

Cisco Nexus 9300-EX and 9300-FX Platform Switches

Product overview

Based on [Cisco Cloud Scale technology](#), the Cisco Nexus® 9300-EX and 9300-FX platforms are the next generation of fixed Cisco Nexus 9000 Series Switches. The new platforms support cost-effective cloud-scale deployments, an increased number of endpoints, and cloud services with wire-rate security and telemetry. The platforms are built on modern system architecture designed to provide high performance and meet the evolving needs of highly scalable data centers and growing enterprises.

Cisco Nexus 9300-EX and 9300-FX platform switches offer a variety of interface options to transparently migrate existing data centers from 100-Mbps, 1-Gbps, and 10-Gbps speeds to 25 Gbps at the server, and from 10- and 40-Gbps speeds to 50 and 100 Gbps at the aggregation layer. The platforms provide investment protection for customers, delivering large buffers, highly flexible Layer 2 and Layer 3 scalability, and performance to meet the changing needs of virtualized data centers and automated cloud environments.

The platform hardware is capable of collecting comprehensive Cisco Tetration Analytics™ telemetry information at line rate across all the ports without adding any latency to the packets or negatively affecting switch performance. This telemetry information is exported every 100 milliseconds by default directly from the switch's Application-Specific Integrated Circuit (ASIC). This information consists of three types of data:

- **Flow information:** This information contains information about endpoints, protocols, ports, when the flow started, how long the flow was active, etc.
- **Interpacket variation:** This information captures any interpacket variations within the flow. Examples include variation in Time To Live (TTL), IP and TCP flags, payload length, etc.
- **Context details:** Context information is derived outside the packet header, including variation in buffer utilization, packet drops within a flow, association with tunnel endpoints, etc.

The Cisco Tetration Analytics platform consumes this telemetry data, and by using unsupervised machine learning and behavior analysis it can provide outstanding pervasive visibility across everything in your data center in real time. By using algorithmic approaches, the Cisco Tetration Analytics platform provides a deep application insights and interactions, enabling dramatically simplified operations, a zero-trust model, and migration of applications to any programmable infrastructure. To learn more, go to <https://www.cisco.com/go/tetration>.

Cisco provides two modes of operation for Cisco Nexus 9000 Series Switches. Organizations can use Cisco NX OS Software to deploy the switches in standard Cisco Nexus switch environments (NX-OS mode). Organizations also can use a hardware infrastructure that is ready to support the Cisco Application Centric Infrastructure (Cisco ACI™) platform to take full advantage of an automated, policy-based, systems-management approach (ACI mode).

Switch models

Table 1 summarizes the Cisco Nexus 9300-EX platform switch models.

Table 1. Cisco Nexus 9300-EX platform switches

Model	Description
Cisco Nexus 93180YC-EX Switch	48 x 1/10/25-Gbps fiber ports and 6 x 40/100-Gbps Quad Small Form-Factor Pluggable 28 (QSFP28) ports
Cisco Nexus 93108TC-EX Switch	48 x 100M/1/10GBASE-T ports and 6 x 40/100-Gbps QSFP28 ports
Cisco Nexus 93180LC-EX Switch	Up to 32 x 40/50-Gbps QSFP+ ports OR 18 x 100-Gbps QSFP28 ports

The Cisco Nexus 93180YC-EX Switch (Figure 1) is a 1-Rack-Unit (1RU) switch with latency of less than 1 microsecond that supports 3.6 Terabits per second (Tbps) of bandwidth and over 2.6 billion packets per second (bps). The 48 downlink ports on the 93180YC-EX can be configured to work as 1-, 10-, or 25-Gbps ports, offering deployment flexibility and investment protection. The uplink can support up to six 40- and 100-Gbps ports, or a combination of 1-, 10-, 25-, 40-, 50-, and 100-Gbps connectivity, offering flexible migration options. The switch has FC-FEC enabled for 25Gbps, and supports upto 3m in DAC connectivity. Please check [Cisco Optics Matrix](#) for the most updated support.

Figure 1. Cisco Nexus 93180YC-EX Switch



The Cisco Nexus 93108TC-EX Switch (Figure 2) is a 1RU switch that supports 2.16 Tbps of bandwidth and over 1.5 bpps. The 48 10GBASE-T downlink ports on the 93108TC-EX can be configured to work as 100-Mbps, 1 Gbps, or 10-Gbps ports. The uplink can support up to six 40- and 100-Gbps ports, or a combination of 1-, 10-, 25-, 40-, 50-, and 100-Gbps connectivity, offering flexible migration options.

Figure 2. Cisco Nexus 93108TC-EX Switch



The Cisco Nexus 93180LC-EX Switch is the industry's first 50-Gbps-capable 1RU switch that supports 3.6 Tbps of bandwidth and over 2.6 bpps across up to 32 fixed 40- and 50-Gbps QSFP+ ports or up to 18 fixed 100-Gbps ports (Figure 3). The switch can support up to 72 10-Gbps ports using breakout cables. A variety of flexible port configurations are supported using templates.

Figure 3. Cisco Nexus 93180LC-EX Switch



Table 2 summarizes the Cisco Nexus 9300-FX platform switch models.

Table 2. Cisco Nexus 9300-FX platform switches

Model	Description
Cisco Nexus 93180YC-FX Switch	48 x 1/10/25-Gbps fiber ports and 6 x 40/100-Gbps QSFP28 ports
Cisco Nexus 93108TC-FX Switch	48 x 100M/1/10GBASE-T ports and 6 x 40/100-Gbps QSFP28 ports
Cisco Nexus 9348GC-FXP	48 x 100M/1G BASE-T ports, 4 x 10/25-Gbps SFP28 ports and 2 x 40/100-Gbps QSFP28 ports
Cisco Nexus 9336C-FX2	36 x 40/100-Gbps QSFP28 ports
Cisco Nexus 93240YC-FX2	48 x 1/10/25-Gbps fiber ports and 12 x 40/100-Gbps QSFP28 ports

The Cisco Nexus 93180YC-FX Switch (Figure 4) is a 1RU switch with latency of less than 1 microsecond that supports 3.6 Tbps of bandwidth and 1.4 bpps. The 48 downlink ports on the 93180YC-FX can be configured to work as 1-, 10-, or 25-Gbps Ethernet or FCoE ports or as 16-, 32-Gbps Fibre Channel ports¹, creating a point of convergence for primary storage, compute servers, and back-end storage resources at the top of rack.

The 6 uplinks ports can be configured as 40 and 100-Gbps Ethernet or FCoE ports, offering flexible migration options. All ports support wire-rate MACsec encryption². The switch has FC-FEC and RS-FEC enabled for 25Gbps support.

Figure 4. Cisco Nexus 93180YC-FX Switch



The Cisco Nexus 93108TC-FX Switch (Figure 5) is a 1RU switch that supports 2.16 Tbps of bandwidth and over 850 mpps. The 48 10GBASE-T downlink ports on the 93108TC-FX can be configured to work as 100-Mbps, 1-Gbps, or 10-Gbps ports. The 6 uplinks ports can be configured as 40- and 100-Gbps ports, offering flexible migration options.

Figure 5. Cisco Nexus 93108TC-FX Switch



The Cisco Nexus 9348GC-FXP Switch (Figure 6) is a 1RU switch that supports 696 Gbps of bandwidth and over 250 mpps. The 48 1GBASE-T downlink ports on the 9348GC-FXP can be configured to work as 100-Mbps, 1-Gbps ports. The 4 ports of SFP28 can be configured as 1/10/25-Gbps and the 2 ports of QSFP28 can be configured as 40- and 100-Gbps ports. The Cisco Nexus 9348GC-FXP is ideal for big data customers that require a Gigabit Ethernet ToR switch with local switching.

¹ Capabilities to enable FC is on the software roadmap

² Capabilities to enable MACsec is on the software roadmap

Figure 6. Cisco Nexus 9348GC-FXP Switch



The Cisco Nexus 9336C-FX2 Switch (Figure 7) is a 1RU switch that supports 7.2 Tbps of bandwidth and over 2.8 bpps. The switch can be configured to work as 1/10/25/40/100-Gbps offering flexible options in a compact form factor. All ports support wire-rate MACsec encryption³. Breakout is supported on all ports. Please see feature table below for more information.

Figure 7. Cisco Nexus 9336C-FX2 Switch



The Cisco Nexus 93240YC-FX2 Switch (Figure 8) supports 4.8 Tbps of bandwidth and over 1.8 bpps. The 48 ports of downlinks support 1/10/25-Gbps. The 12 uplinks ports can be configured as 40- and 100-Gbps ports, offering flexible migration options. Breakout is not supported at FCS, but is on the roadmap. The switch is ideal for a non-oversubscribed solution in a compact form factor. The switch has FC-FEC and RS-FEC enabled for 25Gbps support.

Figure 8. Cisco Nexus 93240YC-FX2 Switch



Features and benefits

The Cisco Nexus 9300-EX and 9300-FX platforms provide the following features and benefits:

- High performance, scalability, flexibility, and security
 - The platform provides wire-rate Layer 2 and 3 switching on all ports.
 - Robust hardware system specifications feature 4-core and 6-core CPUs, a minimum of 24 GB of system memory (64 GB on 93180YC-FX model), and respectively 64-GB and 128-GB Solid-State Disk (SSD) drives on EX and FX models.
 - The 40-MB buffer supports highly scalable data centers and big data applications.
 - Flexible forwarding tables support up to 1 million shared entries on EX models and up to 2 million shared entries on FX models.

³ Capabilities to enable MACsec is on the software roadmap

- Flexible use of TCAM space allows for custom definition of Access Control List (ACL) templates.
- IEEE 802.1ae MAC Security (MACsec) support on all ports of 9300-FX models with speed greater than or equal to 10-Gbps, allows traffic encryption at the physical layer and provides secure server, border leaf, and leaf-to-spine connectivity.
- Virtual Extensible LAN (VXLAN)^{*}
 - The platform offers native line-rate VXLAN routing.
 - The Border Gateway Protocol (BGP) Ethernet Virtual Private Network (EVPN) control plane provides scalable multitenancy and host mobility (refer to [VXLAN Network with MP-BGP EVPN Control Plane](#) for more information).
- Hardware and software high availability
 - Virtual Port-Channel (vPC) technology provides Layer 2 multipathing through the elimination of Spanning Tree Protocol. It also enables fully utilized bisectional bandwidth and simplified Layer 2 logical topologies without the need to change the existing management and deployment models.
 - The 64-way Equal-Cost MultiPath (ECMP) routing enables the use of Layer 3 fat-tree designs. This feature helps organizations prevent network bottlenecks, increase resiliency, and add capacity with little network disruption.
 - Advanced reboot capabilities include hot and cold patching.
 - The switches use hot-swappable Power-Supply Units (PSUs) and fans with N+1 redundancy.
- Purpose-built Cisco NX-OS Software operating system with comprehensive, proven innovations
 - Open programmability supports built-in DevOps automation tools such as [Puppet](#), Chef, and Ansible.
 - Cisco [NX-API](#) supports a common programmatic approach across Cisco Nexus switches.
 - Power-On Auto Provisioning (POAP) enables touchless bootup and configuration of the switch, drastically reducing provisioning time.
 - Cisco Embedded Event Manager (EEM) and Python scripting enable automation and remote operations in the data center.
 - Advanced buffer monitoring reports real-time buffer use per port and per queue, which allows organizations to monitor traffic bursts and application traffic patterns.
 - Complete Layer 3 unicast and multicast routing protocol suites are supported, including BGP, Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Routing Information Protocol Version 2 (RIPv2), Protocol Independent Multicast Sparse Mode (PIM-SM), Source-Specific Multicast (SSM), and Multicast Source Discovery Protocol (MSDP).
 - Segment routing allows the network to forward Multiprotocol Label Switching (MPLS) packets and engineer traffic without Resource Reservation Protocol (RSVP) Traffic Engineering (TE). It provides a control-plane alternative for increased network scalability and virtualization.
 - Fibre Channel and Fibre Channel over Ethernet (FCoE[™]) N-Port Virtualization (NPV) support enables the network administrator to control domain IDs and points of management on a Fibre Channel network as it scales. This feature enables LAN and SAN converged networks on a lossless, reliable Ethernet network.
 - Network traffic monitoring with Cisco Nexus Data Broker builds simple, scalable, and cost-effective network Test Access Points (TAPs) and Cisco Switched Port Analyzer (SPAN) aggregation for network traffic monitoring and analysis.

- Automate the time-consuming tasks of creating, installing, and maintaining appropriate fabricwide switch configurations with the new [Cisco Nexus Fabric Manager](#).

* Software support for Cisco Nexus 9348GC-FXP is on the roadmap

** Software support is on the roadmap. Please visit the latest [release notes](#) for additional information

The Cisco Nexus 9300-EX, 9300-FX platforms offer industry-leading density and performance with flexible port configurations that can support existing copper and fiber cabling (Tables 3, 4 and 5).

Table 3. Cisco Nexus 9300-EX platform switch specifications

Feature	Cisco Nexus 93180YC-EX	Cisco Nexus 93108TC-EX	Cisco Nexus 93180LC-EX
Ports	48 x 10/25-Gbps and 6 x 40/100-Gbps QSFP28 ports	48 x 10GBASE-T and 6 x 40/100-Gbps QSFP28 ports	Up to 32 x 40/50-Gbps QSFP+ ports OR 18 x 100-Gbps QSFP28 ports
Downlink supported speeds	1/10/25-Gbps speeds	100-Mbps and 1/10-Gbps speeds	40/50-Gbps speeds
CPU	4 cores	4 cores	4 cores
System memory	24 GB	24 GB	24 GB
SSD drive	64 GB	64 GB	64 GB
System buffer	40 MB	40 MB	40 MB
Management ports	2 ports: 1 RJ-45 and 1 SFP	2 ports: 1 RJ-45 and 1 SFP	2 ports: 1 RJ-45 and 1 SFP
USB ports	1	1	1
RS-232 serial ports	1	1	1
Power supplies (up to 2)	650W AC, 930W DC, or 1200W HVAC/HVDC	650W AC, 930W DC, or 1200W HVAC/HVDC	500W AC, 930W DC, or 1200W HVAC/HVDC
Typical power* (AC/DC)	210W	290W	220W
Maximum power* (AC/DC)	470W	499W	500W
Input voltage (AC)	100 to 240V	100 to 240V	100 to 240V
Input voltage (high-voltage AC [HVAC])	200 to 277V	200 to 277V	200 to 277V
Input voltage (DC)	-48 to -60V	-48 to -60V	-48 to -60V
Input voltage (high-voltage DC [HVDC])	-240 to -380V	-240 to -380V	-240 to -380V
Frequency (AC)	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz
Fans	4	4	4
Airflow	Port-side intake and exhaust	Port-side intake and exhaust	Port-side intake and exhaust
Physical dimensions (H x W x D)	1.72 x 17.3 x 22.5 in. (4.4 x 43.9 x 57.1 cm)	1.72 x 17.3 x 22.5 in. (4.4 x 43.9 x 57.1 cm)	1.72 x 17.3 x 22.5 in. (4.4 x 43.9 x 57.1 cm)
Acoustics	48.5 dBA at 40% fan speed, 64.9 dBA at 70% fan speed, and 77.8 dBA at 100% fan speed	48.6 dBA at 40% fan speed, 65.2 dBA at 70% fan speed, and 76.5 dBA at 100% fan speed	49.9 dBA at 50% fan speed, 66 dBA at 70% fan speed, and 73.9 dBA at 100% fan speed
RoHS compliance	Yes	Yes	Yes
MTBF	390,330 hours	366,130 hours	323,440 hours

* Typical and maximum power values are based on input drawn from the power circuit. The power supply value (for example, 650W AC power supply: NXA-PAC-650W-PI) is based on the output rating to the inside of the switch

Table 4. Cisco Nexus 9300-FX platform switch specifications

Feature	Cisco Nexus 93180YC-FX	Cisco Nexus 93108TC-FX	Cisco Nexus 9348GC-FXP
Ports	48 x 10/25-Gbps and 6 x 40/100-Gbps QSFP28 ports	48 x 10GBASE-T and 6 x 40/100-Gbps QSFP28 ports	48 x 1-GBASE-T ports, 4 x 10/25-Gbps SFP28 ports and 2 x 40/100 QSFP28 ports
Downlink supported speeds	1/10/25-Gbps Ethernet 8/16/32-Gbps Fibre Channel	100-Mbps and 1/10-Gbps speeds	100-Mbps and 1-Gbps speeds
CPU	6 cores	4 cores	4 cores
System memory	64 GB	24 GB	24 GB
SSD drive	128 GB	128 GB	128 GB
System buffer	40 MB	40 MB	40 MB
Management ports	1 RJ-45 port L1 and L2 ports are unused	2 ports: 1 RJ-45 and 1 SFP+	2 ports: 1 RJ-45 and 1 SFP+
USB ports	1	1	1
RS-232 serial ports	1	1	1
Power supplies (up to 2)	500W AC, 930W DC, or 1200W HVAC/HVDC	500W AC, 930W DC, or 1200W HVAC/HVDC	350W AC, 440W DC
Typical power (AC/DC)	260W	276W	178W
Maximum power (AC/DC)	425W	460W	287W
Input voltage (AC)	100 to 240V	100 to 240V	100 to 240V
Input voltage (high-voltage AC [HVAC])	200 to 277V	200 to 277V	
Input voltage (DC)	-48 to -60V	-48 to -60V	-36V to -72V
Input voltage (high-voltage DC [HVDC])	-240 to -380V	-240 to -380V	
Frequency (AC)	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz
Fans	4	4	3
Airflow	Port-side intake and exhaust	Port-side intake and exhaust	Port-side intake and exhaust
Physical dimensions (H x W x D)	1.72 x 17.3 x 22.5 in. (4.4 x 43.9 x 57.1 cm)	1.72 x 17.3 x 22.5 in. (4.4 x 43.9 x 57.1 cm)	1.72 x 17.3 x 19.7 in. (4.4 x 43.9 x 49.9 cm)
Acoustics	57 dBA at 40% fan speed, 68.9 dBA at 70% fan speed, and 77.4 dBA at 100% fan speed	64.2 dBA at 40% fan speed, 68.9 dBA at 70% fan speed, and 77.8 dBA at 100% fan speed	67.5 dBA at 50% fan speed, 73.2 dBA at 70% fan speed, and 81.6 dBA at 100% fan speed
RoHS compliance	Yes	Yes	Yes
MTBF	238,470 hours	319,790 hours	257,860 hours

Table 5. Cisco Nexus 9300-FX2 series switch specifications

Feature	Cisco Nexus 9336C-FX2	Cisco Nexus 93240YC-FX2
Ports	36 x 40/100-Gbps QSFP28 ports	48 x 1/10/25-Gbps and 12 x 40/100-Gbps QSFP28 ports
Supported speeds	1/10/25/40/100-Gbps Ethernet Breakout supported on all ports, 1-36: 100G, 40G native, 4x10/25G (10G w/QSA) 1G w/QSA except ports 1-6 and 33-36	1/10/25-Gbps on downlinks 40/100-Gbps on uplinks Breakout not supported at FCS, future support in roadmap
CPU	4 cores	4 cores
System memory	24 GB	16 GB
SSD drive	128 GB	128 GB
System buffer	40 MB	40 MB

Feature	Cisco Nexus 9336C-FX2	Cisco Nexus 93240YC-FX2
Management ports	2 ports: 1 RJ-45 and 1 SFP+	2 ports: 1 RJ-45 and 1 SFP+
USB ports	1	1
RS-232 serial ports	1	1
Power supplies (up to 2)	1100W AC, 1100W DC, 1100W HVAC/HVDC	1100W AC
Typical power (AC)	367W	298W
Maximum power (AC)	777W	708W
Input voltage (AC)	100 to 240V	100 to 240V
Input voltage (high-voltage AC [HVAC])	100 to 277V	
Input voltage (DC)	-40 to -72V	
Input voltage (high-voltage DC [HVDC])	-240 to -380V	
Frequency (AC)	50 to 60 Hz	50 to 60 Hz
Fans	3 dual fan trays	5
Airflow	Port-side intake and exhaust	Port-side intake and exhaust
Physical dimensions (H x W x D)	1.72 x 17.3 x 24.5 in. (4.4 x 43.9 x 62.3 cm)	2.1 x 17.3 x 23.3 in. (5.3 x 43.9 x 59.1 cm)
Acoustics	76.2 dBA at 50% fan speed, 85.3 dBA at 70% fan speed, and 92.3 dBA at 100% fan speed	
RoHS compliance	Yes	Yes
MTBF	352,590 hours	365,610 hours

Cisco NX-OS Software overview

NX-OS is a purpose-built data center operating system designed for performance, resiliency, scalability, manageability, and programmability at its foundation. It provides a robust and comprehensive feature set that meets the demanding requirements of virtualization and automation in present and future data centers. The Cisco Nexus 9000 Series uses an enhanced version of NX-OS with a single binary image that supports every switch in the series, simplifying image management. The operating system is modular, with a dedicated process for each routing protocol: a design that isolates faults while increasing availability. In the event of a process failure, the process can be restarted without loss of state. The operating system supports hot and cold patching and online diagnostics.

The software packaging for the Cisco Nexus 9000 Series offers flexibility and a comprehensive feature set while being consistent with Cisco Nexus access switches. The default system software has a comprehensive Layer 2 security and management feature set. To enable additional functions, including Layer 3 IP unicast and IP multicast routing and Cisco Nexus Data Broker, you must install additional licenses. The [licensing guide](#) illustrates the software packaging and licensing available to enable advanced features. For a complete list of supported features, refer to [Cisco Feature Navigator](#).

Software requirements

The Cisco Nexus 9300-EX and 9300-FX platforms support the NX-OS operating system. NX-OS interoperates with any networking operating system, including Cisco IOS® Software, that conforms to the networking standards described in this data sheet.

For the latest software release information and recommendations, refer to the product bulletin at <https://www.cisco.com/go/nexus9000>.

Specifications

Table 6 lists the performance and scalability specifications for the Cisco Nexus 9300-EX and 9300-FX platform switches. (Check the software release notes for feature support information.)

Table 6. Hardware performance and scalability specifications*

Item	Cisco Nexus 9300-EX Platform Switches	Cisco Nexus 9300-FX Series Switches	Cisco Nexus 9300-FX2 Series Switches
Maximum number of Longest Prefix Match (LPM) routes**	896,000	1,792,000	896,000
Maximum number of IP host entries**	896,000	1,792,000	896,000
Maximum number of MAC address entries**	256,000	512,000	256,000
Maximum number of multicast routes	32,000	32,000	32,000
Number of Interior Gateway Management Protocol (IGMP) snooping groups	Shipping: 8,000 Maximum: 32,000	Shipping: 8,000 Maximum: 32,000	Shipping: 8,000 Maximum: 32,000
Maximum number of Cisco Nexus 2000 Series Fabric Extenders per switch	16	16	16
Maximum number of Access Control List (ACL) entries	Per slice of the forwarding engine: 4000 ingress 2000 egress Total (2 forwarding slices): 8000 ingress 4000 egress	Single-slice forwarding engine: 5000 ingress 2000 egress	Per slice of the forwarding engine: 5000 ingress 2000 egress
Maximum number of VLANs	3,967	3,967	3,967
Number of Virtual Routing and Forwarding (VRF) instances	Shipping: 1,000 Maximum: 16,000	Shipping: 1,000 Maximum: 16,000	Shipping: 1,000 Maximum: 16,000
Maximum number of ECMP paths	64	64	64
Maximum number of port channels	512	512	512
Maximum number of links in a port channel	32	32	32
Number of active SPAN sessions	4	4	4
Maximum number of VLAN's in Rapid per-VLAN Spanning Tree (RPVST) instances	3,967	3,967	3,967
Maximum number of Hot-Standby Router Protocol (HSRP) groups	490	490	490
Number of Network Address Translation (NAT) entries	1,023	1,023	1,023
Maximum number of Multiple Spanning Tree (MST) instances	64	64	64
Flow-table size used for Cisco Tetration Analytics platform**	64,000	32,000	64,000

* More templates and greater scalability are on the roadmap. Refer to the [Cisco Nexus 9000 Series Verified Scalability Guide](#) documentation for the latest exact scalability values validated for specific software

** Raw capacity of flow table

Environmental properties

Table 7 lists the environmental properties, and Table 8 lists the weight for the Cisco Nexus 9300-EX and 9300-FX platform switches.

Table 7. Environmental properties

Property	Description
Operating temperature	32 to 104°F (0 to 40°C)
Nonoperating (storage) temperature	−40 to 158°F (−40 to 70°C)
Humidity	5 to 95% (noncondensing)
Altitude	0 to 13,123 ft (0 to 4000m)

Table 8. Weight

Component	Weight
Cisco Nexus 93180YC-EX without power supplies or fans	17.2 lb (7.8 kg)
Cisco Nexus 93108TC-EX without power supplies or fans	17.7 lb (8.0 kg)
Cisco Nexus 93180LC-EX without power supplies or fans	17.2 lb (7.8 kg)
Cisco Nexus 93180YC-FX without power supplies or fans	17.4 lb (7.9 kg)
Cisco Nexus 93108TC-FX without power supplies or fans	17.4 lb (7.9 kg)
Cisco Nexus 9348GC-FXP without power supplies or fans	14.2 lb (6.44 kg)
Cisco Nexus 9336C-FX2 without power supplies or fans	18.8 lb (8.5 kg)
Cisco Nexus 93240YC-FX2 without power supplies or fans	
350W AC power supply	2.8 lb (1.27 kg)
500W AC power supply	2.42 lb (1.1 kg)
650W AC power supply	2.42 lb (1.1 kg)
1100W AC power supply	2.42 lb (1.1 kg)
930W DC power supply	2.42 lb (1.1 kg)
1200W HVDC/HVAC power supply	2.42 lb (1.1 kg)
Fan tray: NXA-FAN-30CFM-F or NXA-FAN-30CFM-B	0.92 lb (0.4 kg)
Fan tray: NXA-FAN-35CFM-F or NXA-FAN-35CFM-B	0.25 lb (0.1 kg)
Fan tray: NXA-FAN-65CFM-F or NXA-FAN-65CFM-B	0.6 lb (0.3 kg)

Regulatory standards compliance

Table 9 summarizes regulatory standards compliance for the Cisco Nexus 9300-EX and 9300-FX platform switches.

Table 9. 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	NEBS <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

Specification	Description
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.

Supported optics modules

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

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

Ordering information

Table 10 presents ordering information for the Cisco Nexus 9300-EX platform switches.

Table 10. Ordering information

Part Number	Product Description
Base Part Numbers	
N9K-C93180YC-EX	Nexus 9K Fixed with 48p 1/10G/25G SFP and 6p 40G/100G QSFP28
N9K-C93108TC-EX	Nexus 9K Fixed with 48p 10G BASE-T and 6p 40G/100G QSFP28
N9K-C93180LC-EX	Nexus 9K Fixed with up to 32p 40/50G QSFP+ or up to 18p 100G QSFP28
N9K-C93180YC-FX	Nexus 9300 with 48p 1/10G/25G SFP and 6p 40G/100G QSFP28, MACsec, and Unified Ports capable
N9K-C93108TC-FX	Nexus 9300 with 48p 10G BASE-T and 6p 40G/100G QSFP28, MACsec capable
N9K-C9348GC-FXP	Nexus 9300 with 48p 100M/1G BASE-T, 4p 10/25G SFP28 and 2p 40G/100G QSFP28
N9K-C9336C-FX2	Nexus 9K Fixed with 36p 40G/100G QSFP28
N9K-C93240YC-FX2	Nexus 9K Fixed with 48p 1/10G/25G SFP and 12p 40G/100G QSFP28
Power Supplies	
NXA-PAC-350W-PI	Nexus 9000 350W AC PS, Port-side Intake
NXA-PAC-350W-PE	Nexus 9000 350W AC PS, Port-side Exhaust
NXA-PAC-500W-PI	Nexus 9000 500W AC PS, Port-side Intake
NXA-PAC-500W-PE	Nexus 9000 500W AC PS, Port-side Exhaust
NXA-PAC-650W-PI	Nexus 9000 650W AC PS, Port-side Intake
NXA-PAC-650W-PE	Nexus 9000 650W AC PS, Port-side Exhaust
NXA-PAC-1100W-PI2	Nexus 9000 1100W AC PS, Port-side Intake
NXA-PAC-1100W-PE2	Nexus 9000 1100W AC PS, Port-side Exhaust
NXA-PDC-930W-PI	Nexus 9000 930W DC PS, Port-side Intake
NXA-PDC-930W-PE	Nexus 9000 930W DC PS, Port-side Exhaust

Part Number	Product Description
UCSC-PSU-930WDC	Nexus 9000 930W DC PS, Port-side Intake
UCS-PSU-6332-DC	Nexus 9000 930W DC PS, Port-side Exhaust
N9K-PUV-1200W	Nexus 9300 1200W Universal Power Supply, Bi-directional air flow and Supports HVAC/HVDC
Fans	
NXA-FAN-30CFM-F	Nexus Single Fan, 30CFM, port side exhaust airflow
NXA-FAN-30CFM-B	Nexus Single Fan, 30CFM, port side intake airflow
NXA-FAN-35CFM-F	Nexus Single Fan, 35CFM, port side exhaust airflow
NXA-FAN-35CFM-B	Nexus Single Fan, 35CFM, port side intake airflow
NXA-FAN-65CFM-F	Nexus Dual Fan, 65CFM, port side exhaust airflow
NXA-FAN-65CFM-B	Nexus Dual Fan, 65CFM, port side intake airflow
Software	
N93-LAN1K9	Enhanced L3 including full OSPF, EIGRP, BGP
NX-OS-ES-GF	NX-OS Essential SW license for a 1G Nexus 9K Leaf
NX-OS-AD-GF	NX-OS Advantage SW license for a 1G Nexus 9K Leaf
NX-OS-ES-XF	NX-OS Essential SW license for a 10/25/40G+ Nexus 9K Leaf
NX-OS-AD-XF	NX-OS Advantage SW license for a 10/25/40G+ Nexus 9K Leaf
Power Cords	
CAB-250V-10A-AR	AC Power Cord - 250V, 10A - Argentina (2.5 meter)
CAB-250V-10A-BR	AC Power Cord - 250V, 10A - Brazil (2.1 meter)
CAB-250V-10A-CN	AC Power Cord - 250V, 10A - PRC (2.5 meter)
CAB-250V-10A-ID	AC Power Cord - 250V, 10A, South Africa (2.5 meter)
CAB-250V-10A-IS	AC Power Cord - 250V, 10A - Israel (2.5 meter)
CAB-9K10A-AU	Power Cord, 250VAC 10A 3112 Plug, Australia (2.5 meter)
CAB-9K10A-EU	Power Cord, 250VAC 10A CEE 7/7 Plug, EU (2.5 meter)
CAB-9K10A-IT	Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy (2.5 meter)
CAB-9K10A-SW	Power Cord, 250VAC 10A MP232 Plug, SWITZ (2.5 meter)
CAB-9K10A-UK	Power Cord, 250VAC 10A BS1363 Plug (13 A fuse), UK (2.5 meter)
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America (2.5 meter)
CAB-AC-L620-C13	North America, NEMA L6-20-C13 (2.0 meter)
CAB-C13-C14-2M	Power Cord Jumper, C13-C14 Connectors, 2 Meter Length (2 meter)
CAB-C13-C14-AC	Power cord, C13 to C14 (recessed receptacle), 10A (3 meter)
CAB-C13-CBN	Cabinet Jumper Power Cord, 250 VAC 10A, C14-C13 Connectors (0.7 meter)
CAB-IND-10A	10A Power cable for India (2.5 meter)
CAB-N5K6A-NA	Power Cord, 200/240V 6A North America (2.5 meter)
CAB-HVAC-SD-0.6M	HVAC Power cable for Anderson-LS-25
CAB-HVAC-C14-2M	HVAC power cable for C14, 2 meters (no more than 240 V)
CAB-HVAC-RT-0.6M	HVAC Power cable with right angle connector for RF-LS-25
Accessories	
N3K-C3064-ACC-KIT	Nexus 3K/9K Fixed Accessory Kit

Warranty

The Cisco Nexus 9300-EX and 9300-FX platforms have 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 range of professional, solution, and product support services for each stage of your Cisco Nexus 9300-EX or 9300-FX platform deployment:

- Cisco Data Center Quick Start Service for Cisco Nexus 9000 Series Switches: This offering provides consulting services that include technical advice and assistance to help deploy Cisco Nexus 9000 Series Switches.
- Cisco Data Center Accelerated Deployment Service for Cisco Nexus 9000 Series Switches: This service delivers planning, design, and implementation expertise to bring your project into production. The service also provides recommended next steps, an architectural high-level design, and operation-readiness guidelines to scale the implementation to your environment.
- Cisco Migration Service for Cisco Nexus 9000 Series Switches: This service helps you migrate from Cisco Catalyst® 6000 Series Switches to Cisco Nexus 9000 Series Switches.
- Cisco Product Support: Support service is available globally 24 hours a day, 7 days a week, for Cisco software and hardware products and technologies associated with Cisco Nexus 9000 Series Switches. Enhanced support options delivered by Cisco also include solution support for Cisco ACI, Cisco SMARTnet™ Service, and Cisco Smart Net Total Care™* service.

For more information, visit <https://www.cisco.com/go/services>.

* For Cisco products only

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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 there's 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 and latest software release information and recommendations, visit <https://www.cisco.com/go/nexus9000>.




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