

7830 Series Switches

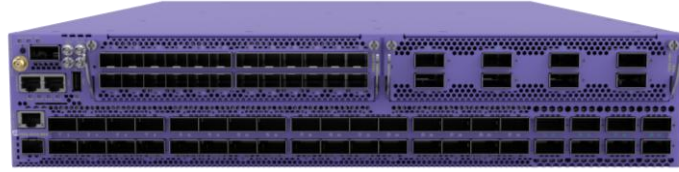


Highlights

- Next-generation high-performance core switch offering high-density 100G and 400G interfaces and Extreme Fabric in a compact 2RU fixed modular form factor
- Extreme Platform ONE™ or ExtremeCloud™ IQ management
- Extreme Platform ONE Security policy enforcement
- Automated provisioning and secure micro and macrosegmentation, edge to core, with Extreme Fabric

Key Hardware Features

- Native 32x100G QSFP28 + 8x400G QSFP-DD fixed ports and 2 expansion slots in a 2RU chassis
- Modular Versatile Interface Modules (VIMs) offering flexible port expansion options with 10G/25G, 100G and 400G ports
- 256-bit MACsec on all ports
- AC and DC power options
- Back-to-front and front-to-back airflow options
- Non-blocking, wire-speed design



Universal 400G Fixed-Modular Core Switch

Enterprise core and data center networks increasingly demand scalable, high-performance switching paired with network automation and security. Designed for high-performance 100G and 400G enterprise core and data center networks, the Extreme 7830 switch offers a fixed-modular design.

Powered by Extreme Fabric Engine operating system (Fabric), the 7830 simplifies new service deployment and supports secure end-to-end network macro and microsegmentation from network edge to the core.

The Extreme 7830 enables organizations to design networks that accommodate a variety of applications and east-west traffic patterns. With its high-density scale-out architecture, leading power efficiency, and airflow options, the 7830 platform delivers a solution that optimizes power, cooling, and equipment room space, wherever the network operating center might be.

Flexible port expansion with versatile interface modules providing 100G, 400G and 10G/25G port options help protect customer investment.

One model of the 7830 (7830-32CE-8DE) is available with the following port capacity:

- 32 x 100Gb QSFP28 ports, 8 x 400Gb QSFP-DD fixed MACsec ready ports and 2 unpopulated modular VIM slots
- 7830-VIM-24YE: 24 x 10Gb/25Gb SFP28 VIM, MACsec ready
- 7830-VIM-16CE: 16 x 100Gb QSFP28 VIM, MACsec ready
- 7830-VIM-8DE: 8 x 400Gb QSFP-DD VIM, MACsec ready
- 7830-VIM-24CE: 24 x 100Gb SFP-DD VIM, MACsec ready



7830-VIM-24YE
- 24x25G SFP28
- 1x10G/25G



7830-VIM-16CE
- 16x100G QSFP28
- 4x10G, 4x25G



7830-VIM-8DE
- 8x400G QSFP-DD
- 4x100G, 4x10G, 4x25G



7830-VIM-24CE
- 24x100G SFP56-DD
- 4x10G, 4x25G

Network Management Flexibility

The 7830 Universal Switch series are managed by Extreme Platform ONE™ or ExtremeCloud™ IQ from the cloud or on premises. Alternatively, 7830 on-box management can be done manually via a web-based GUI or generic command-line interface (CLI).

Extreme Platform ONE™

Extreme Platform ONE is the industry's first all-in-one AI for networking platform with integrated security and conversational, multimodal, and agentic AI.

- A composable workspace with personalized experiences provides the right information and capabilities to the right users.
- Multi-domain, multi-layer physical, access, fabric, RF, and service views for Extreme and third-party devices in cloud make it simpler to monitor, configure, and troubleshoot the network.
- Automation through built-in AI reduces time spent on manual tasks.
- Inventory, subscription, and contract management simplifies budgeting, planning, and compliance.
- Inclusive subscriptions make Extreme Platform ONE as simple to buy and renew as it is to use.

Key Product Capabilities

- Flexible support for up to 24 ports of 400 Gigabit Ethernet, 120 ports of 100 Gigabit Ethernet or up to 216 ports of 10/25 Gigabit Ethernet
- 2x Hot-swappable Ethernet Switch Modules
- Non-blocking, wire-speed switching architecture
- Integrated design optimized for low latency
- Flexible table architecture delivers MAC, ARP, and IP Routing scalability
- Feature-rich support for conventional VLAN, Link Aggregation, and Spanning Tree technologies*
- Support for IP Routing techniques including Static, RIP, OSPF, BGP, ECMP, VRRP, IP Anycast Gateway and VRF
- Support for Static, RIPng, OSPFv3, BGPv6 Peering, ECMP, VRRP, and VRF for IPv6 deployments*
- Extreme Networks Fabric Connect technology supporting L2 Virtual Service Networks (VSNs), Layer 3 Virtual Service Networks, Inter-VSN Routing, IP Shortcut Routing, IP Multicast-over-Fabric Connect and Fabric Connect-PIM Gateway, Fabric Attach Server and Client, Fabric Extend, and Zero-Touch Fabric Connect*
- MACsec and Enhanced Security Mode options
- High Availability Power and Cooling
 - Up to 2 field-replaceable, hot-swappable AC or DC internal Power Supplies
 - 4 field-replaceable Fan Modules

*Verify the OS version to confirm feature availability.

VIM Options

The 7830 supports Versatile Interface Modules (VIMs). Options include modules with 24 x 10Gb/25Gb SFP28, 16 x 100Gb QSFP28, 8 x 400Gb QSFP-DD, or 24 x 100Gb SFP-DD ports, all of which are MACsec capable.

Security

Extreme Universal hardware enables the extension and enforcement of Fabric and Extreme Platform ONE Security policies. Wherever users connect through the network, their access is secure and segmented. Extreme Platform ONE Security, which combines zero-trust network and application access into a single solution, automatically configures devices to enforce security policies with one click. When used in concert with Extreme Fabric, Extreme Platform ONE Security becomes part of the fabric services that automate segmentation and enable the network to flex for efficiency and resiliency while maintaining a consistent security policy end-to-end.

Network Fabric

The 7830 series switch supports Extreme's network fabric natively for network virtualization, automation, and network security and segmentation. No network fabric solution is more turnkey, resilient, or cost-effective. Fabric automates the discovery and onboarding of network and user devices. Its sub-second convergence reduces unplanned downtime and maintenance windows. Automated macro and microsegmentation and stealth topology enhance and automate network security across campus, data center, and branch. Extreme Fabric is also included free with the purchase of the 7830, no additional licenses or controllers are required.

External Interfaces

Model	Interfaces
7830-32CE-8DE	<ul style="list-style-type: none"> 2RU chassis with 32 x 100Gb QSFP28 fixed ports and 8 x 400Gb QSFP-DD fixed ports, 2 unpopulated VIM slots 100Gb ports can be channelized as 4 x 10Gb/25Gb SFP+ ports or 1 x 40Gb QSFP+ ports 400Gb ports can be channelized as 4 x 100Gb QSFP28 ports All ports MACsec capable 1 x RJ45 Serial console port 1 x 1G/10G SFP+, 1 x 100M/1G/10GBase-T management ports USB Type A storage port
7830-VIM-24YE	<ul style="list-style-type: none"> 24 x 10Gb/25Gb SFP28 Modular VIM All ports MACsec capable
7830-VIM-16CE	<ul style="list-style-type: none"> 16 x 100Gb QSFP28 Modular VIM 100Gb ports can be channelized as 4 x 10Gb/25Gb SFP+ ports or 1 x 40Gb QSFP+ ports All ports MACsec capable
7830-VIM-8DE	<ul style="list-style-type: none"> 8 x 400Gb QSFP-DD Modular VIM 400Gb ports can be channelized as 4 x 100Gb QSFP28 ports All ports MACsec capable
7830-VIM-24CE	<ul style="list-style-type: none"> 24 x 100Gb SFP-DD Modular VIM All ports MACsec capable

Chassis and VIM Specifications

Item	Description
Power Supplies	<ul style="list-style-type: none"> Modular 2400W AC power supply (up to 2 PSUs) Modular 2400W DC power supply (up to 2 PSUs) Front-Back and Back-Front airflow options
Fan Tray	<ul style="list-style-type: none"> 4 fan modules, N+1 redundant Front-Back and Back-Front airflow options
Chassis Dimensions	<ul style="list-style-type: none"> 87.8 mm (H) x 635 mm (D) x 439.6 mm (W) 3.46 in. (H) x 25 in. (D) x 17.31 in. (W)
Chassis Weight	<ul style="list-style-type: none"> 17.2 kg (37.92 lb.)
VIM Dimensions	<ul style="list-style-type: none"> 41.40 mm (H) x 279.91 mm (D) x 190.25 mm (W) 1.63 in. (H) x 11.02 in. (D) x 7.49 in. (W)
VIM Weight	<ul style="list-style-type: none"> 7830-VIM-24YE: 1.36 kg (3.00 lb.) 7830-VIM-16CE: 1.91 kg (4.21 lb.) 7830-VIM-8DE: 1.65 kg (3.64 lb.) 7830-VIM-24CE: 1.65 kg (3.64 lb.)
Performance	<ul style="list-style-type: none"> Line rate 25.6 Tbps Switching Capacity (12.8 Tbps Ingress, 12.8 Tbps Egress)
CPU/Memory	<ul style="list-style-type: none"> Intel 8 core CPU, 16 GB memory, 128 GB SSD
Packet Buffers	<ul style="list-style-type: none"> 80 MB

Power Supply Specifications

	2400W AC PSU XN-ACPWR-2400W-F/R-A	2400W DC PSU XN-DCPWR-2400W-F/R-A
Dimensions	40.13 mm (H) x 185.17 mm (D) x 73.5 mm (W) 1.58 in. (H) x 7.29 in. (D) x 2.89 in. (W)	40.13 mm (H) x 185.17 mm (D) x 73.66 mm (W) 1.58 in. (H) x 7.29 in. (D) x 2.9 in. (W)
Weight	0.95 kg (2.09 lb.)	0.93 kg (2.05 lb.)
Voltage Input Range	100-240VAC (range 90 to 264VAC)	48 to 60VDC (range 40Vdc to 72Vdc)
Line Frequency Range	50-60 Hz	N/A
PSU Input Socket	IEC 320 C20	Terminal Block
Operating Conditions	0°-45° C operation	0°-45° C operation

Product Specifications

Standards Compliance

IEEE – Bridging (Networking) and Network Management

- 802.1D MAC Bridges (a.k.a. Spanning Tree Protocol)
- 802.1p Traffic Class Expediting and Dynamic Multicast Filtering
- 802.1t 802.1D Maintenance
- 802.1w Rapid Reconfiguration of Spanning Tree
- 802.1Q Virtual Local Area Networking (VLAN)
- 802.1Qbp Equal-Cost Multi-Path (Shortest Path Bridging)
- 802.1Qcj Automatic Attachment to Provider Backbone Bridging (PBB) Services (Partial Support)
- 802.1s Multiple Spanning Trees (MSTP)
- 802.1v VLAN Classification by Protocol and Port
- 802.1ag Connectivity Fault Management
- 802.1ah Provider Backbone Bridges
- 802.1aq Shortest Path Bridging (SPB) MAC-in-MAC
- 802.1X Port-based Network Access Control
- 802.1AB–2005 Station and Media Access Control
- Connectivity Discovery; aka LLDP (partial support)
- 802.1AE Media Access Control Security
- 802.1AX Link Aggregation

Software Scaling

Fabric Engine

Primary Switch Table Scale

MAC Table	100,000
ARP Table	40,000
IPv4 Route Table	24,000

IP Routing

IP Interfaces (i.e. Routable VLANs)	1,000
VRRP Interfaces:	500
IPv4 VRFs	256
OSPF v2/v3 Neighbors	500
RIP Interfaces	200
BGP v4 & v6 peers	256
Anycast GW Interfaces	1000

Ordering Notes

Customers ordering an AC-bundled version of the 7830 Series switch receive the hardware switch along with a Base software license, integrated power supply, fan modules, and rack-mount kit.

Customers ordering a non-bundled version of the 7830 Series switch customers will only receive the hardware switch, Base software license, and rackmount kit. Customers in this case, must order Power Supply Units (PSU) and fan modules separately.

At least one Power Supply Unit (PSU) is required for 7830 operations. Additional power supplies, transceiver/optics, console cables, power cords, as well as Premier license, must be ordered separately.

Fabric

Max IS-IS Areas	1
Max Fabric Adjacencies (FC and FE)	255
Max Fabric Nodes per Area (BEB, BCB)	500 as Interior Node
Max BEBs per I-SID	2,000
L2 VSNs	4,000
L3 VSNs	256

Filters

IPv4 ACL Rules (Ingress/Egress)	4092
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Base Software and Optional Premier License

The Base software included with each 7830 unit supports most available software features. Certain features in Fabric Engine, however, require a Premier License to operate:

- Layer 3 Virtual Services Networks (VSNs)
- More than 4 active OSPF interfaces
- More than 16 BGP peers
- OpenAPI access
- Distributed Virtual Routing (DVR) Controller*
- Integrated Application Hosting (IAH)*
- VXLAN Gateway*

*Not yet supported

Ordering Information

Part Number	Description
7830-32CE-8DE	7830 Chassis with 32x100G QSFP28 ports and 8x400G QSFP-DD Fixed ports, 2 unpopulated VIM Slots, No PSU or Fans
7830-32CE-8DE-AC-F	7830 Chassis with 32x100G QSFP28 ports and 8x400G QSFP-DD Fixed ports, 2 unpopulated VIM Slots, 2x2400W AC PSU with FB Cooling, 4xFans with FB cooling
7830-32CE-8DE-AC-R	7830 Chassis with 32x100G QSFP28 ports and 8x400G QSFP-DD Fixed ports, 2 unpopulated VIM Slots, 2x2400W AC PSU with BF Cooling, 4xFans with BF cooling
7830-VIM-16CE	7830 VIM with 16x100G QSFP28 ports
7830-VIM-24CE	7830 VIM with 24x100G SFP56-DD ports

Accessories

Part Number	Description
XN-4P-RKMT302	4-Post Rackmount Kit
XN-ACPWR-2400W-FB	2400W AC PSU Front to Back Airflow
XN-ACPWR-2400W-BF	2400W AC PSU Back to Front Airflow
XN-DCPWR-2400W-FB	2400W DC PSU Front to Back Airflow
XN-DCPWR-2400W-BF	2400W DC PSU Back to Front Airflow
XN-FAN-007-FB	Fans with Front to Back Airflow
XN-FAN-007-BF	Fans with Back to Front Airflow
XN-RJ45-DB9-CONSOLE-CBL	RJ45 to DB9 console cable 6ft
XN-RJ45-USBA-CONSOLE-CBL	RJ45 to USB 2.0 Type A male console cable 6ft
XN-RJ45-USBC-CONSOLE-CBL	RJ45 to USB-C console cable 6ft

Software Licenses

Part Number	Description
7000-PRMR-LIC-P	Premier License for 7000 Series
7000-MACSEC-LIC-P	MACsec License for 7000 Series

Management Platform Software Subscriptions

Extreme Networks offers a simple, inclusive subscription program with Extreme Platform ONE. For additional details on subscriptions and product tiers, please refer to the [Extreme Platform ONE data sheet](#).

Warranty

All 7830 Series models are covered under Extreme's Universal LLW policy. For warranty details, please visit our [Policies and Warranties page](#).

Power Cords

In support of Extreme Networks green initiatives, power cords are not included with the 7830 but can be ordered separately. They should be specified at the time of ordering.

Console Cables

Console cables are not included with the 7830 in support of our green initiatives but can be ordered separately.

Optics/Transceivers

For a list of the optics and transceivers supported on the 7830 Series hardware, refer to our [Extreme Optics Compatibility Tool](#)

Maintenance Services

Extreme's maintenance and support services are provided by in-house engineering experts. We have a rate of over 90% first-person resolution, ensuring efficient operation of your business-essential network.

With 24x7x365 phone support, advanced parts replacement, and on-site support, we augment your staff with expert resources to help you mitigate critical network issues fast.

Visit [Extreme Maintenance Services](#) for more information.

Certifications

For information on Industry, Security, and Government certifications for 7830 Series models, contact your Sales Representative.

