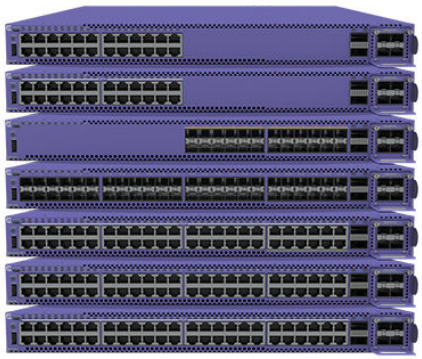
5520 Series

Highlights

- Fixed 24 and 48-port models with gigabit and multi-gigabit support
- Choice of operating system (OS) with universal dual-persona hardware
- Intuitive and centralized cloud-based network management with ExtremeCloud™ IQ and ExtremeCloud IQ - Site Engine
- Fabric-enabled operations with Extreme Fabric Connect for simplified and secure network provisioning and automation

Key Hardware Features

- Choice of 10Gband 25Gb modular uplink ports
- 30W, 60W and 90W PoE support for powering connected devices
- 200Gb per unit stacking of up to eight switches
- Hot-swappable, redundant power supplies and fans
- MACsec on access and modular uplink ports for secure link encryption
- Extended Edge Switching controlling bridge in support of V300/V400 edge devices
- Non-blocking, wire-speed design
- Front to Back cooling on all models and Back to Front cooling option on select models



Universal Edge/Aggregation Switch Platform

The 5520 Series is a family of high-performance, feature-rich edge and aggregation switches designed for the next-generation digital enterprise. Available in 24 and 48-port 1 Gigabit models, 1/2.5/5 Gigabit multi-rate models, as well as a 24-port 10 Gigabit model, the 5520 Series provides end-to-end secure network segmentation and advanced policy capabilities that can be deployed across a range of edge, aggregation, and wiring-closet environments. As a universal hardware platform, the 5520 offers a user-selectable choice of Extreme's flagship switch operating systems for a uniquely flexible platform.

The 5520 supports 10Gb and 25Gb modular uplinks for flexible linkage to other switches or devices over a range of media. Extended Edge Switching controlling bridge is also available in support of V300/V400 edge devices, and select models offer a choice between Front to Back or Back to Front cooling. The 5520 Series offers 30W, 60W, and 90W PoE, making it an ideal wired backend for wireless APs or in support of next-gen powered Ethernet devices, such as digital signage, pan-tilt-zoom cameras, smart lighting, or point-of-sale terminals.

Universal Hardware Platform

The 5520 comes with a dual-persona capability, allowing you to choose your OS. Either the Switch Engine (EXOS)[1] or Fabric Engine (VOSS)[2] OS can be selected at switch start-up or changed at a later stage. When selected, the switch assumes the features and capabilities of that OS.

5520 OS selection can also be automated with ExtremeCloud IQ so that the desired OS can be automatically loaded at switch start-up, facilitating remote OS enablement.

[1] Switch Engine is the new name for ExtremeXOS (EXOS) on all universal switch platforms, starting with Version 31.6.

[2] Fabric Engine is the new name for the VSP Operating System Software (VOSS) on all universal switch platforms, starting with Version 8.6.

Cloud-Based Network Management

The 5520 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 for efficient inventory and network topology management. ExtremeCloud IQ enables zero touch provisioning, allowing you to quickly bring new 5520 switches online as well as select the OS persona.

Alternatively, 5520 on-box management can be done manually via a web-based GUI or generic command-line interface (CLI).

Ethernet Fabric Services

The 5520 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine and Extreme's IP Fabric when running Switch Engine. It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 Fabric services.

Extreme's Fabric Connect and IP Fabric enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

Power over Ethernet (PoE)

All 5520 models support 30W, 60W, and 90W PoE that conforms with IEEE 802.3bt. This enables the 5520 to address the needs of powered edge devices, while eliminating the need for additional electrical cabling and circuits. In addition, 5520 PoE models support perpetual and fast PoE for even more efficient and reliable powered edge device operation

VIM Options for Flexible Uplinks

The 5520 supports Versatile Interface Modules (VIMs), providing flexible uplink capabilities with a single VIM slot. VIM options include four-port 10Gb or 25Gb modules that include LRM and 256-bit MACsec support.

High-Performance Stacking

The 5520 Series supports high-speed 200Gb* stacking when running Switch Engine via its two built-in QSFP28 stacking ports. Up to eight systems can be stacked using qualified QSFP+ direct attach cables and optical transceivers.

*200Gb stacking available with Switch Engine 31.6

Audio Video Bridging

The 5520 series supports IEEE 802.1 Audio Video Bridging (AVB) when running Switch Engine OS. This allows 5520 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.

Product Specifications

External Interfaces

Switch Model	Interfaces

5520-24T
5520-24T-BASE
	• 24 x 10/100/1000BASE-T ports
	  ◦ Full / Half-Duplex (autosensing)
	  ◦ MACsec-capable
	• 2 x Stacking/QSFP28 ports* (unpopulated)
	• 1 x Serial console port (RJ-45)
	• 1 x 10/100/1000BASE-T out-of-band management port
	• 2 x USB A ports for management or external USB flash
	• 1 x USB Micro-B console port
	• 1 x VIM slot

5520-24W	• 24 x 10/100/1000BASE-T 802.3bt (90W) ports
	  ◦ Full / Half-Duplex (autosensing)
	  ◦ MACsec-capable
	• 2 x Stacking/QSFP28 ports* (unpopulated)
	• 1 x Serial console port (RJ-45)
	• 1 x 10/100/1000BASE-T out-of-band management port
	• 2 x USB A ports for management or external USB flash
	• 1 x USB Micro-B console port
	• 1 x VIM slot

5520-48T
5520-48T-BASE
	• 48 x 10/100/1000BASE-T ports
	  ◦ Full / Half-Duplex (autosensing)
	  ◦ MACsec-capable
	• 2 x Stacking/QSFP28 ports* (unpopulated)
	• 1 x Serial console port (RJ-45)
	• 1 x 10/100/1000BASE-T out-of-band management port
	• 2 x USB A ports for management or external USB flash
	• 1 x USB Micro-B console port
	• 1 x VIM slot

5520-48W	• 48 x 10/100/1000BASE-T 802.3bt (90W) ports
	  ◦ Full / Half-Duplex (autosensing)
	  ◦ MACsec-capable
	• 2 x Stacking/QSFP28 ports* (unpopulated)
	• 1 x Serial console port (RJ-45)
	• 1 x 10/100/1000BASE-T out-of-band management port
	• 2 x USB A ports for management or external USB flash
	• 1 x USB Micro-B console port
	• 1 x VIM slot

Switch Model	Interfaces

5520-12MW-36W	• 12 x 100M/1/2.5/5GBASE-T 802.3bt (90W) PoE ports
	  ◦ Full-Duplex
	  ◦ MACsec-capable
	• 36 x 10/100/1000BASE-T 802.3bt (90W) PoE ports
	• Full / Half-Duplex
	• MACsec-capable
	• 2 x Stacking/QSFP28 ports* (unpopulated)
	• 1 x Serial console port (RJ-45)
	• 1 x 10/100/1000BASE-T out-of-band management port
	• 2 x USB A ports for management or external USB flash
	• 1 x USB Micro-B console port
	• 1 x VIM slot

5520-48SE 5520-48SE-BASE	• 48 x 100/1000BASE-X (SFP) ports (unpopulated) ◦ MACsec-capable • 2 x Stacking/QSFP28 ports* (unpopulated) • 1 x Serial console port (RJ-45) • 1 x 10/100/1000BASE-T out-of-band management port • 2 x USB A ports for management or external USB flash • 1 x USB Micro-B console port • 1 x VIM slot
5520-24X 5520-24X-BASE	• 24x 100M/1G/10GBASE-X (SFP+) ports** (unpopulated) • 2 x Stacking/QSFP28 ports* (unpopulated) • 1 x Serial console port (RJ-45) • 1 x 10/100/1000BASE-T out-of-band management port • 2 x USB A ports for management or external USB flash • 1 x USB Micro-B console port • 1 x VIM slot
5520-VIM-4X	• 4 x 1/10GBASE-X SFP+ ports (unpopulated)

5520-VIM-4XE	• 4 x 1/10GBASE-X SFP+ ports (unpopulated)
	  ◦ LRM-capable
	  ◦ MACsec-capable

5520-VIM-4YE	• 4 x 10/25GBASE-X SFP28 ports (unpopulated) ◦ MACsec-capable

* Notes on use of the 2 x Stacking/QSFP28 ports

1. With Switch Engine, the 2 x QSFP28 ports can be used for stacking or as Ethernet uplink ports (when not stacking); stacking data rate is 40Gb or 50Gb per port
2. With Fabric Engine, the 2 x QSFP28 ports can be used as Ethernet uplink ports if in non-Fabric mode or if no VIM is present as of the VOSS 8.4.2 release.
3. Ethernet uplink QSFP28 data rate options per port, with channelization: 4 x 10Gb SFP+, 4 x 25Gb SFP28, 1 x 40Gb QSFP+ (supported with Switch Engine and Fabric Engine); 2 x 50Gb (Switch Engine only)

** 100M on 5520-24 x access ports supported with Switch Engine and with Fabric Engine (minimum Release 8.6).

Performance and Scale

Switch Model	Max Active 10Mb/ 100Mb/ 1000Mb ports	Max Active 100Mb/1Gb / 2.5Gb/5Gb ports	Max Active 100Mb/1Gb SFP ports	Max Active 1Gb/10Gb SFP+ ports*	Max Active 25Gb SFP28 ports*	Max Active 40Gb QSFP+ ports**	Max Active 50Gb ports**	Max Active 40Gb/50Gb Stacking ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5520-24T 5520-24T-BASE	24	0	0	12	12	2	4	2	648Gbps	482.1Mpps
5520-24W	24	0	0	12	12	2	4	2	648Gbps	482.1Mpps
5520-48T 5520-48T-BASE	48	0	0	12	12	2	4	2	696Gbps	517.8Mpps
5520-48W	48	0	0	12	12	2	4	2	696Gbps	517.8Mpps
5520-12MW-36W	36	12	0	12	12	2	4	2	792Gbps	589.3Mpps
5520-48SE 5520-48SE- BASE	0	0	48	12	12	2	4	2	696Gbps	517.8Mpps
5520-24X 5520-24X-BASE	0	0	24	36	12	2	4	2	1080Gbps	803.5Mpps

* Includes 8 ports available through channelization of the 2 x QSFP28 ports when not used for stacking with Switch Engine, or with VOSS 8.4.2 or later

** Available through channelization of the 2 x QSFP28 ports when these ports are not used for stacking in Switch Engine, or with VOSS 8.4.2 or later

***50Gb stacking with Switch Engine mode only 31.6 or later

Software Scaling Values

5520 with Switch Engine

MAC Table: 114,688/65,536
IPv4ARP Table: 60,000/41,000*
IPv4Route Table: 81,000/16,000*
IPMulticast Entries (S,G,V): 43,000/24,000*
IPv6ND Table: 18,000
IPv6Route Table: 40,000/8,000*
ACL (Ingress/Egress): 9,216/1,024
QoS Egress Queues/Port: 8
VLANs:4,094
RoutedVLANS: 2,048

* First value is the maximum; second is the default. Scaling limits are configurable.See the Switch Engine Release Notes for additional details

OnePolicy Scaling

Policy Profiles: 63
Unique permit/deny rules per switch: 8,120
Authenticated policy users/switch: 9,216

5520 with Fabric Engine

MACTable: 40,960 (81,920 non-Fabric)
IPv4ARPARP/IP Host Table: 16,000/48,000
IPv4Route Table: 15,500
IPMulticast Routes: 4,000
IPv6ND Table: 16,000
IPv6Route Table: 7,500
IPv4ACL (Ingress/Egress): 1,024/336
QoSEgress Queues/Port: 8
VLANs: 4,059
Routed VLANs: 500

Fabric Connect Scaling

Fabric Adjacencies per switch: 128
Fabric nodes per area (BEB + BCB): 800
BEB Nodes per VSN: 500
L2VSN: 3500
L3VSN: 256

Weights and Dimensions

Switches

Switch Model	Weight*	Physical Dimensions	
		Chassis Only	With PSU
5520-24T 5520-24T-BASE	5.54 kg (12.21 lb.)	Height: 44 mm (1.73 in.) Width: 441 mm (17.36 in.) Depth: 442 mm (17.40 in.)	Height: 44 mm (1.73 in.) Width: 441 mm (17.36 in.) Depth: 449 mm (17.68 in.)
5520-24W	6.25 kg (13.78 lb.)		
5520-48T 5520-48T-BASE	5.76kg (12.70 lb.)		
5520-48W	6.06 kg (13.36 lb.)		
5520-12MW-36W	6.33 kg (13.96 lb.)		
5520-48SE 5520-SE-BASE	5.70 kg (12.57 lb.)		
5520-24X 5520-24X-BASE	6.25 kg (13.78 lb.)		

* Switch weights include fans but no PSUs

VIM Modules

Model	Weight	Physical Dimensions
5520-VIM-4X	0.17kg (0.37 lb.)	Height: 40.8 mm (1.61 in.) Width: 48.8 mm (1.92 in.) Depth: 146.3 mm (5.76 in.)
5520-VIM-4XE	0.20kg (0.44 lb.)	
5520-VIM-4YE	0.21kg (0.46 lb.)	

Power Supplies

Model	Weight*	Physical Dimensions
10953 (350W AC)	1.08 kg (2.38 lb.)	Height:82.5 mm (3.25 in.) Width: 40 mm (1.57 in.) Depth: 287 mm (11.30 in.)
10951 (715W AC)	1.16kg (2.56 lb.)	

Model	Weight*	Physical Dimensions
10941 (1100W AC)	1.16kg (2.56 lb.)	
XN-ACPWR-2000W-F (2000W AC)	1.16 kg (2.56 lb.)	Height: 75 mm (2.95 in.) Width: 40 mm (1.57 in.) Depth: 292 mm (11.50 in.)

Power Supply Unit Specifications

	10953	10951	10941	XN-ACPWR-2000-F*
Voltage Input Range (Nominal)	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC
Line Frequency Range	50Hz to 60Hz	50Hz to 60Hz	50Hz to 60Hz	50Hz to 60Hz
Power Supply Input Socket	IEC/EN60320 C14	IEC/EN60320 C16	IEC/EN60320 C16	IEC/EN60320 C16
Power Cord Input Plug	IEC/EN60320 C15	IEC/EN60320 C15	IEC/EN60320 C15	IEC/EN60320 C15
Operating Temperature	0°C to 55°C (32°F to 131°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 55°C (32°F to 131°F) Normal Operation

*200-240VAC is required to achieve full 2000W output. If run at 100-120VAC, output is limited to 1100W.

Power Supply Unit Specifications (cont.)

	XN-ACPWR-350W-FB	XN-ACPWR-350W-BF	XN-ACPWR-715W-FB	XN-ACPWR-1100W-FB	XN-ACPWR-2000W-FB*
Voltage Input Range (Nominal)	100-240VAC	100-240VAC	100-240VAC	100-240VAC	100-240VAC
Line Frequency Range	50Hz to 60Hz	50Hz to 60Hz	50Hz to 60Hz	50Hz to 60Hz	50Hz to 60Hz
Power Supply Input Socket	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C16	IEC/EN60320 C16	IEC/EN60320 C16
Power Cord Input Plug	IEC/EN60320 C15	IEC/EN60320 C15	IEC/EN60320 C15	IEC/EN60320 C15	IEC/EN60320 C15
Operating Temperature	0°C to 55°C (32°F to 131°F) Normal Operation	0°C to 55°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation

*200-240VAC is required to achieve full 2000W output. If run at 100-120VAC, output is limited to 1100W.

PoE Power Budget

Switch Model	1 x 715W	2x 715W	1 x 1100W	2 x 1100W	1 x 2000W @ 100-120VAC	1 x 2000W @ 200-240VAC	2 x 2000W @ 100-120VAC	2 x 2000W @ 200-240VAC
5520-24W	494W	1079W	879W	1781W	879W	1779W	1869W	2160W
5520-48W	483W	1068W	868W	1770W	868W	1768W	1858W	3568W
5520-12MW-36W	464W	1049W	849W	1751W	849W	1749W	1839W	3549W

Note: It is recommended that primary and secondary power supply units (PSUs) be of the same type to support optimal PoE operation.

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)**
5520-24T 5520-24T-BASE	52	176	142	483
5520-24W	54	182	2480	1092
5520-48T 5520-48T-BASE	60	205	171	584
5520-48W	59	203	4100	1817
5520-12MW-36W	66	224	4095	1862
5520-48SE 5520-48SE-BASE	61	209	255	872
5520-24X 5520-24X-BASE	48	165	171	585

* Includes maximum PoE load (W) through the switch

** Does not include PoE load heat dissipated through external electronic load

Fan and Acoustic Noise

<table>
<tr><th>Switch Model</th><th colspan="2">Acoustic Information</th></tr>
<tr><td rowspan="2">5520-24T
5520-24T-BASE</td><td colspan="2">Typical: Single 350W AC PSU, no VIM
Maximum: Dual 350W AC PSU, 5520-VIM-4YE</td></tr>
<tr><td>Bystander Sound Pressure
39.6 dB(A),0˚C to 35˚C (32˚F to 95˚F) (Typical)
77.5 dB(A), 50˚C (122˚F) (Maximum)</td><td>Sound Power
5.1 B, 0˚C to 35˚C (32˚F to 95˚F) (Typical)
8.46 B, 50˚C (122˚F) (Maximum)</td></tr>
<tr><td>5520-24W</td><td colspan="2">Typical: Single 715W AC PSU, no VIM
Maximum: Dual 1100W AC PSU, 5520-VIM-4YE</td></tr>
</table>

Switch Model	Acoustic Information	
	Bystander Sound Pressure 50.4 dB(A),0˚C to 35˚C (32˚F to 95˚F) (Typical) 67.1 dB(A), 25˚C (77˚F) (Maximum) 78.9 dB(A), 50˚C (122˚F) (Maximum)	Sound Power 6 B, 0˚C to 35˚C (32˚F to 95˚F) (Typical) 7.61 B, 25˚C (77˚F) (Maximum) 8.6 B, 50˚C (122˚F) (Maximum)
5520-48T 5520-48T-BASE	Typical: Single 350W AC PSU, no VIM Maximum: Dual 350W AC PSU, 5520-VIM-4YE	
	Bystander Sound Pressure 39.0 dB(A),0˚C to 35˚C (32˚F to 95˚F) (Typical) 79.0 dB(A), 50˚C (122˚F) (Maximum)	Sound Power 4.9 B, 0˚C to 35˚C (32˚F to 95˚F) (Typical) 8.52 B, 50˚C (122˚F) (Maximum)
5520-48W	Typical: Single 1100W AC PSU, no VIM Maximum: Dual 2000W AC PSU (240VAC), 5520-VIM-4YE	
	Bystander Sound Pressure 64.3 dB(A),0˚C to 35˚C (32˚F to 95˚F) (Typical) 69.1 dB(A), 25˚C (77˚F) (Maximum) 79.4 dB(A), 50˚C (122˚F) (Maximum)	Sound Power 7.24 B, 0˚C to 35˚C (32˚F to 95˚F) (Typical) 7.65 B, 25˚C (77˚F) (Maximum) 8.6 B, 50˚C (122˚F) (Maximum)
5520-12MW-36W	Typical: Single 1100W AC PSU, no VIM Maximum: Dual 2000W AC PSU (240VAC), 5520-VIM-4YE	
	Bystander Sound Pressure 62.7 dB(A),0˚C to 35˚C (32˚F to 95˚F) (Typical) 69.2 dB(A), 25˚C (77˚F) (Maximum) 78.8 dB(A), 50˚C (122˚F) (Maximum)	Sound Power 7.25 B, 0˚C to 35˚C (32˚F to 95˚F) (Typical) 7.64 B, 25˚C (77˚F) (Maximum) 8.6 B, 50˚C (122˚F) (Maximum)
5520-48SE 5520-48SE-BASE	Typical: Single 350W AC PSU, no VIM Maximum: Dual 350W AC PSU, 5520-VIM-4YE	
	Bystander Sound Pressure 41.4 dB(A),0˚C to 35˚C (32˚F to 95˚F) (Typical) 77.9 dB(A), 50˚C (122˚F) (Maximum)	Sound Power 5.14 B, 0˚C to 35˚C (32˚F to 95˚F) (Typical) 8.53 B, 50˚C (122˚F) (Maximum)
5520-24X 5520-24X-BASE	Typical: Single 350W AC PSU, no VIM Maximum: Dual 350W AC PSU, 5520-VIM-4YE	
	Bystander Sound Pressure 40.6 dB(A),0˚C to 35˚C (32˚F to 95˚F) (Typical) 76.9 dB(A), 50˚C (122˚F) (Maximum)	Sound Power 5.05 B, 0˚C to 35˚C (32˚F to 95˚F) (Typical) 8.52 B, 50˚C (122˚F) (Maximum)

Note: 5520-BASE models only operate up to 40° Centigrade (Maximum)

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH - Regulation (EC) No 1907/2006 - Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663 (2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F) for Front-Back cooling

Temp: 0°C to 45°C (32°F to 113°F) for Back-Front cooling (5520-24T, 5520-24x, 5520-48T, 5520-48SE)

Humidity: 10% to 95% relative humidity, non-condensing

Altitude: 0 to 3,000 meters (9,850 feet)

Shock (half sine): 30m/s2 (3G), 11ms, 60 shocks

Random vibration: 3Hz to 500Hz at 1.5 G 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/s2 (18 G), 6 ms, 600 shocks

Packaged Vibration: 5Hz to 62Hz 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 20Hz to 200Hz

Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 60950-1

UL/CuL 62368-1 Listed

Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)

CDRH Letter of Approval (US FDA Approval)

CAN/CSA 22.2 No. 60950-1

European ITE

EN 60950-1, EN 62368-1

EN 60825-1 Class 1 (Lasers Safety)

2014/35/EU Low Voltage Directive

International ITE

CB Report and Certificate per IEC 60950-1

IEC 62368-1

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)

CB Report and Certificate IEC 62368-1

RoHS Directive 2011/65/EU

AS/NZS 60950-1 (Australia /New Zealand)

European EMC Standards

EN 55032 Class A

EN 55024

EN 55011

EN 61000-3-2,2014 (Harmonics)

EN 61000-3-3 2013 (Flicker)

EN 300 386 (EMC Telecommunications)

2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions)

AS/NZS CISPR32

CISPR 24 Class A (International Immunity)

IEC 61000-4-2/EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria B

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 AB

IEC 61000-4-5 /EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B

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

Country Specific

VCCI Class A (Japan Emissions)

ACMA RCM (Australia Emissions)

CCC Mark (China)

KCC Mark, EMC Approval (Korea)

EAC Mark (Custom Union)

NRCS Mark (South Africa)

BSMI Mark (Taiwan)

Anatel (Brazil)

NoM (Mexico)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T

IEEE 802.3bz 2.5G/5GBASE-T

IEEE 802.3bt Type4 PoE

IEEE 802.3ae 10GBASE-X

IEEE 802.3aq 10GBASE-LRM

IEEE 802.3by 25GBASE-X

IEEE 802.3ba/802.3bm 40GBASE-X and 100GBASE-X

IEEE 802.3az Energy Efficient Ethernet

Ordering Notes

Customers ordering a 5520 Series switch receive the base switch along with Base software license, fan modules and rack-mount kit. At least one Power Supply Unit (PSU) is required for 5520 operation, and a second PSU is required for redundancy and/or additional power.

Versatile Interface Modules (VIMs), power supplies, transceiver/optics, power cords, as well as Premier and MACsec licenses must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 5520 unit supports most available switch features. Certain features, however, require a Premier license to operate.

For Switch Engine, a Premier License is required for:

- 5 or more OSPF interfaces
- PIM DM / PM SSM
- Anycast RP (Rendezvous Point)
- Multi-Source Discovery Protocol (MSDP)
- IS-IS/BGP4/MBGP*
- GRE Tunneling
- EthernetVPN (EVPN)
- Multi-Protocol Label Switching (MPLS)***

For Fabric Engine, a Premier License is required for:

- 5 or more OSFP or RIP interfaces
- 3 or more BGP peers
- 25 or more VRFs**
- Layer 3 Virtual Service Networks (L3 VSNs)
- Distributed Virtual Routing (DvR) Controller

* Up to 2 BGP interfaces included in Base software with the EXOS 31.4 Release

** VRFs included in Base software with the VOSS 8.4 Release

*** PLS available with Switch Engine 31.6 release

Ordering Information

5520 Systems

Part Number	Product Name	Product Description
5520-24T	5520 24-port Switch	5520 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex MACsec-capable ports, includes2 x Stacking/QSFP28 ports, 2 fan modules, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-24T-BASE	5520 24-port Switch	5520 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex MACsec-capable ports, includes2 x Stacking/QSFP28 ports, 2 unpopulated fan slots, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-24W	5520 24-port 90w PoE Switch	5520 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE MACsec-capable ports, includes 2 x Stacking/QSFP28 ports, 3 fan modules, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-48T	5520 48-port Switch	5520 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex MACsec-capable ports, includes2 x Stacking/QSFP28 ports, 3 fan modules, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-48T-BASE	5520 48-port Switch	5520 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex MACsec-capable ports, includes2 x Stacking/QSFP28 ports, 3 unpopulated fan slots, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-48W	5520 48-port 90w PoE Switch	5520 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE MACsec-capable ports, includes 2 x Stacking/QSFP28 ports, 3 fan modules, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-12MW-36W	5520 48-port 90w PoE with 12 ports multi-rate Switch	5520 Universal Switch with 12 x 100Mb/1Gb/2.5Gb/5Gb 802.3bt 90W PoE MACsec-capable ports plus 36 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex MACsec-capable ports, includes2 x Stacking/QSFP28 ports, 3 fan modules, 1VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-48SE	5520 48-port SFP Switch	5520 Universal Switch with 48 x 100M/1Gb SFP MACsec-capable ports, includes 2 x Stacking/ QSFP28 ports, 3 fan modules, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.

Part Number	Product Name	Product Description
5520-48SE-BASE	5520 48-port SFP Switch	5520 Universal Switch with 48 x 100M/1Gb SFP MACsec-capable ports, includes 2 x Stacking/ QSFP28 ports, 3 unpopulated fan slots, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-24X	5520 24-port SFP+ Switch	5520 Universal Switch with 24 x 100Mb/1Gb/10Gb SFP+ ports, includes 2 Stacking/QSFP28 ports, 2 fan modules, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-24X-BASE	5520 24-port SFP+ Switch	5520 Universal Switch with 24 x 100Mb/1Gb/10Gb SFP+ ports, includes 2 Stacking/QSFP28 ports, 2 unpopulated fan slots, 1 VIM slot, 2 unpopulated modular PSU slots, Base software license.
5520-VIM-4X	4-port SFP+ module	5520 Versatile Interface Module with 4 x 1/10Gb SFP+ ports
5520-VIM-4XE	4-port SFP+ module LRM/ MACsec capable	5520 Versatile Interface Module with 4 x 1/10Gb SFP+ LRM and MACsec-capable ports
5520-VIM-4YE	4-port SFP28 module MACsec capable	5520 Versatile Interface Module with 4 x 10/25Gb SFP28 MACsec-capable ports

Accessories

Part Number	Product Name	Product Description
10953	350W AC PSU FB	350W AC PSU supported on 5520
10951	715W AC PSU FB	715W AC PSU supported on 5520
10941	1100W AC PSU FB	1100W AC PSU supported on 5520
XN-ACPWR-2000W-F	2000W AC PSU FB	2000W AC PSU supported on 5520
XN-ACPWR-350W-FB*	350W AC PSU FB	350 Watt AC Power Supply Module - Front to Back airflow, also used on X465 and VSP 4900
XN-ACPWR-715W-FB*	715W AC PSU FB	715 Watt AC PoE Power Supply Module - Front to Back airflow, also used on X465 and VSP 4900
XN-ACPWR-1100W-FB*	1100W AC PSU FB	1100 Watt AC PoE Power Supply Module - Front to Back airflow, also used on X465 and VSP 4900
XN-ACPWR-2000W-FB*	2000WAC PSU FB	2000 Watt AC PoE Power Supply Module - Front to Back airflow, also used on X465 and VSP 4900
17115	Spare Fan Module FB	Fan module for 5520, Front to Back airflow
XN-4P-RMKIT-005	4-Post Rack Mount Kit	Spare 4-Post Rack Mount Kit for 5520
XN-2P-RMKIT-005**	2-Post Rack Mount Kit	Optional 2-Post Rack Mount Kit for 5520

* XN-ACPWR-xxx-FB power supply units cannot be used with the 10941, 10951, 10953, or XN-ACPWR-2000W-F PSUs on the same switch. Not available for Mexico, Russia, Brazil, China, Korea, South Africa, India at present, pending certification.

** The optional 2-post rack mount kit can be used with 5520 chassis HW rev AD or higher.

*** XN-ACPWR-350W-BF and related 17116 fan SKU requires a minimum of Switch Engine Release 32.3 or Fabric Engine Release 8.9 to operate.

Software Licenses

Part Number	Product Name	Product Description
5000-PRMR-LIC-P	Premier License for 5000 Series	Perpetual Premier License for 5000 Series switches
5000-MACSEC-LIC-P	MACsec License for the 5000 Series	Perpetual MACsec license for the 5000 Series switches

Warranty

All 5520 Series models are covered under Extreme's Universal LLW policy. For warranty details, please visit our Policies and Warranties page.

Power Cords

Power cords are not included with the 5520 in support of our green initiatives but can be ordered separately.

Optics / Transceivers

For a list of the optics and transceivers supported on the 5520 Series hardware, refer to our Extreme Optics Compatibility Tool.

Maintenance Services

Extreme's maintenance and support services are provided by 100% 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 ExtremeWorks Maintenance Services for more information.

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