments, Summit X480 can support core routing class scalability for up to 512k IPv4 routing LPM entries in hardware.

Intelligent Switching and MPLS Support

Summit X480 supports sophisticated and intelligent Layer 2 switching, as well as Layer 3 IPv4/IPv6 routing including policy-based switching/routing, Provider Bridging, bi-directional ingress and egress Access Control List (ACL), and bandwidth control by 8 Kbps granularity both for ingress and egress. To provide scalable network architectures used mainly for Carrier Ethernet network deployment, Summit X480 supports MPLS LSP based Layer 3 forwarding and Hierarchical VPLS (H-VPLS) for transparent LAN services. With H-VPLS, transparent Layer 3 networks can be extended throughout the Layer 3 network cloud by using a VPLS tunnel between the regional transparent LAN services typically built by Provider Bridging (IEEE 802.1ad) technology.

VIM Options	None (default option)	VIM2-10G4X	VIM2-SummitStack	VIM2-SummitStack128
Summit X480-24x	• 24 x 100/1000BASE-X (SFP) • 12 x 10/100/1000BASE-T (shared with the last 12 SFP ports) • 2 x 10GBASE-X (XFP)	• 24 x 100/1000BASE-X (SFP) • 12 x 10/100/1000BASE-T (shared with the last 12 SFP ports) • 6 x 10GBASE-X (XFP)	• 24 x 100/1000BASE-X (SFP) • 12 x 10/100/1000BASE-T (shared with the last 12 SFP ports) • 2 x SummitStack	• 24 x 100/1000BASE-X (SFP) • 12 x 10/100/1000BASE-T (shared with the last 12 SFP ports) • 2 x SummitStack128
Summit X480-48t	• 48 x 10/100/1000BASE-T • 4 x 100/1000BASE-X SFP (shared with the last 4 10/100/1000BASE-T ports)	• 48 x 10/100/1000BASE-T • 4 x 100/1000BASE-X SFP (shared with the last 4 10/100/1000BASE-T ports) • 4 x 10GBASE-X (XFP)	• 48 x 10/100/1000BASE-T • 4 x 100/1000BASE-X SFP (shared with the last 4 10/100/1000BASE-T ports) • 2 x SummitStack	• 48 x 10/100/1000BASE-T • 4 x 100/1000BASE-X SFP (shared with the last 4 10/100/1000BASE-T ports) • 2 x SummitStack128
Summit X480-48x	• 48 x 100/1000BASE-X SFP	• 48 x 100/1000BASE-X SFP • 4 x 10GBASE-X (XFP)	• 48 x 100/1000BASE-X SFP • 2 x SummitStack	• 48 x 100/1000BASE-X SFP • 2 x SummitStack128

Specifications

Ports	24-port 10GBASE-T or 24-port SFP+ with one VIM1 slot
Layer 2/3/4 Throughput	• 224 Gbps, 448 Gbps (with VIM2-10G4X) aggregated switch bandwidth • 71.4 Mpps, 101.2 Mpps (with VIM2-SummitStack), 166.7 Mpps (with VIM2-SummitStack128), 130.9 Mpps (with VIM1-10G4X) frame forwarding rate • Less than 4 micro second latency (64-byte)
Management Port	One 10/100/1000BASE-T RJ-45 port for out-of-band management
Console Port	RS-232 DB-9 console port
Power Supply	Dual redundant AC or DC, hot swappable PSU
Fan/Cooling	Hot swappable fan module / front/side-to-back cooling
Dimensions and Weight	1.73 (H) x 17.4 (W) x 19.0 (D) (inch), 20.9 lbs (Summit X480-24x), 21.2 lbs (Summit X480-48t), 22.7 lbs (Summit X480-48x)
Layer 2 Switching	IEEE 802.D, IEEE 802.1W, IEEE 802.1S, EAPSv2, ESRP
Layer 3 Routing	Static, RIPv1,RIPv2,OSPFv2,OSPFv3, IS-IS, BGP4, MPLS/H-VPLS
VLANs	4,094 VLANs with Port, 802.1Q tag, Protocol, MAC-based VLAN
IP Multicast Routing	PIM-DM, PIM-SM, PIM-SSM, Multicast Source Discovery Protocol (MSDP)
ACL	Wire-speed ingress/egress ACL support
QoS	8 egress queues per port, 802.1p, Diffserv, ACL based, Strict Priority and WFQ with min/max bandwidth control
Stacking Support	SummitStack (40 Gbps Default), SummitStack128 (128 Gbps)

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