X435 Series Switches

Highlights

- 8-port and 24-port models with Gigabit Ethernet connectivity
- 4x 100M/1Gb/2.5Gb integrated uplink ports
- 30W, 60W, and 90W PoE support for powering connected edge devices
- Silent operation with fanless 8-port models for noise-sensitive environments
- Power over Ethernet (PoE) passthrough on select 8-port models
- Intuitive and centralized cloud-based network management with ExtremeCloud™ IQ and ExtremeCloud IQ – Site Engine
- Automated connectivity to Extreme Fabric Connect for simplified and secure network fabric network services

Economical Edge Switches for Distributed Enterprises, Branches, and Small Sites

The X435 Series are economical, standalone Ethernet switches designed for enterprises looking for a value-based edge solution. Powered by one of Extreme's flagship operating systems, ExtremeXOS, X435 models deliver comprehensive Layer 2 switching, static routing, superior PoE capabilities, role-based policy, and advanced security services. This makes these switches ideal for enterprises looking for secure and cost-effective Ethernet connectivity in their branch/small sites or at their network edge.

The X435 Series is available in five models: three 8-port compact models, and two 24-port models. Select 8-port and 24-port models are equipped with up to four 100M/1Gb/2.5Gb SFP uplink ports. Certain models are available with IEEE 802.3at PoE+ to power connected IoT devices (such as IP phone and surveillance cameras), wireless access points, and other devices. All 8-port models are fanless, enabling silent operation ideal in noise-sensitive environments. The family also includes an 8-port model supporting PoE passthrough that can draw power from an upstream PoE switch while providing up to 100W of downstream PoE to a connected device, eliminating the need for a separate power supply unit.

Flexible PoE

The X435 Series supports PoE with IEEE standards-based 30W access ports and 60W or 90W uplink ports on select models. This allows PoE to eliminate the need for additional electrical cabling and circuits typically needed to power edge devices (such as IP phones or wireless access points). X435 models also use PoE to address unique edge switch and device needs: they enable perpetual PoE, which prevents service disruptions by maintaining PoE during switch restarts, as well as Fast PoE, which speeds time for endpoint startup by supplying power to edge or IoT devices before switch startup is completed.

PoE Power from Upstream Switch

The 8-port X435 model, X435-8P-2T-W, eliminates the need for a separate power supply unit by drawing its required power from an upstream PoE switch via its Type 4 (30W/60W/90W) links. Delivery of downstream PoE power is still enabled, with a maximum of 100W when drawn from both its 90W uplinks.

Audio Video Bridging

The X435 Series supports IEEE 802.1 Audio Video Bridging (AVB). This allows X435 models to deliver reliable, real-time audio/video transmission over Ethernet, meeting the quality of service required for today's high- definition, time-sensitive multimedia streams.

Fabric Attach

Fabric Attach is available on all X435 models to provide you with an automated connection to Extreme's Fabric Connect solution. Providing zero touch edge provisioning, Fabric Attach gives you access to Extreme Fabric Connect infrastructure's virtualized services and advanced security capabilities.

Role-Based Policy

X435 models support role-based policies centrally administered through the ExtremeControl policy manager. This policy framework allows your network administrators to define distinct roles or profiles to match your enterprise's operational groups. These defined roles can then be granted access to your chosen network services or applications and access privileges enforced both wired and wireless network access points.

Cloud-Based Network Management

The X435 Series can be managed by ExtremeCloud IQ and ExtremeCloud IQ – Site Engine for centralized switch management, giving you a consolidated view of users, devices, and applications across wired and wireless networks. ExtremeCloud IQ enables zero touch provisioning, allowing you to quickly bring new X435 switches online and a granular view that enables efficient inventory and network topology management.

Alternatively, X435 on-box management can be done manually via a web-based GUI or generic command-line interface (CLI).

External Ports and Slots

Switch Model	Ports/Slots
X435-8T-4S	• 8 x 10/100/1000BASE-T ports ○ Full/ Half-Duplex (auto-sensing) • 4 x 100M/1/2.5GBASE-X SFP uplink ports* (unpopulated) • 1 x Serial (console port RJ-45) • 1 x USB A port for external USB flash
X435-8P-4S	• 8 x 10/100/1000BASE-T 802.3at (30W) PoE ports ○ Full/ Half-Duplex (auto-sensing) • 4 x 100M/1/2.5GBASE-X SFP uplink ports* (unpopulated) • 1 x Serial (console port RJ-45) • 1 x USB A port for external USB flash
X435-8P-2T-W	• 8 x 10/100/1000BASE-T 802.3at (30W) access ports ○ Full/ Half-Duplex (auto-sensing) • 2 x 10/100/1000BASE-T 802.3bt Type 3/4 (60W/90W) PoE ports • 1 x Serial (console port RJ-45) • 1 x USB A port for external USB flash
X435-24T-4S	• 24 x 10/100/1000BASE-T access ports ○ Full/ Half-Duplex (auto-sensing) • 4 x 100M/1/2.5GBASE-X SFP uplink ports* (unpopulated) • 1 x Serial (console port RJ-45) • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB A port for external USB flash
X435-24P-4S	• 24 x 10/100/1000BASE-T 802.3at (30W) PoE ports ○ Full/ Half-Duplex (auto-sensing) • 4 x 100M/1/2.5GBASE-X SFP uplink ports* (unpopulated) • 1 x Serial (console port RJ-45) • 1 x 10/100/1000BASE-T out-of-band management port • 1 x USB A port for external USB flash

*With ExtremeXOS 32.2, 2.5 Gb uplink support has been qualified between the X435 and 5520-24X models using specific 10 Gb transceivers. See the Extreme Optics Compatibility Tool for details.

Performance and Scaling

Switch Model	Max Active 10/100/1000BASE- T Ports	Max Active 1Gb/2.5Gb* SFP Ports	Aggregated Switch Bandwidth	Frame Forwarding Rate
X435-8T-4S	8	4	36 Gbps	26.8 Mpps
X435-8P-4S	8	4	36 Gbps	26.8 Mpps
X435-8P-2T-W	10	–	20 Gbps	14.9 Mpps
X435-24T-4S	24	4	68 Gbps	50.6 Mpps
X435-24P-4S	24	4	68 Gbps	50.6 Mpps

Software Scaling

- Layer 2/MAC Addresses: 16K
- 4096 VLANs/VMANs (2 VLANs reserved for system use)
- IPv4 LPM Entries: 32
- IPv4 Hosts: 3100
- IPv6 LPM Entries: 16
- IPv6 Hosts: 500
- IP Multicast groups: 64
- IP Multicast (s,v,g) entries: 1500
- 9216 Byte Max Packet Size (Jumbo Frame)

- IP Multicast (s,v,g) entries: 1500
- 9216 Byte Max Packet Size (Jumbo Frame)
- 8 queues per port
- 1K ingress ACL rules

One Policy Scaling

- Up to 192 authenticated policy users per switch
- Policy Profiles: 63
- Unique Permit/Deny Rules per switch: 184

Weights and Dimensions

Switch Model	Weight	Dimensions
X435-8T-4S	1.87 kg (4.12 lb)	Height: 43.43 mm (1.71 in.) Width: 320.04 mm (12.60 in.) Depth: 200.66 mm (7.90 in.)
X435-8P-4S	2.20 kg (4.85 lb)	
X435-8P-2T-W	1.43 kg (3.15 lb)	Height: 43.94 mm (1.73 in.) Width: 208.28 mm (8.20 in.) Depth: 256.54 mm (10.10 in.)
X435-24T-4S	2.95 kg (6.5 lb)	Height: 43.94 mm (1.73 in.) Width: 441.96 mm (17.40 in.) Depth: 254.00 mm (10.00 in.)
X435-24P-4S	3.48 kg (7.67 lb)	

PoE Power

PoE Power Budget

Switch Model	Max PoE Budget
X435-8P-4S	124W
X435-8P-2T-W	100W*
X435-24P-4S	370W

*Maximum supplied PoE power when drawing power over 2 x 90W PoE input links. See PoE Power Budget Values table for other X435-8P-2T-W configurations and respective PoE budget values.

PoE Power Budget Values for X435-8P-2T-W

PoE Input link(s)*	Max PoE Budget
2 x 90W	100W
1 x 90W	45W
2 x 60W	65W
1 x 60W	25W
2 x 30W	25W
1 x 30W	0W

*From an upstream X465 (or equivalent) PoE switch

Minimum/Maximum Power Consumption and Heat Dissipation

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
X435-8T-4S	6.5	22.1	16.7	57.1
X435-8P-4S	8.0	27.3	155.2	106.4
X435-8P-2T-W	10.9	37.2	122.5	76.7
X435-24T-4S	7.8	26.5	21.3	72.7
X435-24P-4S	12.9	43.9	449.8	238.3

*Includes maximum PoE load (W) through the switch
**Does not include PoE load heat dissipated through external electronic load

Fan and Acoustic Noise

X435-24P-4S

Item	Measurement
Ambient temperature	25°C
PoE	370W
Main Fan Speed (% of max)	45%
PSU1 + PSU2	1100W (1/2 of max POE power)
Bystander sound pressure	45.4
Declared sound pressure (LWAd)	56

Note: Acoustic noise levels shown here represent noise emitted by the switch at room ambient temperatures. Normal operating temperature range: 0°C to 45°C.

Product Specifications

CPU/Memory
- ARM A9 CPU
- 512 MB DRAM
- 128 MB Flash

Environmental

Environmental Specifications
- EN/ETSI300 019-2-1 v2.1.2 – Class 1.2 Storage
- EN/ETSI300 019-2-2 v2.1.2 – Class 2.3 Transportation
- EN/ETSI300 019-2-3 v2.1.2 – Class 3.1e Operational
- EN/ETSI300 753 (1997-10) – Acoustic Noise
- ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance
- EU RoHS 2011/65/EU
- EU WEEE 2012/19/EU
- China RoHS SJ/T 11363-2006
- Taiwan RoHS CNS 15663 (2013.7)

Operating Conditions
- Temperature
  - 8-port X435 models: 0°C to 40°C (32°F to 104°F)
  - 24-port X435 models: 0°C to 45°C (32°F to 113°F)
- Humidity: 10% to 95% relative humidity, non-condensing
- Altitude: 0 to 3,000 meters (9,850 feet)
- Shock (half sine) 30m/s^2 (3G), 11 ms, 60 shocks
- Random vibration: 3 Hz to 500 Hz at 1.5G rms

Packaging and Storage Specifications
- Temp: -40°C to 70°C (-40°F to 158°F)
- Humidity: 10% to 95% relative humidity, non-condensing
- Packaged Shock (half sine): 180 m/s^2 (18G), 6 ms, 600 shocks
- Packaged Vibration: 5 Hz to 62 Hz at velocity 5 mm/s, 62Hz to 500Hz at 0.2 G
- Packaged Random Vibration: 5Hz to 20Hz at 1.0 ASD w/-3 dB/ oct. from 20 Hz to 200 Hz
- Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE
- UL60950-1
- UL62368-1
- Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
- CDRH Letter of Approval (US FDA Approval)
- CAN/CSA 22.2 No. 60950-1
- CAN/CSA No. 22.2 62368-1-14

European ITE
- EN60950-1, EN 62368-1
- EN60825-1 Class 1 (Lasers Safety)
- 2014/ 35/ EU Low Voltage Directive

International ITE
- CB Report & Certificate per IEC 60950-1 AS/NZS 60950-1 (Australia /New Zealand)
- IEC 62368-1
- GB 4943.1-2011
- CNS 14336-1

EMI/EMC Standards

North American EMC for ITE
- FCC CFR 47 Part 15 Class A (USA)
- ICES-003 Class A (Canada)

European EMC Standards
- EN 55032 Class A
- EN 55024
- EN 55035
- EN 61000-3-2,2014 (Harmonics)
- EN 61000-3-3 2013 (Flicker)
- EN 300 386 (EMC Telecommunications)
- 2014/30/EU/EMC Directive
- EN 55011 Class A

International EMC Certifications
- CISPR 32, Class A (International Emissions)
- AS/NZS CISPR 32
- CISPR 24 Class A (International Immunity)
- IEC 61000-4-2 / EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria A
- IEC 61000-4-3 /EN 61000-4-3 Radiated Immunity 10V/m, Criteria A
- IEC 61000-4-4 / EN 61000-4-4 Transient Burst, 1 kV, Criteria A
- IEC 61000-4-5 /EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria A
- IEC 61000-4-6 Conducted Immunity, 0.15-80 MHz, 10V/m unmod. RMS, Criteria A
- IEC/EN 61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C
- IEC 61000-4-8 / EN 61000-4-8
- CISPR 11 Class A
- GB/T 9254-2008

Country Specific
- VCCI Class A (Japan Emissions)
- ACMA RCM (Australia Emissions)
- CCC Mark (China)
- KCC Mark, EMC Approval (Korea)
- EAC Mark (Custom Union)
- NRCS/ICASA Mark (South Africa)
- BSMI Mark (Taiwan)

Telecom Standards
- CE 2.0 Compliant

IEEE 802.3 Media Access Standards
- IEEE 802.3bz 2.5GBASE-X
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3at PoE Plus
- IEEE 802.3bt Type 3 PoE
- IEEE 802.3az Energy Efficient Ethernet

Ordering Notes

Each X435 Series SKU includes the base unit along with integrated power supply, wall or rack-mount kit (depending on model), and fan module (when required). It also includes an ExtremeXOS Value Edge Feature software license. Console cables, power cords, transceiver/optics, and optional AVB Feature Pack must be ordered separately.

Ordering Information

X435 Systems

Part Number	Product Name	Description
X435-8T-4S	X435-8T-4S system	X435 switch with 8x10/100/1000BASE-T full/half-duplex ports, 4x1G/2.5G unpopulated SFP ports, 1 AC PSU, wall-mount kit (16573), ExtremeXOS Value Edge license, fanless
X435-8P-4S	X435-8P-4S system	X435 switch with 8x10/100/1000BASE-T PoE+ full/half-duplex ports, 4x1G/2.5G unpopulated SFP ports, 1 AC PSU, wall-mount kit (16573), ExtremeXOS Value Edge license, fanless
X435-8P-2T-W	X435-8P-2T-W system	X435 switch with 8 x 10/100/1000BASE-T PoE+ full/half-duplex ports, 2x10/100/1000BASE- T802.3bt Type 4 (30W/60W/90W) uplink ports (up to 100w PoE passthrough), wall-mount kit (16573), ExtremeXOS Value Edge license, fanless
X435-24T-4S	X435-24T-4S system	X435 switch 24x10/100/1000BASE-T full/half-duplex ports, 4x1G/2.5G unpopulated SFP ports, 1 AC PSU, rack-mount kit (XN-2P-RMKIT-004), ExtremeXOS Value Edge license, fanless
X435-24P-4S	X435-24P-4S system	X435 switch 24x10/100/1000BASE-T PoE+ full/half-duplex ports, 4x1G/2.5G unpopulated SFP ports, 1 AC PSU, rack-mount kit (XN-2P-RMKIT-004), ExtremeXOS Value Edge license

Accessories

Part Number	Product Name	Description
XN-2P-RMKIT-OO2	Optional Rack Mount Kit for X435-8T-4S & X435-8P-4S	Optional Rack Mount kit for mounting a single X435-8T-4S or X435-8P-4S unit in a 1 RU rack space
XN-2P-RMKIT-OO3	Optional Rack Mount Kit for X435-8P-2T-W	Optional Rack Mount kit for mounting a single X435-8P-2T-W unit in a 1 RU rack space
XN-2P-RMKIT-OO4	Spare Rack Mount Kit for X435 24-port models	Spare Two Post Rack Mount kit for use with X435 24-port models
16572	Optional Dual Rack Mount Kit for X435-8P-2T-W	Kit for mounting two X435-8P-2T-W switches side-by-side in a 19-inch rack
16573	Spare Wall Mount Kit for X435 8-port models	Spare Wall Mounting kit for use X435 8-port models
XN-RJ45-DB9-CONSOLE-CBL	RJ45 to DB9 Console cable	RJ45 to DB9 console cable 6ft
XN-RJ45-USBA-CONSOLE-CBL	RJ45 to USBA Console cable	RJ45 to USB 2.0 Type A male console cable 6ft
XN-RJ45-USBC-CONSOLE-CBL	RJ45 to USBC Console cable	RJ45 to USB-C console cable 6ft

Software Licenses

Part Number	Product Name	Description
EXOS-AVB-FP-X435	X435 Multimedia (AVB) License	Audio Video Bridging Feature Pack for X435 Series.

ExtremeCloud IQ Pilot Licenses

Part Number	Product Name	Description
XIQ-PIL-S-C-EW	XIQ Pilot SAAS Subscription and EW support (1 device)	ExtremeCloud IQ Pilot SaaS Subscription and EW SaaS support for one (1) device
XIQ-PIL-S-C-PWP	XIQ Pilot SAAS Subscription and PWP support (1 device)	ExtremeCloud IQ Pilot SaaS Subscription and PWP SaaS support for one (1) device

Warranty

All X435 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 X435 but can be ordered separately. They should be specified at time of ordering.

Console Cables

Console cables are not included with the X435 in support of our green initiatives but can be ordered separately.

Optics/Transceivers

For a list of the optics and transceivers supported on the X435 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 X435 Series models, contact your Sales Representative.