

# 5720 Series

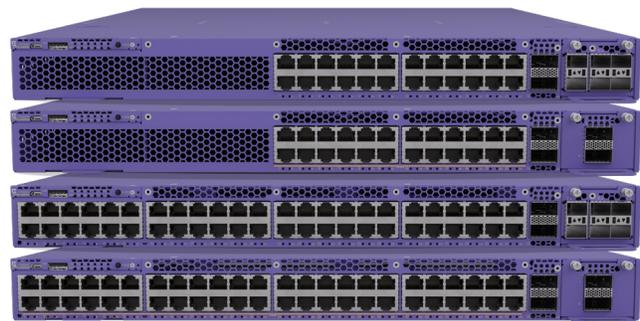
## Universal Edge/Aggregation Switch Platform

### Highlights

- Fixed 24 and 48-port Gigabit and Multi-Gigabit Ethernet switches for enterprise edge and aggregation deployments
- Universal dual-persona hardware allows user choice of switch operating systems
- ExtremeCloud IQ™ and ExtremeCloud IQ - Site Engine for powerful, secure and easy to use cloud-based network management.
- Fabric Connect for automated network operations, simplified network provisioning and enhanced security
- 1-year free ExtremeCloud IQ Pilot subscription included with each 5720 system

### Key Hardware Features

- A choice of 6 x 1/10Gb/25G or 2 x 100Gb modular uplink options
- 30/60/90W PoE support (IEEE 802.3bt)
- Up to 8-unit 400Gb per unit stacking
- Hot-swappable, redundant power supplies and fans
- MACsec on access and modular uplink ports for secure link encryption
- Non-blocking, wire-speed design



The 5720 Series is a family of high-performance, feature-rich edge and aggregation switches designed for the next-generation digital enterprise. As a universal hardware platform, the 5720 Series provides end-to-end secure network segmentation, in addition to advanced policy capabilities, and offers a user-selectable choice of Extreme's flagship switch operating systems. This makes the 5720 a uniquely flexible platform that can be deployed across a range of edge, aggregation and wiring-closet environments.

The 5720 Series includes 24- and 48-port 1/2.5/5 Multi-gig models, as well as 24- and 48-port models 1/2.5/5/10 Multi-gig models. All models offer 90W PoE in support of next-gen powered Ethernet devices, such as digital signage, pan-tilt-zoom cameras, smart lighting or point-of-sale terminals. The 5720 further includes 1/10/25Gb and 100Gb modular uplink options for high-speed, flexible linkage to other switches or devices over a range of media.



## Management

The 5720 can be managed by ExtremeCloud IQ and ExtremeCloud IQ - Site Engine for comprehensive unified management with a consolidated view of users, devices and applications across wired and wireless networks. (NOTE: Each 5720 unit also includes a 1-year free ExtremeCloud IQ Pilot subscription.)

Zero-touch provisioning from ExtremeCloud IQ lets one quickly bring new 5720 switches online as well as enable the selection of the operating system (OS) persona. Alternatively, 5720 on-box management can be done manually via a web-based GUI or generic CLI.



## Power over Ethernet

All 5720 Series models support 30, 60, and 90W Power over Ethernet (PoE) that conforms with IEEE 802.3bt. This enables the 5720 to address the needs of powered edge devices, while eliminating the need for additional electrical cabling and circuits. In addition, 5720 PoE models support perpetual and fast PoE for even more efficient and reliable powered edge device operation.



## High-Performance Stacking

Two built-in QSFP28 stacking ports on 5720 models can be used for up to 400Gb per unit stacking when running Switch Engine. Up to eight systems can be stacked using qualified direct attach cables and optical transceivers.

**Note:** Stacking is not supported when running Fabric Engine.



## Audio Video Bridging

The 5720 series supports IEEE 802.1 Audio Video Bridging when running Switch Engine for reliable, real-time audio/video transmission over Ethernet. AVB technology delivers the quality of service required for today's high-definition and time-sensitive multimedia streams.



## Universal Hardware Platform

The 5720 Series as a universal hardware platform comes with a dual-persona capability allowing user choice of the switch operating system (OS). Either Switch Engine (EXOS)\* or Fabric Engine (VOSS)\* persona can be enabled on 5720 hardware models. The desired persona can be selected at start-up or changed at a later stage. Once selected, the 5720 assumes the features/capabilities of the selected OS.

5720 persona activation can be done manually at boot-up, including via the system CLI. Or, it can be automated by pre-provisioning the 5720 persona in ExtremeCloud IQ. When first booted, the 5720 automatically connects to ExtremeCloud IQ to find its persona. The pre-provisioned OS persona is then remotely enabled on the 5720 system - eliminating the need for manual selection.

\* Switch Engine and Fabric Engine are the new names for ExtremeXOS (EXOS) and VSP Operating System (VOSS), respectively, on all universal switch platforms.



## Ethernet Fabric Services

The 5720 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 on the 5720 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.



## Integrated Application Hosting

Select 5720 Series models support Extreme's Integrated Application Hosting\* which leverages the switch's hardware and software design to run onboard applications without impacting switch performance. 5720-24MXW and 5720-48MXW models can run a Guest VM directly on the switch in support third-party or customized applications to meet specific business or operational needs. This can provide additional network insight or enable new network applications without need for a separate hardware device.

\* Initially available with Fabric Engine; available with Switch Engine in a future release

## External Interfaces

Switch Model	Interfaces
5720-24MW	<ul style="list-style-type: none"> <li>• 24 x 100M/1/2.5/5Gbase-T 802.3bt (90W) ports               <ul style="list-style-type: none"> <li>• Full-duplex</li> <li>• MACsec-capable</li> </ul> </li> <li>• 2 x Stacking/QSFP28 ports (unpopulated)</li> <li>• 1 x Serial console port (RJ-45)</li> <li>• 1 x 10/100/1000BASE-T out-of-band management port</li> <li>• 2 x USB A ports for management or external USB flash</li> <li>• 1 x USB Micro-B console port</li> <li>• 1 x VIM slot</li> </ul>
5720-48MW	<ul style="list-style-type: none"> <li>• 48 x 100M/1/2.5/5Gbase-T 802.3bt (90W) ports               <ul style="list-style-type: none"> <li>• Full-duplex</li> <li>• MACsec-capable</li> </ul> </li> <li>• 2 x Stacking/QSFP28 ports (unpopulated)</li> <li>• 1 x Serial console port (RJ-45)</li> <li>• 1 x 10/100/1000BASE-T out-of-band management port</li> <li>• 2 x USB A ports for management or external USB flash</li> <li>• 1 x USB Micro-B console port</li> <li>• 1 x VIM slot</li> </ul>
5720-24MXW	<ul style="list-style-type: none"> <li>• 24 x 100M/1/2.5/5/10Gbase-T 802.3bt (90W) ports               <ul style="list-style-type: none"> <li>• Full-duplex</li> <li>• MACsec-capable</li> </ul> </li> <li>• 2 x Stacking/QSFP28 ports (unpopulated)</li> <li>• 1 x Serial console port (RJ-45)</li> <li>• 1 x 10/100/1000BASE-T out-of-band management port</li> <li>• 2 x USB A ports for management or external USB flash</li> <li>• 1 x USB Micro-B console port</li> <li>• 1 x VIM slot</li> <li>• 1 x SSD slot</li> </ul>
5720-48MXW	<ul style="list-style-type: none"> <li>• 48 x 100M/1/2.5/5/10Gbase-T 802.3bt (90W) full-duplex ports               <ul style="list-style-type: none"> <li>• Full-duplex</li> <li>• MACsec-capable</li> </ul> </li> <li>• 2 x Stacking/QSFP28 ports (unpopulated)</li> <li>• 1 x Serial console port (RJ-45)</li> <li>• 1 x 10/100/1000BASE-T out-of-band management port</li> <li>• 2 x USB A ports for management or external USB flash</li> <li>• 1 x USB Micro-B console port</li> <li>• 1 x VIM slot</li> <li>• 1 x SSD slot</li> </ul>
5720-VIM-6YE	<ul style="list-style-type: none"> <li>• 6 x 1/10/25G SFP28 ports               <ul style="list-style-type: none"> <li>• MACsec-capable</li> </ul> </li> </ul>
5720-VIM-2CE	<ul style="list-style-type: none"> <li>• 2 x 100Gb QSFP28 ports               <ul style="list-style-type: none"> <li>• MACsec-capable</li> <li>• 10/25/40Gb data rates supported via channelization</li> </ul> </li> </ul>

# Performance and Scale

Switch Model	Max Active 1Gb/2.5Gb/5Gb ports	Max Active 1Gb/2.5Gb/5Gb/10Gb ports	Max Active 10Gb SFP+ ports <sup>1</sup>	Max Active 25Gb SFP28 ports <sup>1</sup>	Max Active 40Gb QSFP+ ports <sup>2</sup>	Max Active 50Gb ports <sup>3</sup>	Max Active 100Gb QSFP28 ports <sup>2</sup>	Max Active 100Gb Stacking ports <sup>4</sup>	Aggregated Switch Bandwidth	Frame Forwarding Rate
5720-24MW	24	0	16	16	2	4	4	2	1040 Gbps	774 mpps
5720-48MW	48	0	16	16	2	4	4	2	1280 Gbps	810 mpps
5720-24MXW	0	24	16	16	2	4	4	2	1280 Gbps	810 mpps
5720-48MXW	0	48	16	16	2	4	4	2	1760 Gbps	810 mpps

<sup>1</sup> When stacking is enabled, 8 of the 10Gb SFP+ and 8 of the 25Gb SFP28 ports are unavailable

<sup>2</sup> When stacking is enabled, 2 of the 40Gb QSFP+ ports and 2 of the 100Gb ports are unavailable

<sup>3</sup> 50Gb available only in Switch Engine mode via the two integrated stacking/QSFP28 ports; when stacking is enabled, the 50Gb ports are unavailable as uplinks

<sup>4</sup> Stacking supported in Switch Engine mode only. Stacking ports can also run at 50Gb in support of cross-stacking with the 5520.

## 5720 Software Scaling Values

### 5720-MXW (24 and 48-port) with Switch Engine

MAC Table: 294,000

IPv4 ARP Table: 172,000

IPv4 Route Table: 294,000

IP Multicast Entries (S,G,V): 110,000

IPv6 Neighbor Table: 78,000

IPv6 Route Table: 218,000

ACLs (Ingress/Egress): 38,864/2,048

QoS Egress Queues per port: 8

VLANs: 4,094

Routed VLANs: 4,094

### One Policy Scaling

Policy Profiles: 63

Unique Permit/Deny Rules per switch: 16,312

### 5720-MW (24 and 48-port) with Switch Engine

MAC Table: 163,000

IPv4 ARP Table: 80,000

IPv4 Route Table: 166,000

IP Multicast Entries (S,G,V): 61,000

IPv6 Neighbor Table: 24,000

IPv6 Route Table: 109,000

ACLs (Ingress/Egress): 18,432/2,048

QoS Egress Queues per port: 8

VLANs: 4,094

Routed VLANs: 4,094

### One Policy Scaling

Policy Profiles: 63

Unique Permit/Deny Rules per switch: 12,216

### 5720-MXW (24 and 48-port) with Fabric Engine

MAC Table: 164,000

IPv4 ARP Table: 65,536

IPv4 Route Table: 24,576

IP Multicast Entries (S,G,V): 6,000

IPv6 Neighbor Table: 32,768

IPv6 Route Table: 12,288

ACLs (Ingress/Egress): 8,192/6,144

QoS Egress Queues per port: 8

VLANs: 4,059

IP Interfaces (Routed VLANs): 1,000

### 5720-MW (24 and 48-port) with Fabric Engine

MAC Table: 100,000

IPv4 ARP Table: 24,600

IPv4 Route Table: 16,384

IP Multicast Entries (S,G,V): 6,000

IPv6 Neighbor Table: 24,576

IPv6 Route Table: 8,192

ACLs (Ingress/Egress): 6,144/3,072

QoS Egress Queues per port: 8

VLANs: 4,059

IP Interfaces (Routed VLANs): 1,000

### Fabric Connect Scaling (all 5720 models)

Fabric Adjacencies per switch: 255

Fabric nodes per area (BEB + BCB): 1,000

BEB Nodes per VSN: 2,000

L2 VSNs: 4,000

LE VSNs: 256

## Weights and Dimensions

Part Number	Weight	Physical Dimensions
5720-24MW	17.75 lb/8.05 kg	17.53 in W/1.7 in H/20.7 in D 44.5 cm/4.3 cm/52.7 cm
5720-48MW	18.85 lb/8.55 kg	
5720-24MXW	17.75 lb/8.05 kg	
5720-48MXW	<b>18.85 lb/8.55 kg</b>	
5720-VIM-6YE	0.53 lb/0.24 kg	2.02 in W/1.64 in H/6.86 in D 5.2 cm/4.2 cm/17.4 cm
5720-VIM-2CE	0.49 lb/0.22 kg	

## Power Supply Unit Specifications

	715W AC PSU	1100W AC PSU	2000W AC PSU*
Voltage Input Range (Nominal)	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC
Line Frequency Range	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz
Power Supply Input Socket	IEC/EN 60320 C16	IEC/EN 60320 C16	IEC/EN 60320 C16
Power Cord Input Plug	IEC/EN 60320 C15	IEC/EN 60320 C15	IEC/EN 60320 C15
Operating Temperature	0° C to 55° C Normal Operation	0° C to 50° C Normal Operation	0° C to 50° C

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

## Minimum/Maximum Power Consumption and Heat Dissipation

Switch Model	Minimum Power Consumption (Watts)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (Watts)*	Maximum Heat Dissipation (BTU/hr)**
5720-24MW	86	293	2549	389
5720-24MXW	105	359	2576	416
5720-48MW	103	354	4078	543
5720-48MXW	105	359	4096	561

\* Includes maximum PoE load (W) through the switch

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

## PoE Power Budget

Switch Model	1 x 715W	2 x 715W	1 x 1100W	2x1100W	1 x 2000W @ 110-132VAC	2 x 2000W @ 110-132VAC	1 x 2000W @ 220-264VAC	2 x 2000W @ 220-264VAC
5720-24MW	450W	1093W	835W	1825W	835W	1825W	1735W	2160W
5720-24MXW	450W	1093W	835W	1825W	835W	1825W	1735W	2160W
5720-48MW	450W	1093W	835W	1825W	835W	1825W	1735W	3535W
5720-48MXW	450W	1093W	835W	1825W	835W	1825W	1735W	3535W

**Note:** It's recommended that primary and secondary PSUs be of the same type to support optimal PoE operation.

# Product Specifications

## 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)  
Humidity: 10% to 95% relative humidity, non-condensing  
Altitude: 0 to 3,000 meters (9,850 feet)  
Shock (half sine) 30m/s<sup>2</sup> (3G), 11ms, 60 shocks  
Random vibration: 3 to 500 Hz 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/s<sup>2</sup> (18 G), 6 ms, 600 shocks  
Packaged Vibration: 5 to 62 Hz at velocity 5 mm/s, 62 to 500 Hz at 0.2 G  
Packaged Random Vibration: 5 to 20 Hz at 1.0 ASD w/-3 dB/oct. from 20 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

UL 60950-1  
UL/CuL 62368-1 Listed  
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)  
Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)  
CDRH Letter of Approval (US FDA Approval)

### European ITE

EN 60950-1 2nd Edition  
EN 62368-1  
EN 60825-1 Class 1 (Lasers Safety)  
2014/35/EU Low Voltage Directive

### International ITE

CB Report & Certificate per IEC 60950-1  
CB Report & Certificate IEC 62368-1  
AS/NZS 60950-1 (Australia/New Zealand)

### 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 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, 2 kV, Criteria B  
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/rms, 80%AM (1kHz), 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)  
BSMI (Taiwan)  
Anatel (Brazil)  
NoM (Mexico)  
EAC (Russia, Belarus, Kazakhstan)  
NRCS (South Africa)

### IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T  
IEEE 802.3bz 2.5G/5G/10GBASE-T  
IEEE 802.3bt Type 4 PoE  
IEEE 802.3ae 10GBASE-X  
IEEE 802.3by 25GBASE-X  
IEEE 802.3ba/802.3bm 40GBASE-X and 100GBASE-X  
IEEE 802.3az Energy Efficient Ethernet

## Ordering Information

Part Number	Product Name	Description
<b>5720 Systems</b>		
5720-24MW	5720 24-port 1G/2.5G/5G Switch with 90W PoE	5720 Universal Switch with 24 x 1/2.5/5Gb 802.3bt 90W PoE ports, 2 x Stacking/QSFP28 ports, 1 unpopulated VIM slot, MACsec-capable, includes 2 x unpopulated PSU slots, fan modules 4-post rack mount kit, Base software license, 1-year ExtremeCloud IQ Pilot Subscription
5720-48MW	5720 48-port 1G/2.5G/5G Switch with 90W PoE	5720 Universal Switch with 48 x 1/2.5/5Gb 802.3bt 90W PoE ports, 2 x Stacking/QSFP28 ports, 1 unpopulated VIM slot, MACsec-capable, includes 2 x unpopulated PSU slots, fan modules 4-post rack mount kit, Base software license, 1-year ExtremeCloud IQ Pilot Subscription
5720-24MXW	5720 24-port 1G/2.5G/5G/10G Switch with 90W PoE	5720 Universal Switch with 24 x 1/2.5/5/10Gb 802.3bt 90W PoE ports, 2 x Stacking/QSFP28 ports, 1 unpopulated VIM slot, MACsec-capable, includes 2 x unpopulated PSU slots, 1 x unpopulated SSD slot, fan modules, 4-post rack mount kit, Base software license, 1-year ExtremeCloud IQ Pilot Subscription
5720-48MXW	5720 48-port 1G/2.5G/5G/10G Switch with 90W PoE	5720 Universal Switch with 48 x 1/2.5/5/10Gb 802.3bt 90W PoE ports, 2 x Stacking/QSFP28 ports, 1 unpopulated VIM slot, MACsec-capable, includes 2 x unpopulated PSU slots, 1 x unpopulated SSD slot, fan modules, 4-post rack mount kit, Base software license, 1-year ExtremeCloud IQ Pilot Subscription
<b>VIM Modules</b>		
5720-VIM-6YE	6-port SFP28 module MACsec-capable	5720 Versatile Interface Module with 6 x 1/10/25Gb SFP28 MACsec-capable ports
5720-VIM-2CE	2-port QSFP28 module MACsec-capable	5720 Versatile Interface Module with 2 x 100Gb QSFP28 MACsec-capable ports
<b>Accessories</b>		
XN-ACPWR-715W-FB	715W AC PSU FB	715 Watt AC Power Supply Module (PSU) – Front-to-Back airflow – also used in 5520, X465 and VSP 4900
XN-ACPWR-1100W-FB	1100W AC PSU FB	1100 Watt AC Power Supply Module (PSU) – Front-to-Back airflow – also used in 5520, X465 and VSP 4900
XN-ACPWR-2000W-FB	2000W AC PSU FB	2000 Watt AC Power Supply Module (PSU) – Front-to-Back airflow – also used in 5520, X465 and VSP 4900
XN-FAN-005-F	Spare Fan module	Spare Fan module used in 5720 Series switches
XN-SSD-002-120	120GB SSD Module	120GB Solid-State Drive (SSD) module for use with Integrated Application Hosting on the 5720-24MXW and 5720-48MXW model switches
XN-2P-RKMT299	Optional Two-Post Rack Mount Kit	Optional Two-Post rack mount kit for use with 5720 Series switches
XN-4P-RKMT299	Spare Four-Post Rack Mount Kit	Spare Four-Post rack mount kit for use with 5720 Series switches
<b>Software Licenses</b>		
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

## Ordering Notes

Customers ordering a 5720 switch receive the base switch along with Base software license, fan modules and rack-mount kit. In addition, each 5720 switch comes with a free 1-year ExtremeCloud IQ Pilot subscription.

Versatile Interface Modules (VIMs), power supplies, transceiver/optics, power cords, as well as Premier and/or MACsec licenses must be ordered separately. At least one Power Supply Unit (PSU) is required for 5720 operation; a second PSU is required for redundancy and/or additional power.

## Base Software and Optional Premier License

The Base software included with each 5720 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
- 3 or more BGP Peers
- PIM DM / PM SSM
- Anycast RP (Rendezvous Point)
- Multi-Source Discovery Protocol (MSDP)
- IS-IS/BGP4/MBGP
- GRE Tunneling
- Ethernet VPN (EVPN)
- Integrated Application Hosting (once available)

### For Fabric Engine, a Premier license is required for:

- 5 or more OSFP or RIP interfaces
- 3 or more BGP peers
- Layer 3 Virtual Service Networks (L3 VSNs)
- Distributed Virtual Routing (DVR) Controller
- Integrated Application Hosting

## Warranty

All 5720 Series models are covered under Extreme's Universal LLW policy. For warranty details, please visit: <http://www.extremenetworks.com/support/policies>.

## Maintenance Services

Extreme's maintenance and support services with 100% in-sourced engineering experts and over 90% first-person resolution ensure efficient operation of your business-essential network. 24x7x365 phone support, advanced parts replacement, and on-site support augment your staff with experienced resources that help you mitigate critical network issues fast. Visit [Extreme Maintenance Services](#) for more information.

## Optics/Transceivers

For a list of the optics/transceivers supported on the 5720 Series hardware, refer to our Extreme Optics Compatibility Tool at <https://optics.extremenetworks.com>.

## Power Cords

In support of Extreme Networks Green initiatives, power cords are not included with the 5720, but can be ordered separately. They should be specified at time of ordering.



<http://www.extremenetworks.com/contact>

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