



Overview

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The Cisco Nexus 9396PX switch (N9K-C9396PX) is a 2-RU, fixed-port switch designed for Top-of-Rack (ToR), Middle-of-Rack (MoR), and End-of-Rack (EoR) deployment in data centers. This switch has 48 fixed 1- and 10-Gigabit Ethernet downlink ports and a choice of 4-, 6-, or 12-port uplink modules. The chassis for this switch includes the following user-replaceable components:

- Uplink modules (one of either of the following for uplink ports)
 - M4PC-CFP2 uplink module (4-port, 100-Gigabit Ethernet module)
 - M6PQ uplink module (6-port, 40-Gigabit Ethernet module)
 - M6PQ-E uplink module (6-port, 40-Gigabit Ethernet module)
 - M12PQ uplink module (12-port, 10/40-Gigabit Ethernet module)
- Fan modules (three—two for operations and one for redundancy [2+1]) with the following airflow choices:
 - Port-side intake version with burgundy coloring (N9K-C9300-FAN2)
 - Port-side exhaust version with blue coloring (N9K-C9300-FAN2-B)



Note Previously, the Cisco Nexus 9396PX shipped with the N9k-C9300-FAN1-B or N9K-C9300-FAN1 fans. Currently, the N9K-C9300-FAN2-B and N9K-C9300-FAN2 are shipped with the switch.

- Power supplies (two—one for operations and one for redundancy [1+1]) with the following airflow choices:
 - 650-W AC power supply with port-side intake airflow (burgundy coloring) (N9K-PAC-650W)
 - 650-W AC power supply with port-side exhaust airflow (blue coloring) (N9K-PAC-650W-B)

- 1200-W HVAC/HVDC power supply with dual-direction airflow (white coloring) (N9K-PUV-1200W)
- 930-W DC power supply with port-side intake airflow (green coloring) (UCSC-PSU-930WDC)
- 930-W DC power supply with port-side exhaust airflow (gray coloring) (UCS-PSU-6332-DC)



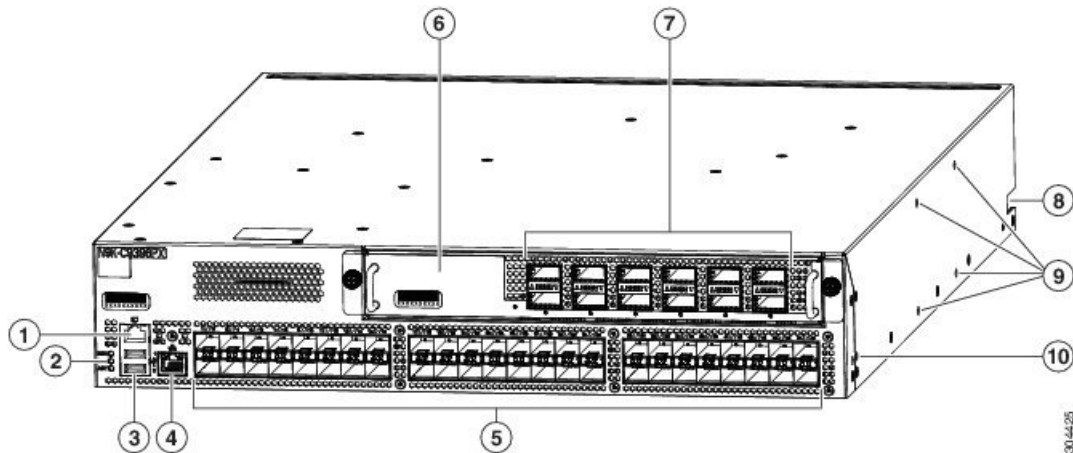
Note Do not mix AC and DC power supplies in the same chassis.



Note All fan modules and power supplies must use the same airflow direction during operations. If you are using the 1200-W HVAC/HVDC power supply, the power supply automatically uses the same airflow direction as used by the other modules in the switch.

The switch supports the Fabric Extenders (FEXs) listed at <https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/hw/interoperability/fexmatrix/fextables.html>.

The following figure shows the hardware features seen from the port side of the chassis.

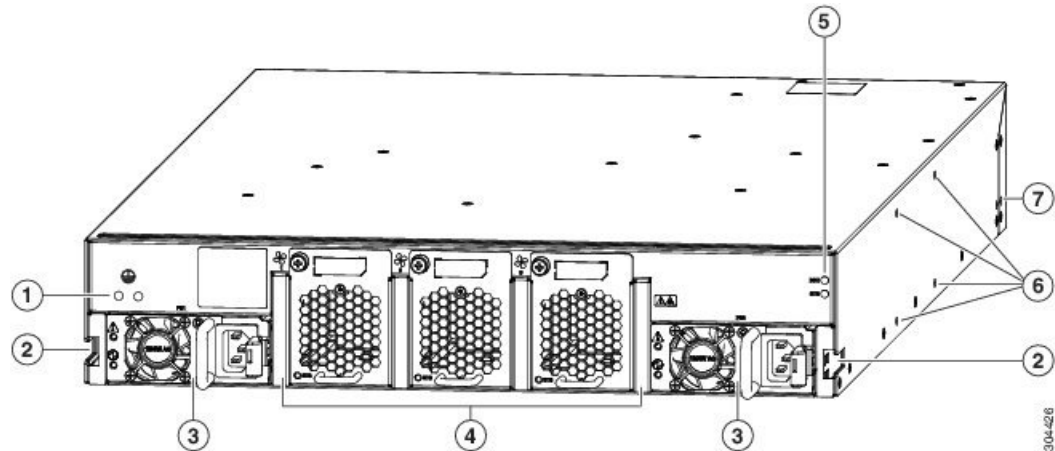


1	Console port (RS232 port)	6	M6PQ, M6PQ-E or M12PQ uplink module (M12PQ uplink module shown).
2	Chassis LEDs <ul style="list-style-type: none"> • Beacon (BCN) • Status (STS) • Environment (ENV) 	7	6- or 12-port 40-Gigabit Ethernet Quad Small Form-Factor Pluggable (QSFP+) optical ports for connections to other devices (12-port uplink module shown)

3	Two USB ports used for saving or copying functions Note USB support is limited to USB 2.0 devices that use less than 2.5 W (less than 0.5 A inclusive of surge current). Devices, such as external hard drives, that instantaneously draw more than 0.5 A are not supported.	8	Notch in both sides of the chassis for locking the power supply end of the chassis to the bottom-support rails
4	Out-of-band management port (RJ-45 port)	9	Screw holes (4) for attaching a center-mount rack bracket for two-post racks (one bracket for each of two sides)
5	48 1- and 10-Gigabit Ethernet Small Form-Factor Pluggable (SFP+) optical ports (supporting 1-Gigabit and 10-Gigabit speeds) to switches or Fabric Extenders (FEXs)	10	Screw holes (2) for attaching a front-mount bracket for four-post racks (one bracket on each of two sides)

To determine which transceivers, adapters, and cables are supported by this switch, see the [Cisco Transceiver Modules Compatibility Information](#) document.

The following figure shows the hardware features seen from the fan side of the chassis.



1	Screw holes (2) for attaching the grounding lug.	5	Chassis LEDs are as follows: <ul style="list-style-type: none"> • Beacon (BCN) • Status (STS)
2	Notch in both sides of the chassis for locking the fan end of the chassis to the bottom-support rails.	6	Screw holes (4) for attaching a center-mount rack bracket for two-post racks (one bracket for each of two sides).

3	<p>Two power supply modules (AC power supply shown)</p> <p>Power supply slots are numbered 1 on the left and 2 on the right (as seen when looking at the power supplies).</p>	7	Screw holes (2) for attaching a front-mount bracket for 4-post racks (1 bracket on each of 2 sides).
4	<p>Three fan modules (2 used for operations and one used for redundancy) of the following types:</p> <p>Note Earlier shipments of the switch were made with the N9K-C9300-FAN1-B or N9K-C9300-FAN1 fans.</p> <p>Fan slots are numbered 1 (leftmost slot) to 3 (rightmost slot).</p>		

You can use the 1- and 10-Gigabit ports to connect this switch to up to 48 devices or to FEXs, which can be connected to additional servers (for the number of FEXs that can be supported, see the release notes for the NX-OS software that you are using). You can connect any of the supported FEXs to the downlink ports.

For installation information on the Cisco Nexus 2000 Series FEXs, see the *Cisco Nexus 2000 Series Hardware Installation Guide*. For information on a B22-HP FEX, see the Getting Started Guide for that FEX model.

Depending on whether you plan to position the ports in a hot or cold aisle, you can order the fan and power supply modules with port-side intake or port-side exhaust airflow. For port-side intake airflow, the fan and AC power supply modules have burgundy coloring (DC power supply modules have green coloring). For port-side exhaust airflow, the fan and AC power supplies have blue coloring (DC power supply modules have gray coloring). You can also order the 1200-W HVAC/HVDC power supply which has dual-direction airflow with white coloring. Dual-direction airflow modules automatically use the airflow direction of the other modules installed in the switch.

The fan and power supply modules are field replaceable and you can replace one fan module or one power supply module during operations so long as the other modules are installed and operating. If you have only one power supply installed, you can install the replacement power supply in the open slot before removing the original power supply.



Note All of the fan and power supply modules must have the same direction of airflow. Otherwise, the switch can overheat and shut down. If you are installing a dual-direction power supply, that module will automatically use the same airflow direction as the other modules in the switch.

**Caution**

If the switch has port-side intake airflow (burgundy coloring for fan modules), you must locate the ports in the cold aisle. If the switch has port-side exhaust airflow (blue coloring for fan modules), you must locate the ports in the hot aisle. If you locate the air intake in a hot aisle, the switch can overheat and shut down.
