

Summit X650 Series



*Summit X650 Series—The ultimate Top of Rack
10 Gigabit Ethernet switch.*

High-Performance Switching and Routing

- 24-port 10 Gigabit Ethernet non-blocking switching with 363 million packet per second forwarding rate in 1 Rack Unit (RU) form factor
- 256 Gbps ultra high-speed stacking for up to eight units in a stack to provide up to 192 10 Gigabit Ethernet ports in one logically integrated unit
- Optional SummitStack-V long-reach stacking via 10 GbE ports
- Virtualized Data Center support: Direct Attach™ and XNV™ (ExtremeXOS® Network Virtualization)
- Priority Flow Control and Enhanced Transmission Selection (PFC/ETS)

Versatile Architecture

- From high-performance server switching to enterprise network aggregation and core deployment
- One network operating system for Extreme Networks® Ethernet switches everywhere in the network
- 10 Gigabit Ethernet over UTP cable and optical fiber with SFP+ transceivers for single-mode and multimode fiber installation

High Availability

- ExtremeXOS modular operating system for highly available network operation
- Carrier-grade redundant networking protocol including Ethernet Automatic Protection Switching (EAPS)
- Internal redundant AC/DC power supply and field replaceable fan tray
- Extends high availability across switches with Multi-Switch Link Aggregation (M-LAG)

Future-Proof

- 48-port 10 Gigabit Ethernet non-blocking switching with 512 Gbps SummitStack™ 512 technology
- Future support for 40 Gigabit Ethernet and 100 Gigabit Ethernet through Versatile Interface Module (VIM) slot

The Summit® X650 series switch is a purpose-built Top of Rack switch designed for emerging 10 Gigabit Ethernet-enabled servers, deployed in enterprise data centers. Summit X650 optimize new server deployments while providing a seamless migration path from existing Gigabit Ethernet-based servers to 10 Gigabit Ethernet-based high-performance servers to start the transition to a new virtualized environment.

Summit X650 provides remarkable high-density for 10 Gigabit Ethernet in a very small 1RU form factor for up to 32 ports in one system and 192 ports in a stacked system. Summit X650 offers two of the most advanced 10 Gigabit Ethernet technologies, 10GBASE-T and SFP+, to accommodate the needs for both copper twisted pair cable and optical fiber-based 10 Gigabit Ethernet.

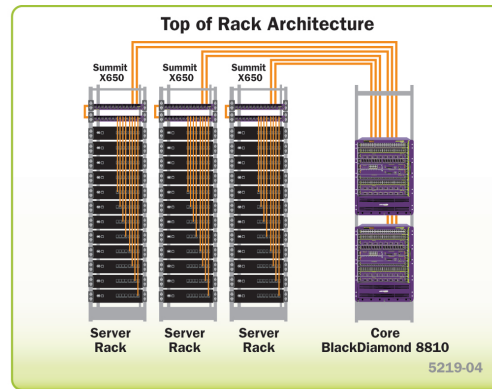
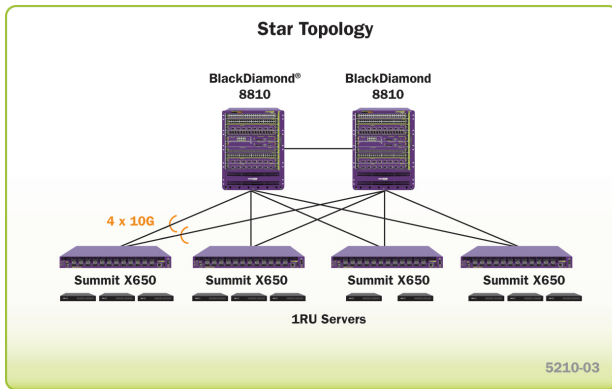
The versatile Summit X650 switch provides exceptional high-density Layer 2/3 switching. With ultra low latency and highly scalable IPv4 and IPv6 unicast and multicast routing, enterprise aggregation and core backbone deployment can be enabled in AC-powered and DC-powered environments.

Summit X650 simplifies network operation with an ExtremeXOS modular operating system across all Extreme Networks Ethernet switches. The ExtremeXOS operating system provides high availability and simplicity with one operating system everywhere in the network.

Target Applications

- Top-of-Rack switch for servers in enterprise data centers
- High-performance 10 gigabit core switch for a small network
- High-performance 10 gigabit aggregation switch in a traditional three-tiered network
- An ideal choice for 10 GbE Carrier Ethernet access and PON OLT aggregation
- Interconnect switch providing low latency connections for High Performance Cluster Computing (HPCC)





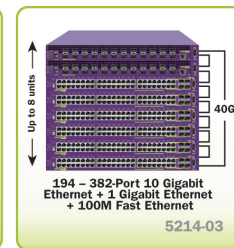
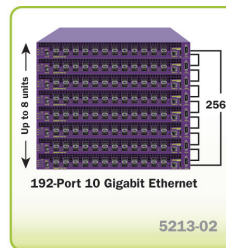
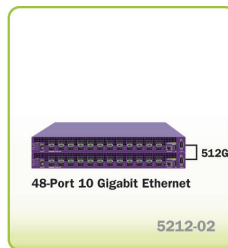
High Performance Switching and Routing

- 24-port 10 Gigabit Ethernet non-blocking switching at 363 million packets per second forwarding rate in 1RU form factor
- 48-port 10 Gigabit Ethernet non-blocking switching at 714 million packets per second with optional 512 Gbps stacking module
- 256 Gbps ultra high-speed stacking for up to eight units in a stack to provide up to 192 10 Gigabit Ethernet ports in one logically integrated unit
- SummitStack-V allows 10 GbE ports to be used as stacking ports, enabling the use of standard cabling and optics technologies used for 10 GbE and enabling long-distance stacking connectivity of up to 40 km
- 32-port 10 Gigabit Ethernet per 1RU height with optional eight-port 10 Gigabit Ethernet SFP+ interface module
- Low latency switching for HPC
- Priority-based Flow Control (PFC, or IEEE 802.1Qbb) allows network traffic to be controlled independently based on Class of Service (Summit X650-24t or -24x, part number 17001B or 17002B, with the VIM1-10G8X module, part number 17012B, only)
- Enhanced Transmission Selection (ETS, or IEEE 802.1Qaz) offers a management framework for assigning bandwidth to Class of Service-based traffic

Versatile Architecture

- From high-performance server switching to enterprise network aggregation and core deployment by supporting highly-scalable Layer 2 and IPv4/v6 unicast and multicast routing
- One network operating system for the Extreme Networks Ethernet switches everywhere in the network
- 10GBASE-T for up to 100 meters over UTP, and SFP+ for fiber and direct attach passive copper installation
- Flexible SummitStack architecture provides virtualized switching system for 10 gigabit, gigabit and Fast Ethernet ports

Virtualized Port Density in a Stack	Rack Units	Stacking Bandwidth
24-port 10G	1RU	–
32-port 10G	1RU	–
48-port 10G	2RU	512 Gbps
192-port 10G	8RU	256 Gbps
194 - 382-port 10G + 1G + 100M	8RU	40 Gbps



High Availability

- ExtremeXOS modular operating system for highly-available network operation
- Carrier-grade redundant networking protocol including EAPS
- Hot-swappable redundant AC/DC power supply and field-replaceable fan tray with front to back cooling



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