

Extreme 9920

Highlights

- Provides highly scalable network visibility for Service Providers and large enterprise networks
- Enables wire-speed traffic aggregation, regeneration, optimization, and load balancing to deliver maximum tool productivity
- Programmable ASIC with full 12.8Tbps throughput to enable a composable data pipeline for flexibility and future proofing
- Composable packet broker service delivers a hierarchical packet management architecture
- Cloud-native operating system built for customization and rapid service delivery
- Works in tandem with the new containerized ExtremeCloud™ Orchestrator (XCO) application
- Great power efficiency with a small footprint



Cloud-Native Network Visibility Platform

The expectation of greater and more flexible visibility into data on the network is driving distributed data visibility requirements. Service Providers need to have the value of a cloud native experience with the reliability of carrier-grade platforms for their automation and visibility. Cloud-native systems are designed to embrace rapid change at large scale with resiliency built-in to produce value faster and focus on business objectives.

5G has changed the way Service Provider networks are designed with new use cases and associated data appearing at the mobile edge every day. Traditional visibility tools cannot adjust to the broader requirements of the cloud-native 5G architecture. Existing solutions often require an infrastructure change to adapt to new customer use cases which leads to a fragmented visibility solution, complexity, and additional cost.

Built from the ground up for a cloud-native world, the Extreme 9920 delivers an industry-changing network visibility platform based on cloud-native principles that is designed to integrate with and address the needs of the most reliable Service Provider environments.

Power Efficiency with a Smaller Physical Footprint

The Extreme 9000 series is ideally suited for modern 5G deployments both in the aggregation at the data center and for high-bandwidth data collection at the edge. The Extreme 9920 platform comes with a high-density chassis with 8 interface module slots. Each slot can be populated with the 16x100GbE/40GbE interface module or the 4x400GbE interface module for a maximum of 128x100GbE/40GbE ports or 32x400GbE ports per chassis. The 9920 supports up to 256 multispeed ports with either 25G or 10G speed, and aggregates and monitors up to 12.8 Tbps of total traffic. This makes the Extreme 9920 suitable to be deployed in a central location for network data processing and analysis. It also leverages Extreme's existing packet broker portfolio to create a hierarchical scale-out architecture to better align function, robustness, and value, and with the ability to scale out for the largest data center, cloud, or service provider environment. Combine this with visibility software based on a containerized architecture to provide an integrated management solution, greatly reducing time to rollout.

Innovative Operational Efficiency

Delivered as a microservices architecture, the Intelligent Network Visibility Solution features a cloud-native composable operating system built for customization and rapid service delivery. The system provides a wealth of streaming telemetry for platform management and performance from the lowest hardware layers through to the services running on the system. Featuring live patching and containerization, updates and patches can be applied quickly and safely for the operating system and container-based services to maintain reliability and to reduce operational risk. Innovative system statistics and APIs help to fine tune highly valuable resources and achieves optimized tooling or analytics capacity, helping to keep these expensive resources functioning at the most efficient level possible. Leveraging the statistics and audit capabilities of the Extreme network of packet brokers, operators can ensure operational efficiency with their tooling or analytics environment.

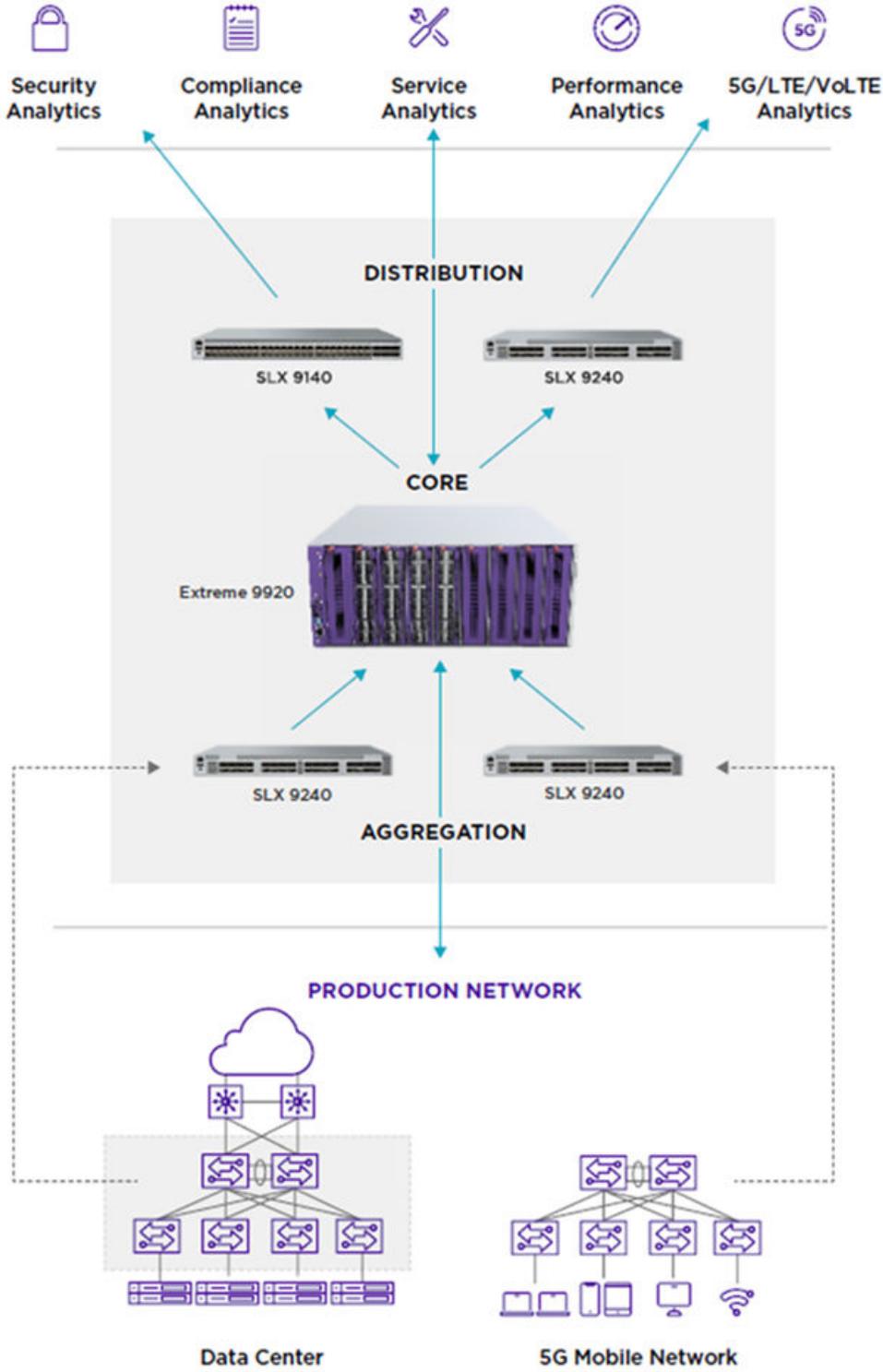
Programmable ASIC for Composable Data Pipeline

The Extreme 9920 is based upon the new Intel Programmable ASIC and provides a composable data pipeline for maximum flexibility, ensuring that any future enhancements can be done with a run-time compiler using the P4 programming language while achieving high throughput (12.8 Tbps). Network availability calculates the optimum path from any TAP/SPAN to any tool across the Extreme 9920 fabric. Path failover maintains tooling reliability by dynamically adjusting the traffic path with any link or switch failure along any path from ingress of the fabric (TAP/SPAN) to egress (tools) of the fabric.

ExtremeCloud Orchestrator - Visibility Skill

Management of the visibility platform leverages cloud-native API-first design to integrate with existing operational and business support systems. For customers looking to interact directly with the platform, including integration with existing MLXe and SLX deployments, the micro-services based Visibility skill within the ExtremeCloud Orchestrator provides a graphical user interface (GUI) for provisioning, management, and maintenance vital for continuous service delivery at scale. Extreme Networks continues to deliver a better user-centric experience by redefining the interface to focus on reducing complexity and to minimize the opportunity for user error. It also manages SLX 9140 and SLX 9240 and MLXe to make the migration of existing services to the new Extreme 9920 seamless.

Analytics Tools



Extreme 9920 Network Visibility Platform Specifications

Chassis Ports	<p>1 x USB Type A – Console Port (no host capabilities)</p> <p>1 x Type A host port</p> <p>1 x Serial console port Mini USB</p> <p>1 x 10/100/1000 BASE-T RJ-45 out of band management port</p>
<p>Interface Modules 9920-16C, 9920-4D</p> <p><i>(Chassis has maximum of 8 interface module slots)</i></p>	<p><u>9920-16C</u></p> <p>16 x 100GbE QSFP28 ports</p> <p>16 x 40GbE QSFP+ ports</p> <p>8 ports x (4x25GbE) QSFP28 ports - via breakout configuration. Port partitioned into four 25GbE interfaces</p> <p>8 ports x (4x10GbE) QSFP+ ports - via breakout configuration. Port partitioned into four 10GbE interfaces</p> <p><u>9920-4D</u></p> <p>4x400GbE QSFP28-DD ports—only 400G speed is supported. Breakout configuration for 400G ports not supported</p>
Feature Slot (9th slot)	Reserved for future use
Power Supplies	<p>Modular 1600W AC power supply (up to 4 PSUs)</p> <p>Modular 1600W DC power supply (up to 4 PSUs)</p>
Fans	<p>Modular, 5 required</p> <p>Front-Back airflow</p>
Dimensions	<p>22.05 in L / 17.24 in W / 6.93 in H</p> <p>(56.0 cm / 43.8 cm / 17.6 cm)</p>
Weight (unpopulated)	33 kg (72.75 lb), includes BMC, four empty power supply slots, 8 empty interface module slots, five empty fan slots
Weight Fan	2.5 kg (5.51 lb), 5 are mandatory
Weight Power Supply	1 kg (2.20 lb)
Weight Interface Module	2 kg (4.41 lb)
Performance	<p>Line rate 25.6 Tbps</p> <p>Switching Capacity (12.8 Tbps ingress, 12.8 Tbps egress)</p>
CPU/Memory	<p>12 Core processors</p> <p>128GB, 4 x 32GB RAM</p> <p>2 x 120GB SSD memory</p>
Packet Buffers	64MB
Operating Conditions	<p>-5° C to 50° C operation</p> <p>5% to 90% relative humidity, non-condensing</p> <p>0-1800 meters altitude</p>

Power and Heat Dissipation

Switch Model	Minimum Heat Dissipation (BTU/hr) (Idle, no ports linked)	Minimum Power Consumption (W) (Idle, no ports linked)	Maximum Heat Dissipation (BTU/hr) (Fans high, all ports 100% traffic)	Maximum Power Consumption (W) (Fans high, all ports 100% traffic)
9920-NPB-8 with 8 interface modules	2899 BTU/hr	850W	7274 BTU/hr	2133W
9920-16-C	136 BTU/hr	40W	539 BTU/hr	158W
9920-4D	136 BTU/hr	40W	409 BTU/hr	120W

Power Supply Specification

	1600W AC PSU	1600W DC PSU
Dimensions	1.57 in H x 2.89 in W x 7.28 in L (4 cm H x 7.35 cm W x 18.5 cm L)	1.57 in H x 2.89 in W x 7.28 in L (4 cm H x 7.35 cm W x 18.5 cm L)
Weight	2.2 lb (1 kg)	2.2 lb (1 kg)
Voltage Input Range	100 -127 VAC / 200 -240 VAC	-48 to -60 VDC
Line Frequency Range	50Hz-60Hz	N/A
PSU Input Socket	IEC 320 C16	BizLink 115HO-025987-R1
Operating Conditions	0° C-50° C operation	0° C-50° C operation

Product Specifications

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 and amendment (EU) 2015/863
 EU WEEE 2012/19/EU
 China RoHS SJ/T 11363-2014
 Taiwan RoHS CNS 15663

Packaging and Storage Specifications

Temp: -40° C to 70° C (-40° F to 158° F)
 Humidity: 5% to 95% relative humidity, non-condensing
 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

Product Software Capabilities

Aggregation

Aggregate incoming flows from multiple taps to a single egress interface to optimize port usage. Supports 1 to 1, 1 to Many, Many to 1, and Many to Many traffic mappings.

Replication

Replicate flows from a single tap to multiple egress interfaces for multiple tools to get identical traffic.

Filtering

Filter on Layer 2 to 4 headers along with specific protocol intelligence at ingress ports and at egress ports brings in lots of flexibility to the packet broker device along with handling complex traffic patterns without requiring loopback interfaces.

Load-balancing

Distributes traffic across tool ports for monitoring in a session aware manner to preserve traffic integrity and to maximize up-time with fail-over protection.

Header Stripping

The ability to strip the header in incoming traffic for customer tools to analyze traffic that may or may not be able to handle some of the tags or packet encapsulations during traffic analysis. Includes 802.1BR, VN-Tag, GTP-U-v1, VXLAN Encap, ERSPAN-II, NVGRE Encap.

Packet Slicing/Truncation

To truncate packets to a specific length to have only relevant data for the tools.

Tunneling

L3 GRE tunnel (origination and termination) and ERSPAN termination.

Source Port Labelling (VLAN Tagging and Untagging)

VLAN tag management (ingress tagging and egress stripping)

Timestamping*

Timestamping (NTP and PTP 1588)

Data Masking*

Protect sensitive data with an offset.

* Future Release

Ordering Information

Part Number	Description
9920-NPB-8	Extreme 9920 8 slot with four empty power supply slots, five empty fan slots and a 4-post rack mount kit
9920-16C	Extreme 9920 16x100/40G line card
9920-4D	Extreme 9920 4x400G line card
9920-FAN-F	Extreme 9920 Fan Front-Back
9920-ACPWR-1600W-F	Extreme 9920 AC Power Supply 1600W Front-Back
9920-DCPWR-1600W-F	Extreme 9920 DC Power Supply 1600W Front-Back
XN-2P-RKMT300	2-Post Rack Mount Kit*
XN-4P-RKMT303	4-Post Rack Mount Kit

* Will need to order two XN-2P-RKMT300, because 9920 chassis is 4RU

Optics / Transceivers

For the most up-to-date list of optics and transceivers supported on this product, refer to our Extreme Optics Compatibility Tool at optics.extremenetworks.com.

Power Cords

Power cords can be ordered separately but need to be specified at time of ordering.

Warranty

The 9920 is covered under Extreme's 1-Year Warranty policy. For warranty details, visit: 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 www.extremenetworks.com/services/ for more information.



©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see <https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks>. Specifications and product availability are subject to change without notice. 26apr24