ExtremeRouting SLX 9740 Technical Specifications

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Preface

This section describes the text conventions used in this document, where you can find additional information, and how you can provide feedback to us.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as ExtremeSwitching switches or SLX routers, the product is referred to as *the switch* or *the router*.

Table 1: Notes and warnings

Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product
	Note	Useful information or instructions
	Important	Important features or instructions
	Caution	Risk of personal injury, system damage, or loss of data
	Warning	Risk of severe personal injury

Table 2: Text

Convention	Description
`screen displays`	This typeface indicates command syntax, or represents information as it is displayed on the screen.
The words *enter* and *type*	When you see the word *enter* in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says *type*.
Key names	Key names are written in boldface, for example **Ctrl** or **Esc**. If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press **Ctrl**+**Alt**+**Del**
Words in italicized type	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
NEW!	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Bold text indicates command names, keywords, and command options.
italic text	Italic text indicates variable content.
[ ]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{ **x** | **y** | **z** }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x | **y**	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, `member[member...]`.
\	In command examples, the backslash indicates a "soft" line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Documentation and Training

Find Extreme Networks product information at the following locations:

Current Product Documentation

Release Notes

Hardware and software compatibility for Extreme Networks products

Extreme Optics Compatibility

Other resources such as white papers, data sheets, and case studies

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Getting Help

If you require assistance, contact Extreme Networks using one of the following methods:

Extreme Portal

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

The Hub

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

Call GTAC

For immediate support: (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

Subscribe to Service Notifications

You can subscribe to email notifications for product and software release announcements, Vulnerability Notices, and Service Notifications.

1. Go to www.extremenetworks.com/support/service-notification-form.
2. Complete the form (all fields are required).
3. Select the products for which you would like to receive notifications.

> **Note**
> You can modify your product selections or unsubscribe at any time.

4. Select **Submit**.

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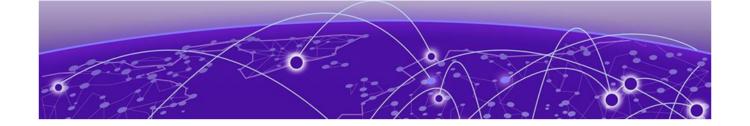
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Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

ExtremeRouting SLX 9740 Technical Specifications

The ExtremeRouting SLX 9740 switch routers include the following models:

Part number	Description
SLX9740-40C, 9740-40C	SLX9740-40C, 9740-40C switch router with two unpopulated power supply slots and six unpopulated fan slots. Supports 40x100GE/40GE QSFP28 ports.
SLX9740-40C-AC-F	SLX9740-40C-AC-F switch router AC with front-to-back airflow. Supports 40x100GE/40GE QSFP28 ports with dual power supplies, six fans.
SLX9740-80C, 9740-80C	SLX9740-80C, 9740-80C switch router with four unpopulated power supply slots and four unpopulated fan slots. Supports 80x100GE/40GE QSFP28 ports.
SLX9740-80C-AC-F	SLX9740-80C-AC-F switch router AC with front-to-back airflow. Supports 80x100GE/40GE QSFP28 ports with quad power supplies, four fans.

SLX 9740 Software Specifications

Table 4: SLX 9740 Software Specifications

Software Specifications	Description
Connector options	• 40 100 GbE/40GbE ports for 9740-40C • 80 100 GbE/40GbE ports for 9740-80C • 72 (18x4) 10/25 GbE ports for 9740-40C • 144 (36x4) 10/25 GbE ports for 9740-80C • Out-of-band Ethernet management: 10/100/1000 Mbps RJ-45 • Console management: RJ45 serial port • Storage: USB port, standard-A plug
Maximum MAC addresses	600K (default profile) 190K (route profile)
Switch fabric capacity (data rate, full duplex)	4.0 Tbps in each direction (front panel ports, 40x100Gbps) for 9740-40C 8.0 Tbps in each direction (front panel port, 80x100Gbps) for 9740-80C
Maximum VLANs	4,096
Maximum ACLs (IPv4/IPv6/L2)	2,000
Maximum members in a standard LAG	64
Maximum number of MCT switches	2

Table 4: SLX 9740 Software Specifications (continued)

Software Specifications	Description
Maximum number of Bridge Domains	4096
Maximum IPv4 unicast routes	128,000
Maximum IPv6 unicast routes	10,000
Maximum IPv4 host routes	47,000
Maximum IPv6 host routes	33,000
Maximum jumbo frame size	9,216 bytes
QoS priority queues (per port)	8
IEEE Compliance	• IEEE 802.1D Spanning Tree Protocol • IEEE 802.1s Multiple Spanning Tree • IEEE 802.1w Rapid Reconfiguration of Spanning Tree Protocol • IEEE 802.3 Ethernet • IEEE 802.3ad Link Aggregation with LACP • IEEE 802.3ab 1000BASE-T • IEEE 802.3z 1000BASE-X • IEEE 802.3ba / 80 2.3bm 40 GBASE-X and 100 GBASE-X • IEEE 802.1Q VLAN Tagging • IEEE 802.1p Class of Service Prioritization and Tagging • IEEE 802.1v VLAN Classification by Protocol and Port • IEEE 802.1AB Link Layer Discovery Protocol (LLDP) • IEEE 802.3x Flow Control (Pause Frames) • IEEE 802.3ae 10 GBASE-X • IEEE 802.3 10 GBASE-T (up to 100 m using Cat6a cabling or better) • IEEE 802.3bj • IEEE 802.3by

Weights and Physical Dimensions

Table 5: SLX 9740 Switch Router Unpackaged Dimensions

SLX9740-40C	Height: 4.31 cm (1.7 in) Width: 45.00 cm (17.72 in) Length (base model): 64.00 cm (25.2 in) Length (40C-AC-F model): 67.00 cm (26.38 in)
SLX9740-80C	Height: 8.66 cm (3.41 in) Width: 45.00 cm (17.72 in) Length (base model): 64.00 cm (25.2 in) Length (80C-AC-F model): 67.00 cm (26.38 in)
XN-FAN-003-F: Fan unit, front-to-back or XN-FAN-003-R: Fan Unit back-to-front	Height: 4.01 cm (1.58 in.) Width: 4.01 cm (1.58 in.) Length: 13.99 cm (5.51 in.)
XN-FAN-004-F: Fan unit, front-to-back or XN-FAN-004-R: Fan Unit back-to-front	Height: 5.99 cm (2.36 in.) Width: 4.01 cm (2.36 in.) Length: 15.49 cm (6.1 in.)
Four-post rack mount kit (included with switch)	Height: 5.00 cm (1.97 in) Width: 7.01 cm (2.76 in) Length: 72.00 cm (28.35 in)
XN-2P-RKMT299 - Two-post rack mount kit for SLX9740-40C (separately orderable)	Height: 4.2 cm (1.65 in) Width: 2.4 cm (0.93 in) Length: 12.5 cm (4.92 in)
XN-2P-RKMT300 - Two-post rack mount kit for SLX9740-80C (separately orderable)	Height: 8.99 cm (3.54 in) Width: 10.16 cm (4.00 in) Length: 13.00 cm (5.12 in)

Table 6: SLX 9740 Switch Router Unpackaged Weight

SLX9740-40C	10.55 kg (23.28 lb)
SLX9740-80C	20.61 kg (45.45 lb)
SLX9740-40C switch router with two AC PSUs (-F and -R models)	13.62 kg (30.04 lb)
SLX9740-80C switch router with four AC PSUs (-F and -R models)	26.48 kg (58.40 lb)
SLX9740-40C fan unit, front-to-back or back-to-front	0.12 kg (0.28 lb)
SLX9740-80C fan unit, front-to-back or back-to-front	0.31 kg (0.70 lb)
SLX9740-40C four-post rack mount kit (included with switch)	2.83 kg (6.26 lb)
SLX9740-80C four-post rack mount kit (included with switch)	2.95 kg (6.52 lb)

Table 6: SLX 9740 Switch Router Unpackaged Weight (continued)

XN-2P-RKMT299 - Two-post rack mount kit for SLX9740-40C (separately orderable)	0.45 kg (0.99 lb)
XN-2P-RKMT300 - Two-post rack mount kit for SLX9740-80C (separately orderable)	0.70 kg (1.54 lb)

Table 7: SLX 9740 Switch Router Packaged Dimensions

SLX9740-40C switch router	Height: 19.20 cm (7.56 in) Width: 59.30 cm (23.35 in) Length: 97.99 cm (38.58 in)
SLX9740-80C switch router	Height: 24.00 cm (9.45 in) Width: 59.30 cm (23.35 in) Length: 97.99 cm (38.58 in)
SLX9740-40C fan unit, front-to-back or back-to-front	Height: 6.50 cm (2.56 in) Width: 10.59 cm (4.17 in) Length: 22.60 cm (8.90 in)
SLX9740-80C fan unit, front-to-back or back-to-front	Height: 9.60 cm (3.78 in) Width: 10.31 cm (4.06 in) Length: 22.48 cm (8.46 in)
Four-post rack mount kit (included with either switch)	Height: 7.01 cm (2.76 in) Width: 10.99 cm (4.33 in) Length: 83.99 cm (33.07 in)
XN-2P-RKMT299 - Two-post rack mount kit for SLX9740-40C (separately orderable)	Height: 24.00 cm (9.45 in) Width: 20.60 cm (8.11 in) Length: 22.09 cm (8.70 in)
XN-2P-RKMT300 - Two-post rack mount kit for SLX9740-80C (separately orderable)	Height: 6.50 cm (2.56 in) Width: 10.59 cm (4.17 in) Length: 22.60 cm (8.90 in)

Table 8: SLX 9740 Switch Router Packaged Weight

SLX9740-40C switch router with no PSUs	17.18 kg (37.89 lb)
SLX9740-40C switch router with two AC PSUs (-F and -R models)	20.20 kg (44.59 lb)
SLX9740-80C switch router with no PSUs	29.08 kg (64.12 lb)
SLX9740-40C switch router with two AC PSUs (-F and -R models)	34.89 kg (76.94 lb)
SLX9740-40C fan unit, front-to-back or back-to-front	0.25 kg (0.56 lb)
SLX9740-80C fan unit, front-to-back or back-to-front	0.54 kg (1.21 lb)
SLX9740-40C four-post rack mount kit (included with switch)	3.11 kg (6.87 lb)
SLX9740-80C four-post rack mount kit (included with switch)	3.23 kg (7.14 lb)

Table 8: SLX 9740 Switch Router Packaged Weight (continued)

XN-2P-RKMT299 - Two-post rack mount kit for SLX9740-40C (separately orderable)	3.20 kg (7.05 lb)
XN-2P-RKMT300 - Two-post rack mount kit for SLX9740-80C (separately orderable)	0.82 kg (1.81 lb)

Acoustic Specifications

Table 9: Acoustic Specifications

Device Model	Bystander Sound Pressure (at 27°C)	Declared Sound Power (at 27°C)
SLX9740-40C-AC-F (SLX 9740-40C with front-to-back airflow	55 dB(A)	7.5 bels
SLX9740-40C-AC-R (SLX 9740-40C with back-to-front airflow	59.4 dB(A)	7.9 bels
SLX9740-80C-AC-F (SLX 9740-80C with front-to-back airflow	59.5 dB(A)	7.8 bels
SLX9740-80C-AC-R (SLX 9740-80C with back-to-front airflow)	66.7 dB(A)	8.5 bels

Power Options

Table 10: SLX 9740 Switch Router Power Options

SLX 9740 Switch Router	1600 W AC power supply: Part # XN-ACPWR-1600W-F (front-to-back): AC Input: 100-120/200-240 VAC, 50/60 Hz Part # XN-ACPWR-1600W-R (back-to-front): AC Input: 220 VAC, 50/60 Hz 7A max. for PSU FSG059 for each PSU for SLX9740-40C 4A max. for PSU FSG059 and FSE023 for each PSU for SLX9740-40C; for SLX9740-80C, min. 2 PSUs provided. PSU Input Socket: IEC 320 C14 Power cord input plug: IEC 320 C13
	1600 W DC power supply: Part # XN-DCPWR-1600W-F (front-to-back) DC Input: +/- 48VDC 15A Max (for PSU FSK010) for each PSU for SLX9740-40c +/- 48VDC 15A Max (for PSU FSK010) for each PSU, min. x2 for SLX9740-80C

Mean Time Between Failures (MTBF)

Table 11: SLX 9740 Mean Time Between Failures (MTBF)

Device Model	Mean Time Between Failures
SLX9740-40C-AC-F	189,747 hrs @ 25°C
SLX9740-80C-AC-F	131,836 hrs @ 25°C

CPU, Memory

Table 12: CPU, Memory

Both models
2.2GHz 64-bit CPU
2 x 16 Gb DDR4 SO-DIMM memory, 128 Gb SSD
16MB BIOS SPI Flash Memory
8 GB Deep Buffer for each BCM88690 MAC ASIC

Standards

Table 13: Safety Standards

North American Safety of ITE	UL 62368-1 (US) UL 60950-1 (US) CAN/CSA 22.2 #62368-1-14, Canada CAN/CSA 22.2 #60950-1-07, Canada Complies with FCC 21 CFR Chapter 1, Sub-chapter J in accordance with FDA & CDRH requirements (US Laser Safety) CDRH Letter of Approval (US FDA Approval)
European Safety of ITE	EN 62368-1 EN 60950-1 EN 60825-1 Class 2 (Lasers Safety) 2014/35/EU Low Voltage Directive
International Safety of ITE	AS/NZS 60950-1 (Australia /New Zealand) CB Report & Certificate per IEC 60950-1 + National Differences CB Report & Certificate IEC 62368-1

Table 14: EMI/EMC Standards

North America EMC for ITE	FCC 47 CFR part 15 Class A (USA) ICES-003 Class A (Canada)
European EMC standards	EN 55032 Class A EN 55024 EN 55011 EN 61000-3-2 (Harmonics) EN 61000-3-3 (Flicker) EN 300 386 (EMC Telecommunications) 2014/30/EU EMC Directive

Table 14: EMI/EMC Standards (continued)

International EMC certifications	IEC 61000-4-2/EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 16kV 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, 2kV, Criteria B IEC 61000-4-5/EN 61000-4-5 Surge, 1kV L-L, 2kV L-G, Level 3 Criteria B IEC 61000-4-6/EN 61000-4-6 Conducted Immunity, 0.15-80 Mhz, 10Vrms, 80%AM (1kHz) Criteria A IEC/EN 61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C CISPER 32 Class A (International Emissions) CISPER 24 Class A (International Immunity) CISPER 11:2009 ED 5.0 Group 1, Class A AS/NZS CISPER 32
Country-specific	VCCI Class A (Japan) ACMA RCM (Australia) CCC Mark (China) KCC Mark, EMC Approval (Korea) BSMI (Taiwan) ANATEL (Brazil) NoM (Mexico) EAC mark (Russiam Belarus, Kazhakstan) NRCS (South Africa)

Table 15: Telecom Standards

EN/ETSI 300 386:2008 (EMC Telecommunications) EN/ETSI 300 019 (Environmental for Telecommunications) MEF9 and MEF14 certified for EPL, EVPL, and ELAN

Table 16: IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T IEEE 802.3z 1000BASE-X IEEE 802.3ae 10GBASE-X IEEE 802.3ba 40GBASE-X

Environmental Data

Table 17: Environmental Data

Environmental standards	EN/ETSI 300 019-2-1 v2.1.2 (2000 - 2009) - Class 1.2 Storage EN/ETSI 300 019-2-2 v2.1.2 (1999 - 09) - Class 2.3 Transportation EN/ETSI 300 019-2-3 v2.1.2 (2003 - 04) - Class 3.1e Operational EN/ETSI 300 753 (1997-10) - Acoustic Noise ASTM D3580 Random Vibration Unpackaged 1.5G
Temperature range	• Front-to-back airflow: 0°C to 40°C (32°F to 104°F) up to 1800m (6,000 ft) • Back-to-front airflow: 0°C to 25°C (32°F to 77°F) up to 457m (1500 ft)
Other operating conditions	Humidity: 5% to 90% relative humidity, non-condensing Altitude: 0 to 4,500 meters (14,763 feet) Storage temperature: -25°C to 55°C (-13°F to 131°F) Operational shock (half sine): 30 m/s^2 (3 G), 11 ms, 60 shocks Operational random vibration: 3 to 500 Hz at 1.5 G rms
Storage & transportation conditions (packaged)	Transportation temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 5% to 95% relative humidity, non-condensing Packaged shock (half sine): 180 m/s^2 (18 G), 6 ms, 600 shocks Packaged sine 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 14 drops minimum on sides and corners at 42 in (<15 kg box)