# Extreme Networks SLX and 8000 Series Switching and Routing Portfolio

## Highlights

- Comprehensive product portfolio for enterprise data centers and communication service provider, 5G mobile edge solution that require dense 40/100GbE for large scale BGP-EVPN Fabric spine and leaf architectures

- Carrier-grade routing and border leafs for enterprise and communication service providers

- Automate infrastructure provisioning, validation, troubleshooting, and remediation workflows

- Improve operations with pervasive traffic visibility for real-time network analytics, monitoring, and troubleshooting

- Full featured SLX operating system with advanced features supporting switching, IP Fabrics, carrier grade routing protocols such as BGP-EVPN and VXLAN

- Integrated Application Hosting supports a virtual machine environment to accomodate Extreme- provided or third-party, customer specific applications.

- Includes Trusted Delivery with measured boot and remote attestation technology

Deliver the network visibility, automation, and agility that organizations need for today's digital era.

## Networks Demand Pervasive Visibility and Automation

Increasingly organizations are expanding from air-gap deployments, private, public, hybrid and edge cloud to address agility, scale, security, reliability and cost requirements as digital transformation reshapes their business environment. To succeed in the digital era, organizations need network platforms with the adaptability to address these rapidly evolving demands and enable them to simplify and scale operations while driving out cost. Modern network architectures - such as IP Fabric – follow those design principles, and with automation built-in the network switch or router, these networks provide a solid foundation for digital transformation.

## Agility at All Layers of the Network

SLX and 8000 series switching and routing platforms provide unparalleled network visibility. Integrated Application Hosting is an Extreme Networks solution that allows Extreme-provided or third-party customized applications to be hosted on an Extreme Networks switch or router. These embedded capabilities enable enterprise and communication service provider data centers the ability to deploy applications directly on their Extreme network switches or routers. This allows organizations to achieve pervasive insight throughout the network to quickly identify problems, accelerate mean-time-to-remediation, and improve overall service levels. ExtremeCloud™ Orchestrator Embedded is a powerful solution that utilizes Integrated Application Hosting technology, enabling quick and efficient provisioning of IP Fabrics based on BGP, EVPN, and VXLAN. This cutting-edge technology simplifies the management of tasks such as adds, moves, and changes, streamlining the design, deployment, operation, and refresh processes in a matter of seconds or minutes. See more information here.

## IP Fabric with ExtremeCloud Orchestrator

Simplifies and accelerates the design, setup, deployment, and management of IP Fabric. The application can run in a server environment or as a service on the Integrated Application Hosting environment of the switches and routers and uses industry-standard, open API based programmable interfaces to provide the easiest way to deploy, provision and automate single or multiple IP Fabric networks in the industry fastest and most efficient way. ExtremeCloud Orchestrator is also the point of integration for VMware, Microsoft and OpenStack. For more information, see ExtremeCloud Orchestrator.

## Core Aggregation

Enterprise and Co-location data center consolidate on multiple layers with the 8820 and can sit as an edge router above the data center network. With the use of MPLS or layer 3 protocols the 8820 links the data center gear to another data center or the outside world. Multi-Chassis Trunking (MCT) provides dynamic flow-based load balancing to multiple network nodes to enable resilient and high performance networks.

## Trusted Delivery

Trusted Delivery from Extreme Networks is designed to protect your key service delivery infrastructure at remote, often-unattended sites, as well as within colocation and data center environments where shared facility access is a concern. With Measured Boot – a security mechanism designed to verify the boot and runtime processes – Extreme Networks provides the capability to validate hardware components, boot process, and the operating system from factory to installation. Combined with remote attestation, where a trusted off-box challenger provides an objective measurement of trust, Measured Boot provides ongoing binary-level validation during operation.

## Flexible Border Routing Solutions

The SLX 9540, SLX 9640 and 8820 are very powerful, deep buffer, dual stack IPv4/IPv6 Internet border router, providing cost-effective solutions that are purpose-built for the most demanding enterprise and communication service provider customers. The robust system architecture and a versatile feature set including IPv4, IPv6 and MPLS/VPLS provides deployment flexibility.

## Pervasive Network Visibility and Programmable Interfaces

By embedding network visibility, organizations can improve network operations and reduce operational costs through pervasive, granular, real-time network monitoring and troubleshooting with dynamic flow identification, intelligent preprocessing, and flexible data streaming.

Extreme Networks Integrated Application Hosting provides an innovative approach to network monitoring and troubleshooting that makes it faster, easier, and more cost-effective to get the comprehensive, real-time visibility needed for network operations and automation.
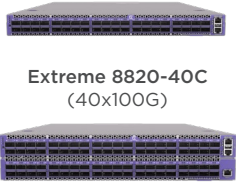
## Integrated Application Hosting

Organizations can improve operational efficiency and troubleshooting with Integrated Application Hosting. An Open Application Engine provides the capability to run Extreme-provided or third-party applications, containers or tools for monitoring and analytic applications directly on the switch or router – without a separate hardware device. The unique design is completely separated from the networking operating system.

# SLX and 8000 Series Portfolio Breadth

The breadth of the SLX and 8000 Series Routing and Switching portfolio (Figure 1) makes them suitable for many places in the network and data center designs – leaf, spine, super-spine, core, border leaf, border routing, and data center interconnect (DCI). The Extreme 8520 with 1/10/25/40/100 GbE, are ideal for leaf deployments, while the Extreme 8720 with 100/40 GbE, are well suited to serve at the spine level. As part of Extreme's Trusted Delivery initiative, the Extreme 8000 Series of Universal Switches introduce powerful security enhancements with

a combination of Secure Boot technology, enhanced by an industry-first Measured Boot implementation. The versatile SLX 9540 and SLX 9640 deliver advanced border routing and MPLS features in border leaf and WAN edge deployments. The highly scalable Extreme 8820 router supports multiple use cases, spanning spine to super-spine, border leaf, core, WAN edge, or data center interconnect. The ultra high-density 100GbE 8820 router supports up to 80 x 100 GbE ports. The respective data sheets for these platforms provide more details.

| Leaf | Spine/Super-Spine | Core | Border Router | DCI/Border Leaf |
|------|-------------------|------|---------------|-----------------|
| Extreme 8520 (48x25G + 8x100G) (48x10G-T + 6x100G) | Extreme 8720 (32x100G) | Extreme 8820-40C (40x100G) / Extreme 8820-80C (80x100G) | SLX 9640 (12x100G + 24x10G) | SLX 9540 (48x10G + 6x100G) |

Shallow Buffer ← → Deep Buffer

BGP-EVPN VXLAN ← → BGP-EVPN VXLAN,VLL/VPLS/MPLS

## Extreme 8720 and Extreme 8520 with Trusted Delivery for Data Center and Mobile Edge deployments

The Extreme 8720 is a high performance, feature-rich, and purpose built 10/25/40/100 GbE network hardware platform built for uncompromising performance in enterprise data centers and for mobile operators delivering critical 5G micro data center and multi-access edge compute (MEC) environments. The Extreme 8520 platforms are top-of-rack, fixed form factor 1/10/25/40/100GbE leaf switches with 32MB of packet buffer and an overall non-blocking, in and out throughput of 2Tbps. There are two network hardware platforms, offering forty-eight 1/10/25 GbE SFP28 ports

and either six or eight 100/40 GbE QSFP28 ports. As part of Extreme Trusted Delivery, the Extreme 8000 Series of Universal switches introduce powerful security enhancements with a combination of Secure Boot technology, enhanced by an industry-first Measured Boot implementation. Measured Boot extends the security posture of the system into the execution of the operating system itself for greater protection against threats. For more information, see the Extreme 8720 Data Sheet and the Extreme 8520 Data Sheet.

## Extreme 8820 Trusted Delivery with 100GbE

Extreme 8820 is a high-performance, feature rich, fixed form factor platform for spine, border leaf and routing configurations. Two models – 80 x 100GbE (2U) or 40 x 100 GbE (1U) - with carrier-class advanced features that leverage proven Extreme routing, MPLS, and VXLAN overlay technology. Extreme trusted delivery enables software integrity from manufacturer thru distribution to the customer and protects key service delivery

infrastructure at remote and unattended 5G cellular sites and edge sites (MEC), as well within co-location and data center environments where shared facility access could be a potential concern. For more information, see the Extreme 8820 Data Sheet.

## SLX 9540 Fixed Form Router

The SLX 9540 Router delivers carrier-class features in a cost-effective 1U fixed form factor optimized for data center interconnect, WAN edge, DC border leaf. It offers 48 10GbE ports and 6 100GbE ports. For more information, see the SLX 9540 Data Sheet.

## SLX 9640 Deep-Buffer Router

The SLX 9640 is designed to support more 100 GbE ports for diverse deployment options for enterprise and communication service providers — such as border leaf, border routing, data center interconnect, all in a 1U fixed form factor. With its carrier- class Ethernet features, SLX 9640 offers flexible port configurations with 24 ports of dual mode 1/10GbE and 12 ports of dual mode 40/100GbE. In addition, each 100GbE port can support 4 ports of 25GbE via breakout, while each 40GbE port can support 4 ports of 10GbE via breakout.

Both SLX routers support a unique procurement model with ports on demand and capacity on demand licensing to offer greater pricing flexibility. For more information, see the SLX 9640 Data Sheet.