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#### **Data Sheet**

# 5120 Series



#### Highlights

- Manageable by Extreme Platform ONE<sup>TM\*</sup>, ExtremeCloud<sup>TM</sup> IQ or ExtremeCloud IQ Site Engine
- Powered uniquely by Switch Engine
   Operating System
- Reduced mean time to resolution with Al
- ExtremeCloud Universal ZTNA policy
   enforcement
- Automated and streamlined switch provisioning and day-to-day operations with cloud-based instant actions
- 24 and 48 port stackable 10Gb aggregation switches with 25Gb and 100Gb uplinks
- 10Gb copper and 10Gb Fiber models in 24 port switches providing costoptimized and flexible connectivity options

#### **Key Hardware Features**

- 24 x 10Gb SFP+ switch with 4 x 25G SFP28 uplinks
- 24 x 10GBase-T switch with 4 x 25G SFP28 uplinks
- 44 x 10Gb SFP+, 4x10G/25G SFP28 with 2x100G QSFP28 uplinks
- $\cdot$  Stacking of up to eight switches
- Hot-swappable, redundant AC power supplies and fans
- Front to Back and Back to Front cooling options
- Line rate MACsec on all ports for secure link encryption\*\*



### Edge/Aggregation Switches

The 5120 Series is a family of 10Gb edge/aggregation switches enabling flexible and cost optimized connectivity to end devices and edge stacks. These switches are primarily targeted for solutions requiring basic 10Gb connectivity to end devices such as video encoders/decoders and other IoT devices. These switches can also be deployed in typical campus networks to aggregate edge stacks while providing high speed uplinks to upstream L3 switches/routers.

10Gb Copper and 10Gb Fiber switch models enable flexible connectivity options for a wide variety of use cases. The 24-port switches come with 4x25Gb fixed uplinks, while the 48-port switch offers 2x100Gb fixed uplinks, along with 4x25Gb ports. The 5120 switches can stack between themselves using the 4x25Gb ports or the 2x100Gb ports\*\*.

The 5120 switches will support line rate MACsec on all the ports offering 256-bit MACsec encryption for secure connectivity to end devices and uplinks\*\*.

Front-to-Back and Back-to-Front cooling options enable the 5120 switches for deployment in data centers as well for management port connectivity of the servers and switches.

- \* Extreme Platform ONE<sup>TM</sup> General Availability (GA) in H2 2025
- \*\* Roadmap Item Planned for future release

### **Network Management Flexibility**

The 5120 Universal Switch series are managed by Extreme Platform ONE or ExtremeCloud IQ from the cloud or on-premises. Alternatively, 5120 onbox management can be done manually via a web-based GUI or generic command-line interface (CLI).

### Extreme Platform ONE<sup>™</sup>

Extreme Platform ONE<sup>TM</sup> is an enterprise connectivity platform that integrates networking and security with Al into one powerful and radically simplified experience and licensing model. It supports NetOps, SecOps, and business teams with built in automation and enables organizations to regain control, unlock innovation, and boost productivity through:

- · One integrated experience that is easy to use.
- Automation through built-in AI that boosts productivity, reducing cycle time for many tasks from hours to minutes.
- Simplified licensing that makes the solution as easy to buy as it is to use.
- Al-assisted workflows for configuration, deployment, and management.
- Inventory management simplifies budgeting, planning and compliance.

### Audio Video Bridging\*

The 5120 series will support IEEE 802.1 Audio Video Bridging when running Switch Engine OS. This allows 5120 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.

\*Audio Video Bridging is a roadmap item and planned for a future release.

### Security

The 5120 switch is enabled for the enforcement of Universal ZTNA policies. Wherever users connect through the network, their access is secure and segmented. ExtremeCloud Universal ZTNA, which combines zero-trust network and application access in one solution, automatically configures devices to enforce security policy consistently.

### **Fabric Enabled Switching**

Extreme Fabric is the industry's most simple, resilient, and secure end-toend, enterprise network fabric solution. Fabric automates discovery and onboarding of network and user devices. Its sub-second convergence reduces unplanned downtime and maintenance windows. Automated micro-segmentation and stealth topology enhance and automate network security across campus, data center, and branch.

The 5120 series switches are fabric-enabled and can be automatically attached to and configured by Extreme Fabric. This reduces time to deploy new devices, services, and sites.

### **Instant Onboarding**

5120 Series onboarding to the cloud is a hands-off operation using zero touch provisioning. Simply unpack the 5120 Series switch, connect it to the network, and it automatically connects to the cloud, ready to be provisioned. New switches can be configured, one-by-one, with a few clicks. Instant port, instant secure port, and instant stack all further reduce time spent on deployment.

### Instant Port\*\*

Instant Port automates adds, moves or changes across 5120 Series switch ports, eliminating the need for manual port configuration. The 5120 Series automatically detects the connected device and applies the correct port parameters. The result is significant time savings when adding or moving devices across the 5120 Series wired network. A simple cloud interface allows instant Port definitions of customer designated device types which can then be applied across a single switch, a stack or even all 5120 Series switches in the network.

### Instant Secure Port\*\*

Instant Secure Port leverages ExtremeCloud Universal ZTNA for authentication and zero-trust policy enforcement across the 5120 Series switch ports, while providing the same add, move, and change automation features of Instant Port. It simplifies 5120 Series security by using Universal ZTNA's cloud-based security capabilities, including RADIUS authentication, unified visibility and reporting, as well as policy enforced locally on 5120 Series ports. In doing so, it delivers a consistent and frictionless security experience for any user or device connecting through the 5120 Series switch. (Note: ExtremeCloud Universal ZTNA requires a separate license.)

### Instant Stack\*\*

Instant Stack simplifies cloud-based stack provisioning, enabling the entire switch stack to be set up through a single push-button operation. Real-world stack information, including each switch model and their stack order is captured and replicated in the cloud. Once set up, the entire stack is then ready to be cloud-provisioned.

\* \*Supported via Switch Engine Only

# **External Interfaces**

Switch Model	Interfaces
5120-24X-4Y	<ul> <li>24 x 100M*/1G/10GbE SFP+ ports</li> <li>4 x 1/10/25GbE SFP28 ports (includes 2 stacking ports)</li> <li>1 x Serial console port (RJ-45), 1 x USB Micro-B console port</li> <li>1 x 10/100/1000BASE-T out-of-band management port</li> <li>1 x USB A ports for management or external USB flash</li> </ul>
5120-24XT-4Y	<ul> <li>24 x 100M*/1G/10GBASE-T ports</li> <li>4 x 1/10/25GbE SFP28 ports (includes 2 stacking ports)</li> <li>1 x Serial console port (RJ-45), 1 x USB Micro-B console port</li> <li>1 x 10/100/1000BASE-T out-of-band management port</li> <li>1 x USB A ports for management or external USB flash</li> </ul>
5120-44X-4Y-2C	<ul> <li>44 x 100M*/1G/10GbE SFP+ ports</li> <li>4 x 1/10/25GbE SFP28 ports (includes 2 stacking ports)</li> <li>2 x Stacking/QSFP28 ports (unpopulated)** <ul> <li>100GbE ports can be channelized as 4x25G or 4x10G ports</li> </ul> </li> <li>1 x Serial console port (RJ-45), 1 x USB Micro-B console port <ul> <li>1 x 10/100/1000BASE-T out-of-band management port</li> <li>1 x USB A ports for management or external USB flash</li> </ul> </li> </ul>

\* 100M support will be available only on the first 12 ports of the switch with 100Base-Fx transceiver part #10063

Half Duplex will not be supported on any port

\*\* 200Gb stacking to be available on the 5120-44X-4Y-2C in a future release of Switch Engine.

# **Performance and Scale**

Switch Model	Max Active 1Gb/10Gb ports	Max Active 1Gb/10Gb SFP+ ports	Max Active 1/10/25Gb SFP28 ports	Max Active 100Gb QSFP28 ports	Max Active 25Gb Stacking ports	Max Active 50Gb Stacking ports	Aggregated Switch Bandwidth	Frame Forwarding Rate
5120-24X-4Y	-	24	4	-	2	-	680Gbps	506Mpps
5120-24XT-4Y	24	-	4	-	2	-	680Gbps	506Mpps
5120-44X-4Y-2C	-	44	4	2	2	2	1480Gbps	1101Mpps

# **Software Scaling Values**

### Switch Engine

- MAC Table: 16,000
- VLANs: 4,094
- IPv4 ARP Table: 400
- IPv4 Route Table: 64
- IP Multicast Entries (S,G,V): 150
- IPv6 Neighbor Table: 200
- IPv6 Route Table: 32
- Routed VLANS: 125
- ACL (Ingress/Egress): 1,024/256

- Policy Profiles: 63
- Unique permit/deny rules per switch: 184

# Weights and Dimensions

Switch Model	Weight*	Physical Dimensions
5120-24X-4Y	5.89 kg (12.98 lb.)	Height: 43.18 mm (1.7 in.) Width: 40.44 mm (17.34 in.) Depth: 33.32 mm (17.06 in.)
5120-24XT-4Y	5.89 kg (12.98 lb.)	Height: 43.18 mm (1.7 in.) Width: 40.44 mm (17.34 in.) Depth: 33.32 mm (17.06 in.)
5120-44X-4Y-2C	6.09 kg (13.43 lb.)	Height: 43.18 mm (1.7 in.) Width: 40.44 mm (17.34 in.) Depth: 33.32 mm (17.06 in.)

\*Switch weights include fans but no PSUs

# **Power Supply Unit Specifications**

	XN-ACPWR-550W-FB-A	XN-ACPWR-550W-BF-A
Voltage Input Range (Nominal)	100VAC-127VAC / 200VAC-240VAC	100VAC-127VAC / 200VAC-240VAC
Line Frequency Range	50Hz to 60Hz	50Hz to 60Hz
Power Supply Input Socket	IEC/EN 60320 C14	IEC/EN 60320 C14
Power Cord Input Plug	IEC/EN 60320 C13	IEC/EN 60320 C13

# 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)**
5120-24X-4Y	29.95	102.10	172.82	589.69
5120-24XT-4Y	36.78	125.49	173.09	590.62
5120-44X-4Y-2C	61.6	210.18	315.52	1076.60

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

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

### Fan and Acoustic Noise

Switch Model	Acoustic Information		
5120-24X-4Y	<ul> <li>Bystander Sound Pressure</li> <li>Typical F2B @35°C 50dB(A)</li> <li>Maximum F2B @50°C 55.8 dB(A)</li> <li>Typical B2F @35°C 58.6dB(A)</li> <li>Maximum B2F @50°C 62.6dB(A)</li> </ul>	Sound Power • Typical F2B @35°C 6.3B(A) • Maximum F2B @50°C 6.7B(A) • Typical B2F @35°C 6.1B(A) • Maximum B2F @50°C 7.3B(A)	
5120-24XT-4Y	Bystander Sound Pressure • Typical F2B @35°C 49.8dB(A) • Maximum F2B @50°C 62.7dB(A) • Typical B2F @35°C 48.5dB(A) • Maximum B2F @50°C 77.1dB(A)	Sound Power • Typical F2B @35°C 6.3B(A) • Maximum F2B @50°C 7.4B(A) • Typical B2F @35°C 6.1B(A) • Maximum B2F @50°C 8.8B(A)	
5120-44X-4Y-2C	<ul> <li>Bystander Sound Pressure</li> <li>Typical F2B @35°C 50.7dB(A)</li> <li>Maximum F2B @50°C 69.8dB(A)</li> <li>Typical B2F @35°C 50.2dB(A)</li> <li>Maximum B2F @50°C 79.8dB(A)</li> </ul>	Sound Power • Typical F2B @35°C 6.5B(A) • Maximum F2B @50°C 8.1B(A) • Typical B2F @35°C 6.2B(A) • Maximum B2F @50°C 9.0B(A)	

#### Typical:

Single PSU, 75% loaded with 10G SR optics Ambient Temperature 0°C to 35°C Traffic @50% load on all ports Target Bystander Sound Pressure: <55dB(A), <65dB(A) BTF

#### Maximum:

Dual PSU, 100% loaded with 10G SR optics Ambient Temperature – Up to maximum operating temperature Traffic @70% load on all ports

### **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: 5% to 95% relative humidity, non-condensing Altitude: 0 to 3,000 meters (9,850 feet) Shock (half sine) 98m/s2 (10G), 11ms, 18 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: 5% 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/3dB/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 55035 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 61000-4-3 Radiated Immunity 10V/m, 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, 0.15-80MHz, 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 (South Africa) BSMI Mark (Taiwan) Anatel (Brazil) NoM (Mexico)

# **Ordering Information**

#### **Base Chassis**

Part Number	Product Name	Product Description
5120-24X-4Y	5120-24X-4Y, No PS, No Fans	5120 24 port stackable switch with 24 x 1G/10G SFP+ ports, 4x10G/25G SFP28 ports, 4 unpopulated fan slots, 2 unpopulated modular PSU slots
5120-24XT-4Y	5120-24XT-4Y, No PS, No Fans	5120 24 port stackable 24 x 1G/10GBase-T Non-PoE ports, 4x10G/25G SFP28 ports, 4 unpopulated fan slots, 2 unpopulated modular PSU slots
5120-44X-4Y-2C	5120-44X-4Y-2C, No PS, No Fans	5120 48 port stackable switch with 44 x 1G/10G SFP+ ports, 4 x 10G/25G SFP28 ports, 2x100G QSFP28 Universal/Stack ports, 6 unpopulated fan slots, 2 unpopulated modular PSU slots
5120-24X-4Y-TAA	5120-24X-4Y, No PS, No Fans TAA	5120 stackable switch with 24 x 1G/10G SFP+ ports, 4 x 10G/25G SFP28 ports, 4 unpopulated fan slots, 2 unpopulated modular PSU slots TAA Compliant
5120-24XT-4Y-TAA	5120-24XT-4Y, No PS, No Fans TAA	5120 stackable switch with 24 x 1G/10GBase-T Non-PoE ports, 4x10G/25G SFP28 ports, 4 unpopulated fan slots, 2 unpopulated modular PSU slots TAA Compliant
5120-44X-4Y-2C-TAA	5120-44X-4Y-2C, No PS, No Fans TAA	5120 stackable switch with 44 x 1G/10G SFP+ ports, 4 10G/25G SFP28 ports, 2x100G QSFP28 Universal/Stack ports, 6 unpopulated fan slots, 2 unpopulated modular PSU slots TAA Compliant

#### Bundles

Part Number	Product Name	Product Description
5120-24X-4Y-AC-F	5120-24X-4Y with 1 AC PS, 4 Fans FB	5120 stackable switch with 24 x 1G/10G SFP+ ports, 4 x 10G/25G SFP28 ports, 4 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot, Front to Back airflow
5120-24XT-4Y-AC-F	5120-24XT-4Y with 1 AC PS, 4 Fans FB	5120 stackable switch with 24 x 1G/10GBase-T Non-PoE ports, 4 x 10G/25G SFP28 ports, 4 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot, Front to Back airflow
5120-44X-4Y-2C-AC-F	5120-44X-4Y-2C with 1 AC PS, 6 Fans FB	5120 stackable switch with 44 x 1G/10G SFP+ ports, 4 x 10G/25G SFP28 ports, 2 x 100G QSFP28 Universal/Stack ports, 6 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot, Front to Back airflow
5120-24X-4Y-AC-R	5120 24prt 10G SFP+ 1AC PS, 4 Fans BF	5120 24 port stackable switch with 24 x 1G/10G SFP+ ports, 4 x 10G/25G SFP28 ports, 4 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot, Back to Front airflow
5120-24XT-4Y-AC-R	5120 24prt 10GBase-T 1AC PS, 4 Fans BF	5120 24 port stackable switch with 24 x 1G/10GBase-T Non-PoE ports, 4 x 10G/25G SFP28 ports, 4 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot, Back to Front airflow
5120-44X-4Y-2C-AC-R	5120 48prt 10G SFP+ 1 AC PS, 6 Fans BF	5120 48 port stackable switch with 44 x 1G/10G SFP+ ports, 4 x 10G/25G SFP28 ports, 2x100G QSFP28 Universal/Stack ports, 6 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot, Back to Front airflow
5120-24X-4Y-AC-F-TAA	5120-24X-4Y with 1 AC PS, 4 Fans TAA	5120 stackable switch with 24 x 1G/10G SFP+ ports, 4x10G/25G SFP28 ports, 4 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot TAA Compliant

Part Number	Product Name	Product Description
5120-24XT-4Y-AC-F-TAA	5120-24XT-4Y with 1 AC PS, 4 Fans TAA	5120 stackable switch with 24 x 1G/10GBase-T Non-PoE ports, 4x10G/25G SFP28 ports, 4 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot TAA Compliant
5120-44X-4Y-2C-AC-F-TA	5120-44X-4Y-2C with 1 AC PS, 6 Fans TAA	5120 stackable switch with 44 x 1G/10G SFP+ ports, 4 x 10G/25G SFP28 ports, 2 x 100G QSFP28 Universal/Stack ports, 6 fans, 1 x 550W AC PSU, 1 unpopulated modular PSU slot TAA Compliant

#### Accessories

Part Number	Product Name	Product Description
XN-ACPWR-550W-FB-A	550W AC PSU FB	550 Watt AC Power Supply Module - Front to Back airflow
XN-ACPWR-550W-BF-A	550W AC PSU BF	550 Watt AC Power Supply Module - Back to Front airflow
XN-FAN-005-R	5120 Fan module BF Airflow	Fan module with Back to Front Airflow for use with 5120 switches
XN-2P-RMKIT-014	2P Rack Mount for 5120 switches	Two-piece rack mount kit for 5120 switches, usable with 2 post or 4 post racks

#### **Software Licenses**

Part Number	Product Name	Product Description
5000-PRMR-LIC-P	5000-PRMR-LIC-P	Premier License for 5000 Series switches
5000-MACSEC-LIC-P <sup>(1)</sup>	5000-MACSEC-LIC-P	MACsec license for the 5000 Series switches

<sup>(1)</sup> Roadmap Item – Planned for future release

### Warranty

All 5120 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit the <u>Policies and Warranties page</u>.

### **Power Cords**

Power cords are not included with the 5120 in support of our green initiatives but can be ordered separately.

### **Optics/Transceivers**

For a list of the optics and transceivers supported on the 5120 Series hardware, refer to our <u>Extreme Optics Compatibility Tool</u>.

### **Maintenance Services**

Extreme's maintenance and support services are provided 100% by inhouse engineering experts. We have a 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 <u>Extreme Maintenance Services</u> for more information.



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