

Cisco Nexus 9500 Platform Line Cards and Fabric Modules

Product Overview

The Cisco Nexus[®] 9500 switching platform (Figure 1), offers three modular options: the Cisco Nexus 9504 Switch with 4 slots, the Cisco Nexus 9508 Switch with 8 slots, and the Cisco Nexus 9516 Switch with 16 slots. All three switches use the same supervisor, system controller and power supplies. The Cisco Nexus 9500 Series consists of Layer 2 and 3 non-blocking Ethernet switches with backplane bandwidth of up to 115.2 Terabits per second (Tbps). The Cisco Nexus 9504, 9508, and 9516 Switches support 100 Megabit Ethernet and 1, 10, 25, 40, 50, and 100 Gigabit Ethernet interfaces through a comprehensive selection of modular line cards. Configurable with up to 2304 x 10 Gigabit Ethernet ports, 2048 x 25 Gigabit Ethernet ports, 576 x 40 Gigabit Ethernet ports, 1024 x 50 Gigabit Ethernet ports, or 512 x 100 Gigabit Ethernet ports, they provide ample capacity for both access- and aggregation-layer deployments.

Figure 1. Cisco Nexus 9000 Series Switches

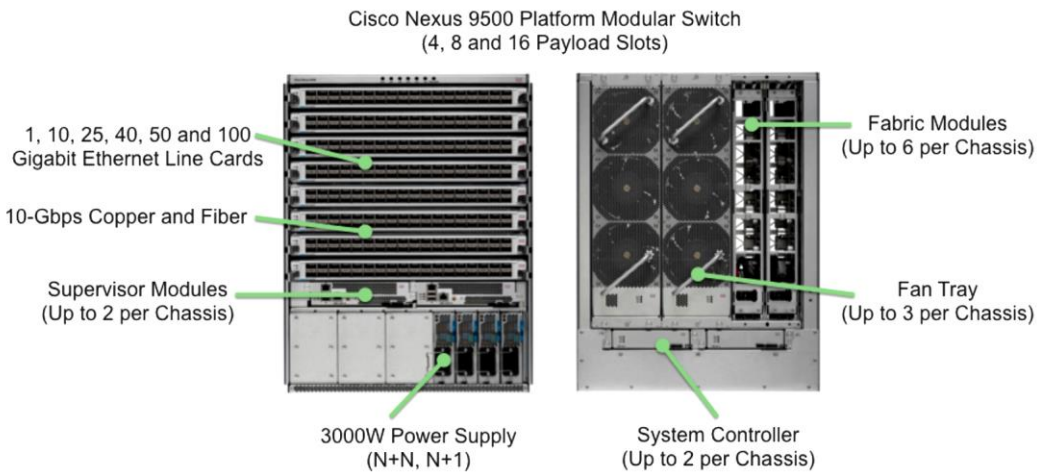


The Cisco Nexus 9000 Series offers two modes of operation. Organizations can use Cisco[®] NX-OS Software with the Cisco Nexus 9000 Series in standard Cisco Nexus switch environments (NX-OS mode). They can also use ACI mode, with hardware infrastructure ready to support the Cisco Application Centric Infrastructure (Cisco ACI[™]) solution, to take full advantage of an automated, policy-based, systems management approach using Cisco ACI. This data sheet covers standard Cisco Nexus 9500 platform deployment scenarios using NX-OS mode.

Cisco Nexus 9500 Platform Components

The Cisco Nexus 9500 platform is built using the components illustrated in Figure 2 and described in the following sections.



Figure 2. Cisco Nexus 9500 Platform Components













Cisco Nexus 9500 Platform Line Cards for Non-ACI Mode Deployments



The Cisco Nexus 9500 platform supports a variety of hot-swappable line cards (Table 1) optimized for datacenter deployments.

Table 1. Cisco Nexus 9500 Platform Line Cards

Line Card Type	Description
100-Gbps Line Cards	
N9K-X9732C-FX: 100 Gigabit Ethernet Line Card 	<ul style="list-style-type: none"> • 32-port 100 Gigabit Ethernet Quad Small Form-Factor Pluggable 28 (QSFP28) line card • Every QSFP28 supports 1 x 100, 2 x 50, 1 x 40, 4 x 25, 4 x 10, and 1x1/10 Gigabit Ethernet • Powered by Cisco® Cloud Scale Technology • 160-MB buffer • Line rate for all packet sizes • Supports NX-OS mode • Supported in 4-, 8-, and 16- slot chassis • Requires 4 100-Gbps fabric modules (N9K-C95XX-FM-E or N9K-C95XX-FM-E2) for maximum bandwidth • Requires 5 100-Gbps fabric modules (N9K-C9516-FM-E2) for N+1 fabric module redundancy (Note: Fabric module redundancy requires a chassis with only N9K-X9732C-FX cards.) • Compatible with N9K-C9504-FM-E¹, N9K-C9508-FM-E¹, N9K-C9516-FM-E¹, and N9K-C9516-FM-E2
N9K-X9736C-FX: 100 Gigabit Ethernet Line Card 	<ul style="list-style-type: none"> • 36-port 100 Gigabit Ethernet Quad Small Form-Factor Pluggable 28 (QSFP28) line card • Every QSFP28 supports 1 x 100, 2 x 50, 1 x 40, 4 x 25, 4 x 10, and 1x1/10 Gigabit Ethernet¹ • Powered by Cisco® Cloud Scale technology • 160-MB buffer • Supports both NX-OS and ACI modes • Supported in 4-, 8-, and 16- slot chassis • Requires 5x 100-Gbps fabric modules (N9K-C95XX-FM-E) for maximum bandwidth (Note: 7.2Tbps bi-directional bandwidth with 5 fabric modules requires a chassis with only N9K-X9736C-FX cards.) • Compatible with N9K-C9504-FM-E, N9K-C9508-FM-E, N9K-C9516-FM-E, and N9K-C9516-FM-E2

Line Card Type	Description
<p>N9K-X9736C-EX: 100 Gigabit Ethernet Line Card</p> 	<ul style="list-style-type: none"> • 36-port 100 Gigabit Ethernet Quad Small Form-Factor Pluggable 28 (QSFP28) line card • Every QSFP28 supports 1 x 100, 2 x 50, 1 x 40, 4 x 25, 4 x 10, and 1x1/10 Gigabit Ethernet¹ • Powered by Cisco® Cloud Scale technology • 160-MB buffer • Supports NX-OS mode • Supported in 4-, 8-, and 16- slot chassis • Requires 4x 100-Gbps fabric modules (N9K-C95XX-FM-E) for maximum bandwidth • Support maximum 6.4 Tbps bi-directional fabric bandwidth • Compatible with N9K-C9504-FM-E, N9K-C9508-FM-E, and N9K-C9516-FM-E
<p>N9K-X9732C-EX: 100 Gigabit Ethernet Line Card</p> 	<ul style="list-style-type: none"> • 32-port 100 Gigabit Ethernet Quad Small Form-Factor Pluggable 28 (QSFP28) line card • Every QSFP28 supports 1 x 100, 2 x 50, 1 x 40, 4 x 25, 4 x 10, and 1x1/10 Gigabit Ethernet • Powered by Cisco's Cloud Scale Technology • 160-MB buffer • Line rate for all packet sizes • Supports both NX-OS and ACI modes • Supported in 4-, 8-, and 16- slot chassis • Requires 4x 100-Gbps fabric modules (N9K-C950X-FM-E) for maximum bandwidth • Compatible with N9K-C9504-FM-E, N9K-C9508-FM-E, and N9K-C9516-FM-E
<p>N9K-X9432C-S: 100 Gigabit Ethernet Line Card</p> 	<ul style="list-style-type: none"> • 32-port 100 Gigabit Ethernet QSFP28 line card • Every QSFP28 supports 1 x 100, 2 x 50, 1 x 40, 4 x 25 and 4x10 Gigabit Ethernet² • 32-MB buffer • Line rate for packets greater than 250 bytes • Supports NX-OS mode • Supported in 4- and 8-slot chassis • Requires 4x fabric modules (N9K-C950X-FM-S) for maximum bandwidth • Compatible with N9K-C9504-FM-S and N9K-C9508-FM-S
40-Gbps Line Cards	
<p>N9K-X9636PQ: 40 Gigabit Ethernet Line Card</p> 	<ul style="list-style-type: none"> • 36-port 40 Gigabit Ethernet QSFP+ line card • Non-blocking, 36-MB buffer • Line rate for all packet sizes • Supports NX-OS mode • Supported in 4- and 8-slot chassis • Requires 6x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM and N9K-C9508-FM
<p>N9K-X9536PQ: 40 Gigabit Ethernet Line Card</p> 	<ul style="list-style-type: none"> • 36-port 40 Gigabit Ethernet QSFP+ line card • 104-MB buffer • Supports Virtual Extensible LAN (VXLAN) routing and bridging • 1.5:1 oversubscription • Supports NX-OS mode • Supported in 4-, 8-, and 16-slot chassis • Requires 3x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM, N9K-C9508-FM, and N9K-C9516-FM

Line Card Type	Description
<p>N9K-X9432PQ: 40 Gigabit Ethernet Line Card</p> 	<ul style="list-style-type: none"> • 32-port 40 Gigabit Ethernet QSFP+ line card • 24-MB buffer • Line rate for packets greater than 200 bytes • Supports NX-OS mode • Supported in 4-, 8-, and 16-slot chassis • Requires 4x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM, N9K-C9508-FM, and N9K-C9516-FM
10/25-Gbps Fiber Line Cards	
<p>N9K-X97160YC-EX: 1, 10 and 25 Gigabit Ethernet Access-Layer and 10, 40 and 100 Gigabit Ethernet Aggregation-Layer Line Card</p> 	<ul style="list-style-type: none"> • 48-port 1, 10 and 25 Gigabit Ethernet SFP+ with 4-port 100 Gigabit Ethernet QSFP+ line card • Powered by Cisco® Cloud Scale Technology • Non-blocking, 40-MB buffer • Greater distance options for 25G deployments with FC and RS FEC • Supports VXLAN routing and bridging • Supports NX-OS mode • Supported in 4-, 8-, and 16-slot chassis • Requires 4x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM-E, N9K-C9508-FM-E, and N9K-C9516-FM-E
<p>N9K-X9564PX: 1 and 10 Gigabit Ethernet Access-Layer and 10 and 40 Gigabit Ethernet Aggregation-Layer Line Card</p> 	<ul style="list-style-type: none"> • 48-port 1 and 10 Gigabit Ethernet SFP+ with 4-port 40 Gigabit Ethernet QSFP+ line card • Non-blocking, 104-MB buffer • Supports VXLAN routing and bridging • Supports NX-OS mode • Supported in 4-, 8-, and 16-slot chassis • Requires 3x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM, N9K-C9508-FM, and N9K-C9516-FM
<p>N9K-X9464PX: 1 and 10 Gigabit Ethernet Access-Layer and 10 and 40 Gigabit Ethernet Aggregation-Layer Line Card</p> 	<ul style="list-style-type: none"> • 48-port 1 and 10 Gigabit Ethernet SFP+ with 4-port 40 Gigabit Ethernet QSFP+ line card • 12-MB buffer • Line rate for packets greater than 200 bytes • Supports NX-OS mode • Supported in 4-, 8-, and 16-slot chassis • Requires 4x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM, N9K-C9508-FM, and N9K-C9516-FM
10-Gbps Copper Line Cards	
<p>N9K-X9788TC-FX: 1 and 10 Gigabit Ethernet Copper Access-Layer and 40/100 Gigabit Ethernet Aggregation-Layer Line Card</p> 	<ul style="list-style-type: none"> • 48-port 1 and 10GBASE-T plus 4-port 40/100 Gigabit Ethernet QSFP28 line card • Powered by Cisco® Cloud Scale Technology • Nonblocking, 40-MB buffer • Designed for End-of Row (EoR) and Middle-of-Row (MoR) environments • Supports VXLAN routing and bridging • Supports NX-OS mode • Supports 100 Megabit Ethernet, 1 Gigabit Ethernet, and 10GBASE-T copper cabling connectivity for server access • Supported in 4-, 8-, and 16-slot chassis • Requires 4x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM-E, N9K-C9508-FM-E, N9K-C9516-FM-E, and N9K-C9516-FM-E2

Line Card Type	Description
N9K-X9564TX: 1 and 10 Gigabit Ethernet Copper Access-Layer and 10 and 40 Gigabit Ethernet Aggregation-Layer Line Card 	<ul style="list-style-type: none"> • 48-port 1 and 10GBASE-T plus 4-port 40 Gigabit Ethernet QSFP+ line card • Nonblocking, 104-MB buffer • Supports VXLAN routing and bridging • Supports NX-OS mode • Supports 100 Megabit Ethernet, 1 Gigabit Ethernet, and 10GBASE-T copper cabling connectivity for server access • Supported in 4-, 8-, and 16-slot chassis • Requires 3x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM, N9K-C9508-FM, and N9K-C9516-FM
N9K-X9464TX2: 1 and 10 Gigabit Ethernet Copper Access-Layer and 10 and 40 Gigabit Ethernet Aggregation-Layer Line Card 	<ul style="list-style-type: none"> • 48-port 1 and 10GBASE-T plus 4-port 40 Gigabit Ethernet QSFP+ line card • 12-MB buffer • Line rate for packets greater than 200 bytes • Supports NX-OS mode • Supports 100 Megabit Ethernet, 1 Gigabit Ethernet, and 10GBASE-T copper cabling connectivity for server access • Supported in 4-, 8-, and 16¹-slot chassis • Requires 4x fabric modules for maximum bandwidth • Compatible with N9K-C9504-FM, N9K-C9508-FM, and N9K-C9516-FM

¹ Hardware capability. Check software release notes for latest information

Cisco Nexus 9500 Platform Fabric Modules and Performance

The Cisco Nexus 9500 platform has a Clos fabric design that interconnects the line cards with rear-mounted fabric modules. All fabric cards are directly connected to all line cards. With load balancing across fabric cards, the architecture achieves optimal bandwidth distribution within the chassis. Cloud Scale Technology powered N9K-C95xx-FM-E enables 100 Gigabit Ethernet deployments (N9K-C9516-FM-E provides maximum of 50-Gbps per flow). See Table 2 for line card and fabric module compatibility information.

Table 2. Cisco Nexus 9500 Line Cards and Fabric Modules

Part Number	Product Description	Performance	Compatible Fabric Module	Required Fabric Modules for Maximum Bandwidth
100-Gbps Line Cards				
N9K-X9732C-FX	32-port 40/100 Gigabit Ethernet QSFP28 line card	6.4 Tbps 10.23 bpps	N9K-C95xx-FM-E N9K-C95xx-FM-E2	4
N9K-X9736C-FX	36-port 40/100 Gigabit Ethernet QSFP28 line card	7.2 Tbps 11.50 bpps	N9K-C95xx-FM-E N9K-C95xx-FM-E2	5
N9K-X9736C-EX	36-port 40/100 Gigabit Ethernet QSFP28 line card	7.2 Tbps 11.50 bpps	N9K-C95xx-FM-E N9K-C95xx-FM-E2	4
N9K-X9732C-EX	32-port 40/100 Gigabit Ethernet QSFP28 line card	6.4 Tbps 10.23 bpps	N9K-C95xx-FM-E N9K-C95xx-FM-E2	4
N9K-X9432C-S	32-port 40/100 Gigabit Ethernet QSFP28 line card	6.4 Tbps 7.03 bpps	N9K-C95xx-FM-S	4
40-Gbps Line Cards				
N9K-X9636PQ	36-port 40 Gigabit Ethernet QSFP+ line card	2.88 Tbps 4.29 bpps	N9K-C95xx-FM	6
N9K-X9536PQ	36-port 40 Gigabit Ethernet QSFP+ line card	2.88 Tbps 2.86 bpps	N9K-C95xx-FM	3
N9K-X9432PQ	32-port 40 Gigabit Ethernet QSFP+ line card	2.56 Tbps 2.86 bpps	N9K-C95xx-FM	4

Part Number	Product Description	Performance	Compatible Fabric Module	Required Fabric Modules for Maximum Bandwidth
1/10/25-Gbps Fiber Line Cards				
N9K-X97160YC-EX	48-port 1/10/25 Gigabit Ethernet SFP+ and 4-port 40/100 Gigabit Ethernet QSFP line card	1.6 Tbps 5.11 bpps	N9K-C95xx-FM-E N9K-C95xx-FM-E2	4
N9K-X9564PX	48-port 1/10 Gigabit Ethernet SFP+ and 4-port 40 Gigabit Ethernet QSFP+ line card	1.28 Tbps 1.9 bpps	N9K-C95xx-FM	3
N9K-X9464PX	48-port 10 Gigabit Ethernet SFP+ and SFP and 4-port 40 Gigabit Ethernet QSFP+ line card	1.28 Tbps 1.9 bpps	N9K-C95xx-FM	4
1/10-Gbps Copper Line Cards				
N9K-X9788TC-FX	48-port 1/10GBASE-T and 4-port 40/100 Gigabit Ethernet QSFP28 line card	1.76 Tbps	N9K-C95xx-FM-E N9K-C95xx-FM-E2	4
N9K-X9564TX	48-port 1/10GBASE-T and 4-port 40 Gigabit Ethernet QSFP+ line card	1.28 Tbps 1.9 bpps	N9K-C95xx-FM	3
N9K-X9464TX2	48-port 1/10GBASE-T and 4-port 40 Gigabit Ethernet QSFP+ line card	1.28 Tbps 1.9 bpps	N9K-C95xx-FM	4

Notes:

Tbps: Terabits per second
 bpps: Billions of packets per second
 mpps: Millions of packets per second

Specifications

Table 3 lists the specifications for the Cisco Nexus 9500 platform in a standard (NX-OS Mode) deployment. (Please check software release notes for feature-support information.)

Table 3. Product Specifications: Performance and Scalability

Item	Cisco Nexus X9400, X9500, and X9600 Line Cards	Cisco Nexus X9432C-S Line Card	Cisco Nexus X97xx-EX/FX Line Card
Maximum number of Longest-Prefix-Match (LPM) routes	128,000	128,000	V4: 600K (Shared with V4 Host Routes) V6: 300K (In addition to V4 Entries)
Maximum number of IP host entries	208,000	104,000	600K (Shared with V4 LPM)
Maximum number of MAC address entries	160,000	40,000 (104,000 ⁴)	64,000 (512K ¹)
Number of multicast routes	<ul style="list-style-type: none"> 8,000 to 32,000 (without virtual port channel [vPC]) 4,000 to 32,000 (with vPC) 	32,000 (52,000 ⁴)	32,000
Number of Interior Gateway Management Protocol (IGMP) snooping groups	<ul style="list-style-type: none"> 8,000 to 32,000 (without vPC) 4,000 to 32,000 (with vPC) 	<ul style="list-style-type: none"> 8,000 to 32,000 (without vPC) 4,000 to 32,000 (with vPC) 	<ul style="list-style-type: none"> 8,000 to 32,000 (without vPC) 4,000 to 32,000 (with vPC)
Maximum number of VLANs	4,096	4,096	4,096
Maximum number of Virtual Routing and Forwarding (VRF) instances	1,000	2,000	1000 (16K ¹)
Maximum number of links in a port channel	32	32	32
Maximum number of ECMP paths	64	64	64
Maximum number of port channels	512	512	512

Item	Cisco Nexus X9400, X9500, and X9600 Line Cards	Cisco Nexus X9432C-S Line Card	Cisco Nexus X97xx-EX/FX Line Card
Number of active Cisco Switched Port Analyzer (SPAN) sessions	4 to 32	4 to 32	4 to 32
Maximum number of Rapid per-VLAN Spanning Tree (RPVST) instances	507	507	507 (4K ¹)
Maximum number of Hot Standby Router Protocol (HSRP) groups	490	490	490
Maximum number of Multiple Spanning Tree (MST) instances	64	64	64
Maximum number of tunnel endpoints (VTEP) and VXLAN physical servers (per VLAN)	10,000	10,000	10,000

¹ Hardware capability. Please check the software release notes for the latest scale numbers

Supported Optics Modules

For details about the available optics modules and the minimum software release required for each supported optical module, visit

https://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html.

Weight and Typical Power

Table 4 lists the weight and typical power consumption of the Cisco Nexus 9500 platform.

Table 4. Weight and Power Consumption

Component	Weight	Typical Power	Maximum Power
Fabric Module			
• N9K-C9504-FM	• 5.76 lb (2.6 kg)	• 95W	• 131W
• N9K-C9504-FM-E	• 6.6 lb (2.98 kg)	• 234W	• 313W
• N9K-C9504-FM-S	• 6.2 lb (2.81 kg)	• 171W	• 246W
• N9K-C9508-FM	• 9.59 lb (4.4 kg)	• 176W	• 251W
• N9K-C9508-FM-E	• 11.6 lb (5.28 kg)	• 455W	• 570W
• N9K-C9508-FM-S	• 10.80 lb (4.9 kg)	• 340W	• 400W
• N9K-C9516-FM	• 11.50 lb (5.2 kg)	• 330W	• 504W
• N9K-C9516-FM-E	• 22.7 lb (10.3 kg)	• 980W	• 1320W
• N9K-C9516-FM-E2	• 20.31 lb (9.21 kg)	• 439W	• 780W
100-Gbps Line Cards			
Cisco Nexus X9732C-FX: 32-port 100/40 Gigabit Ethernet QSFP28 line card	15 lb (6.8 kg)		
Cisco Nexus X9736C-FX: 36-port 100/40 Gigabit Ethernet QSFP28 Line Card	14.38 lb (6.50 kg)	607W	1000W
Cisco Nexus X9736C-EX: 36-port 100/40 Gigabit Ethernet QSFP28 line card	14.77 lb (6.7 kg)	632W	792W
Cisco Nexus X9732C-EX: 32-port 100/40 Gigabit Ethernet QSFP28 line card	12.13 lb (5.5 kg)	430W	720W
Cisco Nexus X9432C-S: 32-port 100/40 Gigabit Ethernet QSFP28 line card	12.30 lb (5.58 kg)	440W	509W

Component	Weight	Typical Power	Maximum Power
40-Gbps Line Cards			
Cisco Nexus X9636PQ: 36-port 40 Gigabit Ethernet QSFP+ line card	11.48 lb (5.2 kg)	260W	400W
Cisco Nexus X9536PQ: 36-port 40 Gigabit Ethernet QSFP+ line card	11.99 lb (5.44 kg)	360W	400W
Cisco Nexus X9432PQ: 32-port 40 Gigabit Ethernet QSFP+ line card	10.85 lb (4.92 kg)	240W	300W
10/25-Gbps Fiber Line Cards			
Cisco Nexus X97160YC-EX: 48-port 1/10/25 Gigabit Ethernet SFP+ and 4-port 40/100 Gigabit Ethernet QSFP+ line card	12.75 lb (5.78 kg)	415W	540W
Cisco Nexus X9564PX: 48-port 1/10 Gigabit Ethernet SFP+ and 4-port 40 Gigabit Ethernet QSFP+ line card	11.48 lb (5.2 kg)	300W	400W
Cisco Nexus X9464PX: 48-port 10 Gigabit Ethernet SFP+ and SFP and 4-port 40 Gigabit Ethernet QSFP+ line card	10.76 lb (4.88 kg)	160W	240W
10-Gbps Copper Line Cards			
Cisco Nexus X9788TC-FX: 48-port 1/10GBASE-T and 4-port 40/100 Gigabit Ethernet QSFP28 line card	13 lb (5.9 kg)		
Cisco Nexus X9564TX: 48-port 1/10GBASE-T and 4-port 40 Gigabit Ethernet QSFP+ line card	12.58 lb (5.7 kg)	450W	540W
Cisco Nexus X9464TX2: 48-port 1/10GBASE-T and 4-port 40 Gigabit Ethernet QSFP+ line card	10.01 lb (4.54 kg)	288W	350W

Mean Time between Failure

Table 5 lists the Mean Time Between Failure (MTBF) information for the Cisco Nexus 9500 platform.

Table 5. MTBF Information

Component	MTBF (Hours)
Fabric Module	
<ul style="list-style-type: none"> • N9K-C9504-FM • N9K-C9504-FM-E • N9K-C9504-FM-S • N9K-C9508-FM • N9K-C9508-FM-E • N9K-C9508-FM-S • N9K-C9516-FM • N9K-C9516-FM-E • N9K-C9516-FM-E2 	<ul style="list-style-type: none"> • 817,120 • 651,120 • 835,390 • 797,010 • 589,840 • 560,000 • 558,730 • 552,880 • 515,870
100-Gbps Line Cards	
Cisco Nexus X9732C-FX: 32-port 40/100 Gigabit Ethernet QSFP28 line card	505,870
Cisco Nexus X9736C-FX: 36-port 40/100 Gigabit Ethernet QSFP28 line card	413,150
Cisco Nexus X9736C-EX: 36-port 40/100 Gigabit Ethernet QSFP28 line card	435,710
Cisco Nexus X9732C-EX: 32-port 40/100 Gigabit Ethernet QSFP28 line card	405,240
Cisco Nexus X9432C-S: 32-port 40/100 Gigabit Ethernet QSFP28 line card	693,000
40-Gbps Line Cards	
Cisco Nexus X9636PQ: 36-port 40 Gigabit Ethernet QSFP+ line card	681,740

Component	MTBF (Hours)
Cisco Nexus X9536PQ: 36-port 40 Gigabit Ethernet QSFP+ line card	551,400
Cisco Nexus X9432PQ: 32-port 40 Gigabit Ethernet QSFP+ line card	789,550
10/25-Gbps Fiber Line Cards	
Cisco Nexus X97160YC-EX: 48-port 1/10/25 Gigabit Ethernet SFP+ and 4-port 40/100 Gigabit Ethernet QSFP+ line card	439,920
Cisco Nexus X9564PX: 48-port 1/10 Gigabit Ethernet SFP+ and 4-port 40 Gigabit Ethernet QSFP+ line card	462,510
Cisco Nexus X9464PX: 48-port 10 Gigabit Ethernet SFP+ and SFP and 4-port 40 Gigabit Ethernet QSFP+ line card	619,650
10-Gbps Copper Line Cards	
Cisco Nexus X9788TC-FX: 48-port 1/10GBASE-T and 4-port 40/100 Gigabit Ethernet QSFP28 line card	227,990
Cisco Nexus X9564TX: 48-port 1/10GBASE-T and 4-port 40 Gigabit Ethernet QSFP+ line card	393,420
Cisco Nexus X9464TX2: 48-port 1/10GBASE-T and 4-port 40 Gigabit Ethernet QSFP+ line card	504,520

Regulatory Standards Compliance

Table 6 summarizes regulatory standards compliance for the Cisco Nexus 9500 platform.

Table 6. Regulatory Standards Compliance: Safety and EMC

Specification	Description
Regulatory compliance	Products should comply with CE Markings according to directives 2004/108/EC and 2006/95/EC
Safety	<ul style="list-style-type: none"> • UL 60950-1 Second Edition • CAN/CSA-C22.2 No. 60950-1 Second Edition • EN 60950-1 Second Edition • IEC 60950-1 Second Edition • AS/NZS 60950-1 • GB4943
EMC: Emissions	<ul style="list-style-type: none"> • 47CFR Part 15 (CFR 47) Class A • AS/NZS CISPR22 Class A • CISPR22 Class A • EN55022 Class A • ICES003 Class A • VCCI Class A • EN61000-3-2 • EN61000-3-3 • KN22 Class A • CNS13438 Class A
EMC: Immunity	<ul style="list-style-type: none"> • EN55024 • CISPR24 • EN300386 • KN 61000-4 series
RoHS	The product is RoHS-6 compliant with exceptions for leaded-Ball Grid-Array (BGA) balls and lead press-fit connectors.

Ordering Information

Table 7 provides ordering information for the Cisco Nexus 9500 platform.

Table 7. Ordering Information

Part Number	Product Description
Hardware	
100-Gbps Line Cards	
N9K-X9732C-FX	Nexus 9500 line card, 32p 100G QSFP aggregation line card
N9K-X9736C-FX	Nexus 9500 line card, 36p 100G QSFP aggregation line card
N9K-X9736C-EX	Nexus 9500 line card, 36p 100G QSFP aggregation line card
N9K-X9732C-EX	Nexus 9500 line card, 32p 100G QSFP aggregation line card
N9K-X9432C-S	Nexus 9500 line card, 32p 100G QSFP28 aggregation line card (Linerate >250 Bytes)
40-Gbps Line Cards	
N9K-X9636PQ	Nexus 9500 line card, 36p 40G QSFP aggregation line card (non-blocking) for 4 and 8 slot chassis
N9K-X9536PQ	Nexus 9500 line card, 36p 40G QSFP aggregation line card (1.5:1 Oversubscribed) for 4,8 and 16 slot chassis
N9K-X9432PQ	Nexus 9500 line card, 32p 40G QSFP aggregation line card (Linerate >200 Bytes) for 4,8 and 16 slot chassis
10/25-Gbps Fiber Line Cards	
N9K-X97160YC-EX	Nexus 9500 48p 1/10/25G SFP+ (non-blocking) plus 4p 40/100G QSFP line card for 4,8 and 16 slot chassis
N9K-X9564PX	Nexus 9500 48p 1/10G SFP+ (non-blocking) plus 4p QSFP line card for 4,8 and 16 slot chassis
N9K-X9464PX	Nexus 9500 line card, 48p 1/10G SFP+ (non-blocking) plus 4p QSFP line card for 4,8 and 16 slot chassis
10-Gbps Copper Line Cards	
N9K-X9788C-FX	Nexus 9500, 48p 1/10G-T plus 4p 40/100G QSFP28 line card (non-blocking) for 4,8 and 16 slot chassis
N9K-X9564TX	Nexus 9500, 48p 1/10G-T plus 4p QSFP line card (non-blocking) for 4,8 and 16 slot chassis
N9K-X9464TX2	Nexus 9500 line card, 48p 1/10G-T plus 4p QSFP line card (non-blocking) for 4,8 and 16 slot chassis
Fabric Modules	
N9K-C9504-FM-E	Fabric Module for Nexus 9504 with 100G support, NX-OS and ACI spine
N9K-C9504-FM-S	Fabric Module for Nexus 9504 with 100G support, NX-OS only
N9K-C9504-FM	Fabric Module for Nexus 9504 chassis
N9K-C9508-FM-E	Fabric Module for Nexus 9508 chassis 100G support, NX-OS and ACI spine
N9K-C9508-FM-S	Fabric Module for Nexus 9508 chassis 100G support, NX-OS only
N9K-C9508-FM	Fabric Module for Nexus 9508 chassis
N9K-C9516-FM	Fabric Module for Nexus 9516 chassis
N9K-C9516-FM-E	Fabric Module for Nexus 9516 chassis 100G support (50G/flow), NX-OS
N9K-C9516-FM-E2	Fabric Module for Nexus 9516 chassis 100G support (100G/flow), NX-OS and ACI Spine
Software	
N95-LAN1K9	Enhanced L3 including full OSPF, EIGRP, BGP, VXLAN
NDB-MODL-SWT-K9	Tap/SPAN Agg lic for 1 Cisco Nexus 9508/9516 switch
DCNM-LAN-N95-K9	DCNM license for Nexus 9500 Series

Warranty

The Cisco Nexus 9500 platform has a 1-year limited hardware warranty. The warranty includes hardware replacement with a 10-day turnaround from receipt of a Return Materials Authorization (RMA).

Service and Support

Cisco offers a wide range of services to help accelerate your success in deploying and optimizing the Cisco Nexus 9500 platform in your data center. These innovative Cisco Services offerings are delivered through a unique combination of people, processes, tools, and partners and are focused on helping you increase operation efficiency and improve your data center network.

Cisco Advanced Services use an architecture-led approach to help you align your data center infrastructure with your business goals and achieve long-term value. Cisco SMARTnet™ Service helps you resolve mission-critical problems with direct access at any time to Cisco network experts and award-winning resources. With this service, you can take advantage of the Cisco Smart Call Home service, which offers proactive diagnostics and real-time alerts on your Cisco Nexus 9500 platform switch.

Spanning the entire network lifecycle, Cisco Services offerings help increase investment protection, optimize network operations, support migration operations, and strengthen your IT expertise.

Cisco Capital Financing to Help You Achieve Your Objectives

Cisco Capital® financing can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce Capital Expenditures (CapEx), accelerate your growth, and optimize your investment dollars and ROI. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment. And you have just one predictable payment. Cisco Capital financing is available in more than 100 countries. [Learn more.](#)

For More Information

For more information about the Cisco Nexus 9000 Series, please visit <https://www.cisco.com/go/nexus9000>.



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at <https://www.cisco.com/go/offices>.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: <https://www.cisco.com/go/trademarks>. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)