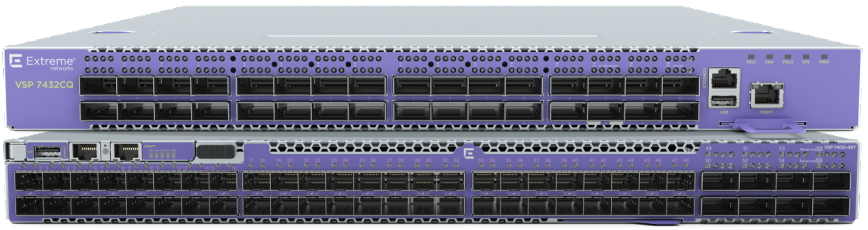
Extreme networks

Data Sheet

Highlights

- High-Density 25 Gigabit and 100 Gigabit fixed-form switches for core, aggregation, and spine/leaf applications
- 32 ports of 100 Gigabit or 48 ports of 25 Gigabit Ethernet connectivity
- Compact 1U form factor for reduced power and footprint
- Non-blocking, wire-speed switching architecture
- Wide range of port speeds including 1Gb, 10Gb, 25Gb, 40Gb and 100Gb
- Supports both Fabric Connect and/or conventional Routed IP deployments
- Extreme Integrated Application Hosting for 3rd-party application hosting without impact to switch performance
- Hot-swappable modular power and fans
- Front-to-back and back-to-front air flow options
- AC and DC power supply options



BUILT ON BROADCOM

ExtremeSwitching™ VSP 7400 Series

High-Performance 25GB and 100Gb Fabric-Enabled Core and Aggregation Switches

Product Overview

The Virtual Services Platform (VSP) 7400 Series are space-efficient, high-performance Ethernet switches, available delivering wire-speed 100 Gigabit and 25Gb Ethernet connectivity. Supporting a range of interface speeds, including 1Gb, 10Gb, 25Gb, 40Gb and 100Gb, all in a compact 1RU form factor, the VSP 7400 Series can be flexibly deployed in either core/aggregation or spine/leaf high-density top-of-rack architectures. It also supports Extreme Fabric Connect for simplified, automated network services delivery.

Two models of the VSP 7400 Series are available:

VSP7400-32C: Core or spine switch with 32 x 100Gb QSFP28 ports. QSFP28 ports can also be optionally run at 10Gb, 25Gb or 40Gb with channelization for high-density applications.

VSP7400-48Y-8C: Aggregation or leaf switch with 48 x 25Gb SFP28 ports and 8 x 40/100Gb QSFP28 uplink ports. SFP28 ports on the VSP7400-48Y can also run at 1Gb, 10Gb or 25Gb to support a range of connectivity options.

The VSP 7400 can handle a variety of high bandwidth applications, including high-density 10Gb, emerging 25Gb, as well as 40Gb and 100Gb core/aggregation and spine/leaf fabric deployments. A variety of QSFP28, QSFP+, SFP28 and SFP+ transceivers are also available to support a range of fiber interface needs.

Extreme Fabric Connect

The VSP 7400 Series natively supports the Extreme Fabric Connect technology. Based on an extended implementation of the Shortest Path Bridging (SPB) standards of IEEE 802.1aq and IETF RFC 6329, Fabric Connect offers the ability to create a simplified virtualized network that simplifies network provisioning and reduces the strain on network and IT personnel. Benefits include:

- Eliminates need to configure network-wide VLANs
- Replaces legacy protocols with a single unified protocol
- Removes the risk of network loops
- Delivers an edge-only provisioning model that seamlessly integrates with orchestration and automation
- Supports both L2 and L3 virtualization, including IP multicast routing

Traditionally, provisioning new network services required engineers to touch every device in the service path, configuring each device to enable both the active and redundant links. The bigger the network the more complex this task becomes.

Leveraging Fabric Connect delivers fundamental change. Rather than the network appearing as a mass of individual devices, it becomes a single cloud, so that engineers only need to touch the unique device that is providing service directly to the end-point. Fabric Connect instantly propagates all the end-point's service attributes to every other node within the fabric.

Specific Fabric Connect features supported on the VSP 7400 Series include: Layer 2 Virtual Service Networks (VSNs), Layer 3 VSNs, Inter-VSN Routing, IPv4/IPv6 IP Shortcuts, IP Multicast over Fabric Connect, Fabric Extend and Fabric Attach Server. Also available is an integrated Fabric IPSec Gateway that aggregates Fabric Extend tunnels along with IPSec encryption, fragmentation and reassembly.

Advanced Layer 3 Services

The VSP 7400 Series also supports advanced Layer 3 services that enable it to satisfy conventional IP routing deployments, in addition to its fabric-based services. Layer 3 services include IPv4 and IPv6 dynamic routing, as well as IP multicast services.

Specific IP routing technologies supported include RIPv1/2, RIPng, OSPFv2/v3, BGP/BGP+ and VRF. Multicast services include PIM-SM/SSM, IGMP v1/v2/v3, as well as Fabric Connect to PIM gateway. The VSP 7400 also supports Distributed Virtual Routing (DvR) and VXLAN Gateway services.

Integrated Application Hosting

Extreme's Integrated Application Hosting leverages the VSP 7400 Series hardware and software to run onboard applications without impact to switch performance. This flexible and open solution enables organizations to deploy third-party or custom applications and tools directly on the VSP 7400 system for a variety of network needs.

Integrated Application Hosting consists of a pre-configured Virtual Machine (VM) environment on the VSP 7400 with support for multiple VMs. These VMs leverage the high-performance VSP 7400 multi-core processor design and can be used to host applications for monitoring, visibility, or other network uses, based on customer requirements.

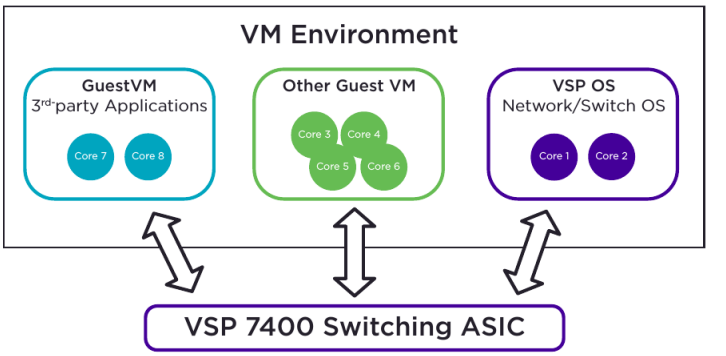


Figure 1: Extreme Integrated Application Hosting on VSP 7400 Series

Benefits of the Integrated Application Hosting include:

- Flexible deployment of VM-based applications within the network using the hardware resources of the VSP 7400
- Ability of VM-based applications to extract data without disrupting forwarding or control plane traffic within the VSP 7400
- Availability of dedicated memory and SSD storage for flexible packet capture and off-line visibility processing

Network Intelligence

The VSP 7400 Series can provide insight and intelligence into the network via its native analytics capabilities, which include line-rate, hardware-accelerated IPFIX and sFlow. With these tools, the VSP 7400 Series can deliver actionable insights into both network and application performance without the need for expensive sensors or collectors.

Management

The VSP 7400 Series can be managed in a variety of ways. Simple on-box management functions are delivered by a web-based GUI and a generic CLI is available for manual configuration.

ExtremeCloud IQ™ along with Extreme Management Center (XMC) also provide a comprehensive unified management capability with a consolidated view of users, devices and applications for wired and wireless networks. Zero touch provisioning lets one quickly bring new infrastructure online and a granular view of users, devices and applications enables efficient inventory and network topology management.

VSP 7400 Series and Ansible

Ansible Network modules deliver the benefit of simple, powerful, agentless automation to network administrators. Ansible VSP network modules can be used to configure, test and validate existing network state on the VSP family of devices including the VSP 7400 Series.

Base Software and Licensing

The VSP 7400 Series is being introduced with the VSP Operating System Software (VOSS) 8.0 release, which is the minimum required to operate the switch. Base software included with the VSP 7400 Series hardware purchase provides most of the features available on the switch. A Premium Software license, however, is required to enable the following features on the switch:

- Layer 3 Virtual Services Networks (VSNs)
- Distributed Virtual Routing Controller
- VXLAN Gateway
- 25 or more VRFs
- Extreme Integrated Application Hosting

Product Specifications

Model	VSP 7400-32C	VSP 7400-48Y-8C
Ports	• 32 x QSFP28 10Gb/25Gb/40Gb/100Gb ports • Up to 32 x 40Gb/100Gb Ethernet interfaces • Up to 124 x 10Gb/25Gb Ethernet interfaces • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • Micro-USB Type A storage port	• 48 x SFP28 1Gb/10Gb/25Gb ports • 8 x QSFP28 40Gb/100Gb ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • Micro-USB Type A storage port
Performance	6.4 Tbps Line-Rate Switching Capacity (3.2 Tbps ingress, 3.2 Tbps egress) / 2,000 Mpps forwarding	4.0 Tbps Line-Rate Switching Capacity (2.0 Tbps ingress, 2.0 Tbps egress) / 1,000 Mpps forwarding
Dimensions	17.3in W / 22.43in D / 1.7in H (44.0cm / 57.0cm / 4.3cm)	17.3in W / 20.9in D / 1.7in H (44.0cm / 53.2cm / 4.3cm)
Weight	16.3lb (7.39kg) no PSU / 19.9lb (8.20kg) with single PSU	16.4lb (7.42kg) no PSU / 20.0lb (9.07kg) with single PSU
Power Supply Options	Internal 750W AC power supply (up to 2 PSUs) Internal 750W DC power supply (up to 2 PSUs) Front-Back and Back-Front airflow options 1 + 1 redundancy	
Fan Tray	6 fan modules (5 + 1 redundancy) Front-Back and Back-Front airflow options	
CPU/Memory	8 Core Processor 16GB DDR4 ECC memory 128GB SSD memory	
Operating Conditions	0º - 45ºC operation 5% to 95% relative humidity, non-condensing 0 - 3000 meters altitude	

Power Supply Specifications

	750W AC PSU XN-ACPWR-750W-F/R	750W DC PSU XN-DCPWR-750W-F/R
Dimensions	3.15in W x 1.57in H x 8.11in D(8.0cm x 4.0cm x 20.6 cm)	3.15in W x 1.57in H x 8.11in D(8.0cm x 4.0cm x 20.6 cm)
Weight	1.79lb (0.81 kg)	1.85lb (0.85 kg)
Voltage Input Range	100 -140 VAC / 200-240 VAC	-48 to -60 VDC
Line Frequency Range	50 – 60 HZ	N/A
PSU Input Socket	IEC 320 C14	Terminal Block
PSU Output Cord	IEC 320 C13	N/A
Operating Conditions	0° – 55° operation	0° to 55° operation

Power and Heat Dissipation

Switch Model	Minimum Heat Dissipation (BTU/hr) (Idle, no ports linked)	Minimum Power Consumption (Watts) (Idle, no ports linked)	Maximum Heat Dissipation (BTU/hr) (100% fans, 30 ports, 100% traffic)	Maximum Power Consumption (Watts) (100% fans, 30 ports, 100% traffic)
VSP7400-48Y-8C-AC-F VSP7400-48Y-8C-AC-R	553 BTU/hr	167W	1600 BTU/hr	469W
VSP7400-32C-AC-F & VSP 7400-32C-AC-R	734 BTU/hr	215 W	1573 BTU/hr	461 W

Note: All configurations with 2 PSUs @ 220V

General

VSP7400-32C

- Physical Connectivity: 32 x QSFP28 ports
- Switch Fabric Architecture: 6.4 Tbps total capacity (3.2 Tbps ingress, 3.2 Tbps egress)
- Jumbo Frame support up to 9.600 bytes

VSP7400-48Y-8C

- Physical Connectivity: 48 X SFP28 ports + 8 x QSFP28 ports
- Switch Fabric Architecture: 4.0 Tbps total capacity (2.0 Tbps ingress, 2.0 Tbps egress)
- Jumbo Frame support up to 9,600 bytes

Performance and Scale

Layer 2

- MAC Address: up to 160,000
- Port-based VLANs: 4,059
- MSTP Instances: 64
- LACP Links per Group: 8 Active

Layer 3 IPv4 Routing Services

- ARP Entries: up to 56,000
- IP Routes: up to 16,000
- RIP Interfaces: 200
- OSPF Interfaces: 512
- BGP Peers: 256
- VRF Instances: up to 256

Layer 3 IPv6 Routing Services

- Neighbors: up to 32,000
- IP Routes: up to 7,500
- RIPng Interfaces: 48
- OSPFv3 Interfaces: 500
- BGPv6 Peers: 256
- VRF Instances: up to 256

Multicast

- IGMP Interfaces: 4,059
- PIM Active Interfaces: 128
- MLD Interfaces: 4,059
- IP Multicast Streams: 6,000

Fabric Connect

- MAC Address: 80,000
- NNI Interfaces/Adjacencies: up to 256
- BEB Nodes per VSN: 2,000
- BCB/BEB Nodes per Region: 2,000
- L2 Virtual Service Networks: 4,000
- L3 Virtual Service Networks: up to 256
- IP Shortcut Routes: IPv4 up to 16,000 and IPv6 7,500
- L2 Multicast Virtual Service Networks: 2,000
- L3 Multicast Virtual Service Networks: 256

QoS and Filtering

- ACL non-IPv6: 512 Ingress and 254 Egress
- ACL IPv6: 384 Ingress and 256 Egress
- IPv4 ACE (Ingress): 768 each for Security and QoS (total of 1536)
- IPv4 ACE (Egress): 783
- IPv6 ACE (Ingress): 768
- IPv6 ACE (Egress): 511
- Egress Port Shaper Granularity: 1Mbps to 100Gbps per Port

Operations and Management

- Mirrored Ports: up to 125 when all applicable ports are channelized
- sFlow: up to 3,000 samples per second
- Fabric RSPAN: up to 1,000 VSN IDs per Region

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
China RoHS: SJ/T 11363-2006
Taiwan RoHS: CNS 15663(2013.7)

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: 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 62368-1
Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
CDRH Letter of Approval (US FDA Approval)
CAN/CSA 22.2 No. 60950-1
CAN/CSA No. 22.2 62368-1-14

European ITE

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

International ITE

CB Report & Certificate per IEC 60950-1 AS/NZS 60950-1 (Australia /New Zealand)
IEC 62368-1
GB 4943.1-2011
CNS 4336-1

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 v1.6.1 (EMC Telecommunications)
2014/30/EU EMC Directive
EN 55011 Class A

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 A
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 A
IEC 61000-4-5 /EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria A
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
IEC 61000-4-8 / EN 61000-4-8
CISPER 11 Class A
GB/T 9254-2008

Country Specific

VCCI Class A (Japan Emissions)
ACMA RCM (Australia Emissions)
CCC Mark (China)
KCC Mark, EMC Approval (Korea)
EAC Mark (Custom Union)
NRCS / SABS Mark (South Africa
BSMI Mark (Taiwan)

Telecom Standards

CE 2.0 Compliant

Standards Compliance

IEEE

802.1 Bridging (Networking) and Network Management

802.1D MAC Bridges (a.k.a. Spanning Tree Protocol)
802.1p Traffic Class Expediting and Dynamic Multicast Filtering
802.1t 802.1D Maintenance
802.1w Rapid Reconfiguration of Spanning Tree (RSTP)
802.1Q Virtual Local Area Networking (VLAN)
802.1Qbp Equal-Cost Multi-Path (Shortest Path Bridging)
802.1Qcj Automatic Attachment to Provider Backbone Bridging (PBB) Services (Partial Support)
802.1s Multiple Spanning Trees (MSTP)
802.1v VLAN Classification by Protocol & Port
802.1ag Connectivity Fault Management
802.1ah Provider Backbone Bridges
802.1aq Shortest Path Bridging (SPB) MAC-in-MAC
802.1X Port-based Network Access Control
802.1AB-2005 Station & Media Access Control Connectivity Discovery; aka LLDP (partial support)
802.1AX Link Aggregation

802.3 Ethernet

802.3-1983 CSMA/CD Ethernet (ISO/IEC 8802-3)
802.3i-1990 10Mb/s Operation, 10BASE-T Copper
802.3u-1995 100Mb/s Operation, 100BASE-T Copper, with Auto-Negotiation
802.3x-1997 Full Duplex Operation
802.3z-1998 1000Mb/s Operation, implemented as 1000BASE-X
802.3ab-1999 1000Mb/s Operation, 1000BASE-T Copper
802.3ae-2002 10Gb/s Operation, implemented as 10GBASE-SFP+
802.3an-2006 10Gb/s Operation, 10GBASE-T Copper
802.3by-2016 25Gb/s Operation
802.3ba-2010 40Gb/s and 100Gb/s Operation
802.3bm-2015 40Gb/s and 100Gb/s Operation, implemented as 40GBASE-QSFP+ & 100GBASE-QSFP28

IETF

768 UDP
783 TFTP
791 IP
792 ICMP
793 TCP
826 ARP
854 Telnet
894 Transmission of IP Datagrams over Ethernet Networks
896 Congestion Control in IP/TCP internetworks
906 Bootstrap Loading using TFTP
950 Internet Standard Subnetting Procedure
951 BOOTP: Relay Agent-only
959 FTP
1027 Using ARP to Implement Transparent Subnet Gateways
1058 RIP
1112 Host Extensions for IP Multicasting
1122 Requirements for Internet Hosts - Communication Layers
1155 Structure and Identification of Management Information for TCP/IP-based Internets
1156 MIB for Network Management of TCP/IP
1157 SNMP
1212 Concise MIB Definitions
1213 MIB for Network Management of TCP/ IP-based Internets: MIB-II
1215 Convention for Defining Traps for use with the SNMP
1256 ICMP Router Discovery
1258 BSD Rlogin
1271 Remote Network Monitoring MIB
1305 NTPv3

1321 MD5 Message-Digest Algorithm
1340 Assigned Numbers
1350 TFTPv2
1398 Ethernet MIB
1442 SMIv2 of SNMPv2
1450 SNMPv2 MIB
1519 CIDR
1541 DHCP
1542 Clarifications and Extensions for BOOTP
1573 Evolution of the Interfaces Group of MIB-II
1587 OSPF NSSA Option
1591 DNS Client
1650 Definitions of Managed Objects for the Ethernet-like Interface Types
1657 Definitions of Managed Objects for BGP-4 using SMIv2
1723 RIPv2 Carrying Additional Information
1812 Router Requirements
1850 OSPFv2 MIB
1866 HTMLv2
1907 SNMPv2 MIB
1930 Guidelines for creation, selection, and registration of an AS
1981 Path MTU Discovery for IPv6
2021 Remote Network Monitoring MIBv2 using SMIv2
2068 HTTP
2080 RIPng for IPv6
2131 DHCP
2138 RADIUS Authentication
2139 RADIUS Accounting
2139 RADIUS Accounting
2236 IGMPv2 Snooping
2284 PPP Extensible Authentication Protocol
2328 OSPFv2
2362 PIM-SM
2404 HMAC-SHA-1-96 within ESP and AH6
2407 Internet IP Security Domain of Interpretation for ISAKMP6
2408 Internet Security Association and Key Management Protocol
2428 FTP Extensions for IPv6 and NAT
2452 TCP IPv6 MIB
2453 RIPv2
2454 UDP IPv6 MIB
2460 IPv6 Basic Specification
2463 ICMPv6
2464 Transmission of IPv6 Packets over Ethernet Networks
2466 MIB for IPv6: ICMPv6 Group
2474 Differentiated Services Field Definitions in IPv4 and IPv6 Header
2575 VACM for SNMP
2576 Coexistence between v1/ v2/ v3 of the Internet-standard Network Management Framework
2578 SMIv2
2579 Textual Conventions for SMIv2
2580 Conformance Statements for SMIv2
2597 Assured Forwarding PHB Group
2598 Expedited Forwarding PHB
2616 HTTPv1.1
2710 MLD for IPv6
2716 PPP EAP TLS Authentication Protocol
2787 Definitions of Managed Objects for VRRP
2818 HTTP over TLS
2819 Remote Network Monitoring MIB
2863 Interfaces Group MIB
2865 RADIUS
2869 RADIUS Extensions (partial support)
2874 DNS Extensions for IPv6
2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
2933 IGMP MIB
2934 PIM MIB for IPv4
2992 ECMP Algorithm
3046 DHCP Relay Agent Information Option 82
3162 RADIUS and IPv6
3246 Expedited Forwarding PHB
3315 DHCPv6
3339 Date and Time on The Internet: Timestamps
3376 IGMPv3
3411 Architecture for Describing SNMP Management Frameworks
3412 Message Processing and Dispatching for SNMP
3413 SNMP Applications
3414 USM for SNMPv3
3415 VACM for SNMP
3416 Protocol Operations v2 for SNMP
3417 Transport Mappings for SNMP
3418 MIB for SNMP
3484 Default Address Selection for IPv6
3513 IPv6 Addressing Architecture
3569 Overview of SSM
3579 RADIUS Support for EAP
3587 IPv6 Global Unicast Address Format
3596 DNS Extensions to support IPv6
3748 Extensible Authentication Protocol
3810 MLDv2 for IPv6
3879 Deprecating Site Local Addresses

4007 IPv6 Scoped Address Architecture
4022 TCP MIB
4087 IP Tunnel MIB
4113 UDP MIB
4133 Entity MIB Version 3 (partial support)
4193 Unique Local IPv6 Unicast Addresses
4213 Basic Transit ion Mechanisms for IPv6 Hosts and Routers
4250 SSH Assigned Numbers
4251 SSH Protocol Architecture
4252 SSH Authentication Protocol
4253 SSH Transport Layer Protocol
4254 SSH Connection Protocol
4255 DNS to Securely Publish SSH Key Fingerprints
4256 Generic Message Exchange Authentication for SSH
4291 IPv6 Addressing Architecture
4292 IP Forwarding Table MIB
4293 IP MIB
4301 Security Architecture for IP[1]
4302 IP Authentication Header[1]
4303 IP Encapsulating Security Payload[1]
4308 Cryptographic Suites for IPsec
4363 Definitions of Managed Object s for Bridges with Traffic Classes, Multicast Filtering and VLAN Extensions (partial support)
4429 Optimistic DAD for IPv6 (partial support)
4443 ICMP for IPv6
4541 Considerations for IGMP and MLD Snooping Switches
4552 Authentication/ Confidentiality for OSPFv3
4601 PIM-SM: Revised Protocol Specification
4607 Source-Specific Multicast for IP
4675 RADIUS Attributes for Virtual LAN and Priority Support (partial support)
4835 Cryptographic Algorithm Implementation Requirement s for ESP and AH
4861 Neighbor Discovery for IPv6
4862 IPv6 Stateless Address Auto-Configuration
5095 Deprecation of Type 0 Routing Headers in IPv6
5176 Dynamic Authorization Extensions to RADIUS
5187 OSPFv3 Graceful Restart (Helper-mode)
5308 Routing IPv6 with IS-IS
5340 OSPF for IPv6
5424 The Syslog Protocol
5798 VRRPv3 for IPv4 and IPv6
5905 NTPv4: Protocol and Algorithms Specification
5997 Use of Status-Server Packets in RADIUS
6105 IPv6 Router Advertisement Guard
6329 IS-IS Extensions supporting IEEE 802.1aq SPB
6933 Entity MIBv4 (partial support)
7358 VXLAN: A Framework for Overlaying Virtualized L2 Networks over L3 Networks (partial support)
7610 DHCPv6 Shield: Protecting against Rogue DHCPv6 Servers
Iernet-Draft IP/ IPVPN services with IEEE 802.1aq SPB networks (draft -unbehagen-spb-ip-ipvpn-00)
Internet-Draft SPB Deployment Considerations (draft -lapuh-spb-deployment -03)

1 Implemented to deliver IPsec capability for Control Plane traffic only.

Ordering Information

Part Number	Product Name	Product Description
VSP 7400 Series Systems		
VSP7400-32C	VSP 7432CQ	VSP 7400, 32 x 100Gbps QSFP28 ports, 8-core CPU, 16GB RAM, 128GB SSD, 4-post rack mount kit No PSU No Fans
VSP7400-32C-AC-F	VSP 7432CQ-F	VSP 7400, 32 x 100Gbps QSFP28 ports, 8-core CPU, 16GB RAM, 128GB SSD, Single 750W AC PSU, six fans, 4-post rack mount kit, Front to Back Airflow
VSP7400-32C-AC-R	VSP 7432CQ-R	VSP 7400, 32 x 100Gbps QSFP28 ports, 8-core CPU, 16GB RAM, 128GB SSD, Single 750W AC PSU, six fans, 4-post rack mount kit, Back to Front Airflow
VSP7400-48Y-8C	VSP7400-48Y-8C	VSP 7400, 48 x 1/10/25Gbps SFP28 ports, 8 x 100Gbps QSFP28 ports, 8-core CPU, 16GB RAM, 128GB SSD, 4-post rack mount kit, No PSU No Fans
VSP7400-48Y-8C-AC-F	VSP7400-48Y-8C-AC-F	VSP 7400, 48 x 1/10/25Gbps SFP28 ports, 8 x 100Gbps QSFP28 ports, 8-core CPU, 16GB RAM, 128GB SSD, Single 750W AC PSU, six fans, 4-post rack mount kit, Front to Back Airflow
VSP7400-48Y-8C-AC-R	VSP7400-48Y-8C-AC-R	VSP 7400, 48 x 1/10/25Gbps SFP28 ports, 8 x 100Gbps QSFP28 ports, 8-core CPU, 16GB RAM, 128GB SSD, Single 750W AC PSU, six fans, 4-post rack mount kit, Back to Front Airflow
XN-FAN-001-F	VSP/SLX Front to Back Fan	Single Fan module, Front-to-Back Airflow supported on VSP7400
XN-FAN-001-R	VSP/SLX Back to Front Fan	Single Fan module, Back-to-Front Airflow supported on VSP 7400

Ordering Information (cont.)

Part Number	Product Name	Product Description
VSP 7400 Series Systems		
XN-ACPWR-750W-F	VSP/SLX 750W AC PSU Front to Back airflow	AC 750W PSU, Front-to-Back Airflow supported on VSP 7400
XN-ACPWR-750W-R	VSP/SLX 750W AC PSU Back to Front airflow	AC 750W PSU, Back-to-Front Airflow supported on VSP 7400
XN-DCPWR-750W-F	VSP/SLX 750W DC PSU Front to Back airflow	DC 750W PSU, Front-to-Back Airflow supported on VSP 7400
XN-DCPWR-750W-R	VSP/SLX 750W DC PSU Back to front airflow	DC 750W PSU, Back-to-Front Airflow supported on VSP 7400
XN-2P-RKMT299	Two Post Rail Kit VSP 7400, SLX9150	Spare two post rack mount rail kit supported on VSP 7400
XN-4P-RKMT298	Four Post Rail Kit VSP 7400, SLX9150	Spare four post rack mount rail kit supported on VSP 7400
Firmware Licenses		
VSP-PRMR-LIC-P	VSP Premier License	VSP 7400 Premier Feature LIcense (includes Integrated Application Hosting)
100Gb Optical Transceivers and Direct Attach Cables		
10401 or AA1405005-E6	100Gb QSFP28 SR4	100Gb, 100GBASE-SR4, 70m OM3 / 100m OM4 MMF, QSFP28, MPO (8 fiber)
10403	100Gb QSFP28 LR4	100Gb, 100GBASE-LR4, 10 km SMF, QSFP28, LC
10404	100Gb QSFP28 CWDM4	100Gb, CWDM4, 2km SMF, QSFP28, LC
10405	100Gb QSFP28 PSM4	100Gb, Parallel Single Mode PSM4, 2km SMF, QSFP28, MPO (8 fiber)
100G-ER4LT-QSFP40KM	100Gb QSFP28 ERF-lite	100Gb, ERF-lite 30km (w/o FEC), 40km (w/ FEC), SM F, QSFP28, LC
10411 or AA1405029-E6	100Gb, DAC QSFP28-QSFP28 1m	100Gb, QSFP28-QSFP28 Direct attach passive copper cable, 1m
10413 or AA1405031-E6	100Gb, DAC QSFP28-QSFP28 3m	100Gb, QSFP28-QSFP28 Direct attach passive copper cable, 3m
10414 or AA1405032-E6	100Gb, DAC QSFP28-QSFP28 5m	100Gb, QSFP28-QSFP28 Direct attach passive copper cable, 5m
10421	100Gb, DAC QSFP28- 4xSFP28 1m	100Gb, QSFP28-4 x SFP28 (4x25Gb) Direct attach passive copper breakout, 1m
10423	100Gb, DAC QSFP28- 4xSFP28 3m	100Gb, QSFP28-4 x SFP28 (4x25Gb) Direct attach passive copper breakout, 3m
10424	100Gb, DAC QSFP28- 4xSFP28 5m	100Gb, QSFP28-4 x SFP28 (4x25Gb) Direct attach passive copper breakout, 5m
10444	100Gb AOC QSFP28 x 4 SFP28 20m	100Gb, QSFP28-4xSFP28 (4x25Gb) Active optical breakout cable, 20m
40Gb Optical Transceivers and Direct Attach Cables		
10319	QSFP+ SR4 Module	40Gb QSFP+ SR4 optical module, MPO connector, 100m MMF OM3, 140M MMF OM4
10320 or AA1404001-E6	QSFP+ LR4	40Gb QSFP+ LR4 optical module, LC connectors, 10km SMF
40GB-ESR4-QSFP or AA1404006-E6	QSFP+ ESR4	40Gb QSFP+ Extended Reach SR4, MMF, 300m OM4
10326	QSFP+ PSM Optical Module	40Gb QSFP+ Parallel single mode (PSM), LR4, MPO connector, 10km SMF
10329	40Gb Bidi MMF QSFP+	40Gb Bidrectional MMF, 100m OM3, QSFP+, Duplex LC
10334	40Gb LM4 QSFP+	40Gb QSFP+ LM4, 140m OM3 MMF, 1km SMF, LC
AA1404002-E6	40G LM4 QSFP+	40Gb QSFP+ LM4, 80m on OM3 and OM4 MMF, Duplex LC
AA1404003-E6	40Gb ER4 QSFP+	40Gb QSFP+ ER4, up to 30km or 40km or engineered links
AA1404005-E6	40Gb-SR4 / 4X10Gb-SR QSFP+	40Gb-SR4/4X10Gb-SR QSFP+ MPO/MTP, 850NM, 150m OM4 MMF
AA1404037-E6	QSFP+ to QSFP+ Direct Attach Cable 0.5M	Direct Attach Cable (QSFP+ to QSFP+), 0.5m
AA1404029-E6	QSFP+ to QSFP+ Direct Attach Cable 1m	Direct Attach Cable (QSFP+ to QSFP+), 1m
AA1404030-E6	QSFP+ TO QSFP+ Direct Attach Cable 2m	Direct Attach Cable (QSFP+ to QSFP+), 2m
AA1404031-E6	QSFP+ to QSFP+ Direct Attach Cable 3m	Direct Attach Cable (QSFP+ to QSFP+), 3m
AA1404032-E6	QSFP+ TO QSFP+ Direct Attach Cable 5m	Direct Attach Cable (QSFP+ to QSFP+), 5m
AA1404028-E6	QSFP+ TO QSFP+ Active Optical cable 10M	Direct Attach Cable (QSFP+ to QSFP+) 10m active optical
AA1404033-E6	Breakout Cable (QSFP+ to 4xSFP+), 1m	Breakout Cable (QSFP+ to 4xSFP+), 1m
AA1404035-E6	Breakout Cable (QSFP+ to 4xSFP+), 3m	Breakout Cable (QSFP+ to 4xSFP+), 3m
AA1404036-E6	Breakout Cable (QSFP+ to 4xSFP+), 5m	Breakout Cable (QSFP+ to 4xSFP+), 5m
AA1404041-E6	Breakout Cable (QSFP+ to 4xSFP+), 10m	Breakout Cable (QSFP+ to 4xSFP+), 10m active optical

Ordering Information (cont.)

Part Number	Product Name	Product Description
25Gb Optical Transceivers and Direct Attach Cables		
10501	25Gb SFP28 SR MMF	25Gb, 25GBASE-SR, 70m OM3/ 100m OM4 MMF, SFP28, duplex LC
10502	25Gb SFP28 SR-Lite MMF	25Gb, 25GBASE-SR-Lite, 30m/ 50m/ 70m OM3, 40m/ 70m/ 100m OM4 (no FEC/ BASE-R/ RS FEC), SFP28, Duplex LC
10503	25Gb SFP28 ESR MMF	25Gb, Extended SR (ESR), 200m OM3/400m OM4 MMF, SFP28, duplex LC
10504	25Gb SFP28 LR 10km	25Gb, 25GBASE-LR, 10km SMF, SFP28, LC
10520	25Gb, DAC SFP28-SFP28 1m	25Gb, SFP28-SFP28 Direct attach passive copper cable, 1m
10521	25Gb, DAC SFP28-SFP28 3m	25Gb, SFP28-SFP28 Direct attach passive copper cable, 3m
10522	25Gb, DAC SFP28-SFP28 5m	25Gb, SFP28-SFP28 Direct attach passive copper cable, 5m
10530	25Gb AOC SFP28-SFP28 10m	25Gb, SFP28-SFP28 Active optical breakout cable, 10m
10531	25Gb AOC SFP28-SFP28 20m	25Gb, SFP28-SFP28 Active optical breakout cable, 20m
10Gb Optical Transceivers and Direct Attach Cables		
10301 or AA1403015-E6	10Gb SR SFP+ module	10GBASE-SR SFP+, 850nm, LC, 300m OM3 MMF, 400m OM4 MMF
10302 or AA1403011-E6	10Gb LR SFP+ module	10GBASE-LR SFP+, 1310nm, LC, 10km SMF
10309 or AA1403013-E6	10Gb ER SFP+ module	10GBASE-ER, 1550nm, up to 40km SMF
10338	10Gb SFP+ 10GBASE-T	10Gb SFP+, 10GBASE-T RJ-45, 20m with CAT6a
AA1403043-E6	10Gb SFP+, 10GBASE-T	10GBase-T SFP+ RJ45, Up to 30m
AA1403165-E6	10Gb CWDM	10GBASE-CWDM, 1550nm, up to 70km SMF
AA1403169-E6	10Gb BX-TX	10GBASE-BX TX: 1270nm, up to 10km SMF
AA1403170-E6	10Gb BX-TX	10GBASE-BX TX: 1330nm, up to 10km SMF
AA1403019-E6	10Gb Direct Attach Cable, 3m	Direct Attach Cable (SFP+), 3m passive copper
AA1403020-E6	10Gb Direct Attach Cable, 5m	Direct Attach Cable (SFP+), 5m passive copper
AA1403022-E6	10Gb Direct Attach Cable, 7m	Direct Attach Cable (SFP+), 7m passive copper
AA1403018-E6	10Gb Direct Attach Cable, 10m	Direct Attach Cable (SFP+), 10m
10GB-BX10-U	10Gb, Single Fiber SM, -U 10 KM	10Gb, Single Fiber SM, Bidirectional, 1330nm Tx / 1270nm RX, 10Km, Simplex LC SFP+ (must be paired with 10GB-BX10-D)
10GB-BX10-D	10Gb Single Fiber SM, -D 10 KM	10Gb, Single Fiber SM, Bidirectional, 1270nm Tx / 1330nm RX, 10Km, Simplex LC SFP+ (must be paired with 10GB-BX10-U)
10GB-BX40-U	10Gb Single Fiber SM, -U 40 KM	10Gb, Single Fiber SM, Bidirectional, 1330nm Tx / 1270nm RX, 40Km, Simplex LC SFP+ (must be paired with 10GB-BX40-D)
10GB-BX40-D	10Gb Single Fiber SM, -D 40 KM	10Gb, Single Fiber SM, Bidirectional, 1270nm Tx / 1330nm RX, 40Km, Simplex LC SFP+ (must be paired with 10GB-BX40 -D)
1Gb Optical Transceivers		
AA1419043-E6	1000BASE-T SFP (RJ-45)	1-port 1000BASE-T Small Form Pluggable (SFP), 8-pin modular connector (RJ-45)
AA1419048-E6	SFP 1000BASE-SX DDI (LC)	1-port 1000BASE-SX Small Form Factor Pluggable (SFP) connector type: LC
AA1419049-E6	SFP 1000BASE-LX DDI (LC)	1-port 1000BASE-LX Small Form Factor Pluggable (SFP) connector type: LC
AA1419069-E6	SFP 1000BASE-BX (LC) - 1310nm	1-port 1000BASE-BX Small Form Factor Pluggable (SFP) connector type: LC - 1310nm Wavelength. Must be paired with AA1419070-E6
AA1419070-E6	SFP 1000BASE-BX (LC) - 1490nm	1-port 1000BASE-BX Small Form Factor Pluggable (SFP) connector type: LC - 1490nm Wavelength. Must be paired with AA1419069-E6
10051H	1000BASE-SX SFP, Hi	1000BASE-SX SFP, MMF 220 & 550 meters, LC connector, Industrial Temp
10052H	1000BASE-LX SFP, Hi	1000BASE-LX SFP, MMF 220 & 550 meters, SMF 10km, LC connector, Industrial Temp
10053H	1000BASE-ZX SFP, Hi	1000BASE-ZX SFP, SMF 70km, LC connector, Industrial Temp

Part Number	Product Name	Product Description
1Gb Optical Transceivers (cont'd)		
MGBIC-BX40-U	1000BASE-BX-U BiDi SFP 40Km	1000BASE-BX-U SFP, single fiber, 1310-nm TX/1490-nm RX wavelength, 40Km Industrial Temp
MGBIC-BX40-D	1000BASE-BX-D BiDi SFP 40Km	1000BASE-BX-D SFP, single fiber, 1490-nm TX/1310-nm RX wavelength, 40Km Industrial Temp
MGBIC-BX120-U	1000BASE-BX-U BiDi SFP 120Km	1000BASE-BX-U SFP, single fiber, 1490-nm TX/1590-nm RX wavelength, 120Km Industrial Temp
MGBIC-BX120-D	1000BASE-BX-D BiDi SFP 120Km	1000BASE-BX-U SFP, single fiber, 1590-nm TX/1490-nm RX wavelength, 120Km Industrial Temp

Optics/Transceivers

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

Power Cords

VSP 7400 Series power cords can be ordered separately but need to be specified at time of ordering. Refer to www.extremenetworks.com/product/powercords/ for details on power cord availability for this product.

Warranty

The VSP 7400 Series is 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.

Extreme networks

http://www.extremenetworks.com/contact

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