



Overview

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Overview

The Cisco Nexus 93600CD-GX switch (N9K-C93600CD-GX) is a 1-rack unit (RU), fixed-port switch designed for deployment in data centers.

This switch has the following ports:

- 28 10/40/100-Gigabit QSFP28 ports (ports 1-28)
- 8 10/40/100/400-Gigabit QSFP-DD ports (ports 29-36)
- Two management ports (one 10/100/1000BASE-T port and one 1-Gbps SFP port)
- One console port (RS-232)
- 1 USB port



Note This switch offers QSA 10G support on all ports.



Note There is no support for 1-Gigabit nor 100-Megabit optics on this switch.



Note

- Ports 1-24 support 2x50G breakout on all ports, 4x10 and 4x25G breakout on odd ports with even ports purged.
- Ports 25-28 support 2x50, 4x10 and 4x25G breakout as native downlinks.
- Ports 29-36 support 2x50, 4x10, 4x25, and 4x100G as port profile converted downlinks.



- Note**
- For ports 1 through 24, every 4 ports (1-4, 5-8, 9-12, and so on, referred to as a "quad") must operate at either 10G or 40/100G. That is, all 4 ports will operate in 10G or 40/100G. In breakout, all ports in the quad must have the same breakout map (2x50, 4x10, or 4x25G).
 - Ports 25-26 and ports 27-28 (port groups of 2 ports each) must operate at either 10G or 40/100G, or breakout map (2x50, 4x10, or 4x25G)



Note For ports 1 through 24, every 4 ports (1-4, 5-8, 9-12, and so on, referred to as a "quad") can operate either 10G or 40/100G (no breakout), but cannot have 10G and 40/100G at the same time.

For example, the following combinations are supported.

- Example 1: Port 1-4: 40G or 100G
- Example 2: Port 1-4: 10G

The following combinations will have hardware disabled port.

- Example 3: (if 10G is detected first in the quad):
 - Port 1: 10G (40G or 100G hardware disabled)
 - Port 2: 10G (40G or 100G hardware disabled)
 - Port 3: 10G (40G or 100G hardware disabled)
 - Port 4: 10G (40G or 100G hardware disabled)
- Example 4: (if 40/100G is detected first in the quad):
 - Port 1: 40G or 100G (10G hardware disabled)
 - Port 2: 40G or 100G (10G hardware disabled)
 - Port 3: 40G or 100G (10G hardware disabled)
 - Port 4: 40G or 100G (10G hardware disabled)

Supported mixed speed combination examples:

Table 1: Combination with 4x10G/4x25G with native 10G

Port number	Supported combinations		
Port 1	4x10G or 4x25G	4x10G or 4x25G	Native 10G
Port 2	hw-disabled	hw-disabled	Native 10G
Port 3	4x10G or 4x25G	Native 10G	4x10G or 4x25G
Port 4	hw-disabled	Native 10G	hw-disabled

Table 2: Combination with 4x10G/4x25G with native 40/100G

Port number	Supported combinations	
Port 1	4x10G or 4x25G	Native 40/100G will be hw-disabled
Port 2	hw-disabled	Native 40/100G will be hw-disabled
Port 3	Native 40/100G will be hw-disabled	4x10G or 4x25G
Port 4	Native 40/100G will be hw-disabled	hw-disabled

This switch includes the following user-replaceable components:

- Fan modules (six) with the following airflow choices:
 - Port-side exhaust fan module with blue coloring (NXA-FAN-35CFM-PE)
 - Port-side intake fan module with burgundy coloring (NXA-FAN-35CFM-PI)



Note This switch runs with +1 redundancy mode, so that if one fan fails, the switch can sustain operation. But if a 2nd fan fails, this switch is not designed to sustain operation. Hence before waiting for major threshold temperature to be hit, the switch will power down due to **Powered-down due to fan policy trigger**.



Note Each fan module has two rotors. The switch can function normally if one rotor inside the any one fan module fails. In case of more than one rotor failure, the switch will issue a warning and power down in 2 minute.

- Power supply modules (two—One for operations and one for redundancy [1+1]) with the following choices:
 - 1100-W port-side exhaust AC power supply with blue coloring (NXA-PAC-1100W-PE2)
 - 1100-W port-side intake AC power supply with burgundy coloring (NXA-PAC-1100W-PI2)
 - 1100-W port-side exhaust HVAC/HVDC power supply with blue coloring (NXA-PHV-1100W-PE)
 - 1100-W port-side intake HVAC/HVDC power supply with burgundy coloring (NXA-PHV-1100W-PI)
 - 1100-W port-side exhaust DC power supply with blue coloring (NXA-PDC-1100W-PE)
 - 1100-W port-side intake DC power supply with burgundy coloring (NXA-PDC-1100W-PI)

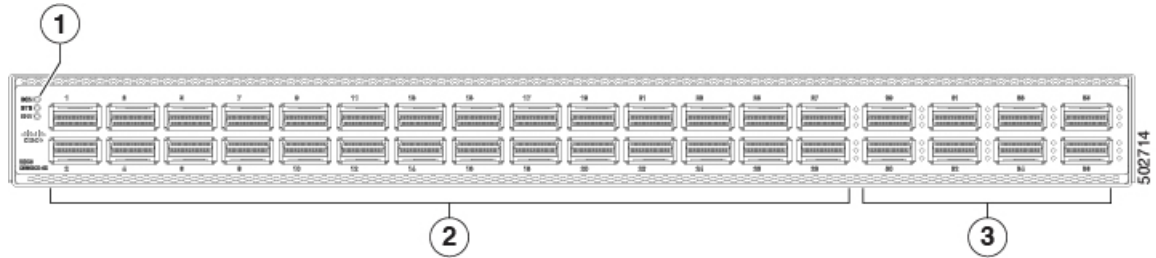


Note All fan modules and power supplies must use the same airflow direction.



Note In the event that only one power supply is operating in an active system and a second power supply is inserted, the system fan will slow down to **50% of Max speed** for 12 seconds. It can take up to 10 seconds for the second power supply to become active. Please do not remove the first power supply during this time-frame, in order to avoid system shutdown.

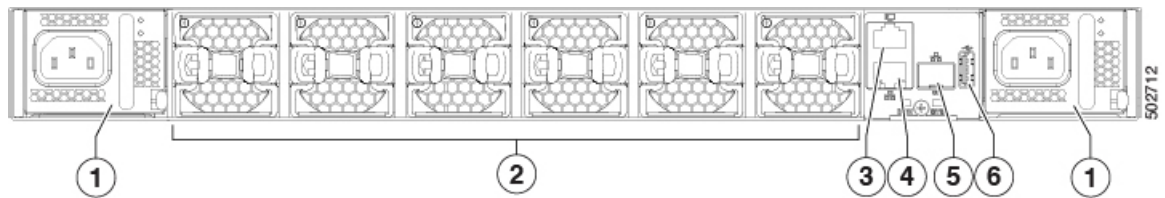
The following figure shows the switch features on the port side of the chassis.



1	Beacon (BCN), Status (STS), and Environment (ENV) LEDs	3	8 100/400-Gigabit QSFP-DD ports Ports 29-36 support 4x10 and 4x25G as port profile converted downlinks
2	28 40/100-Gigabit QSFP28 ports Ports 25-28 support 4x10G and 4x25G breakout as native downlinks		

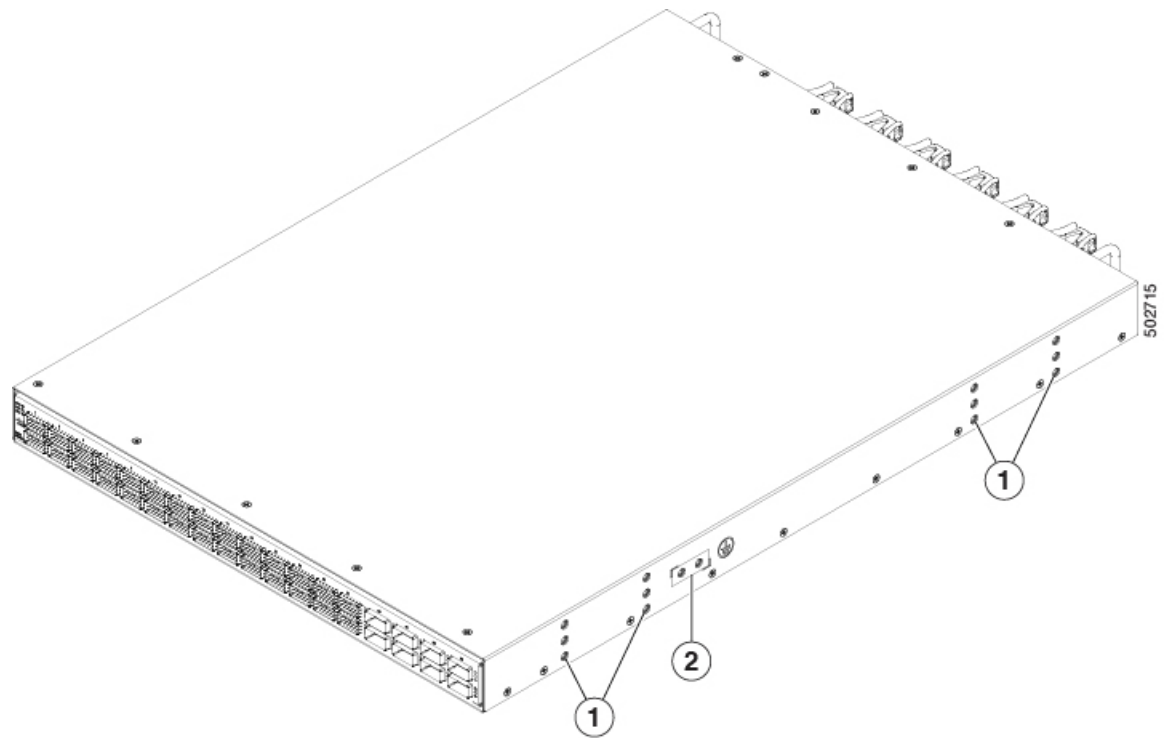
To determine which transceivers, adapters, and cables support this switch, see the [Cisco Transceiver Modules Compatibility Information](#) document.

The following figure shows the switch features on the power supply side of the chassis.



1	Power supply modules (1 or 2) (AC power supplies shown) with slots numbered 1 (left) and 2 (right)	4	Management port (1—RJ-45 copper port)
2	Fan modules (6) with slots numbered from 1 (left) to 6 (right)	5	Management port (1—SFP optical port)
3	Console port (1)	6	USB port (1)

The following figure shows the side of the chassis.



1	Screw holes for mounting brackets	3	Grounding pad
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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 power supplies have burgundy coloring. For port-side exhaust airflow, the fan and power supplies have blue coloring.

The fan and power supply modules are field replaceable. 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 fan and power supply modules must have the same direction of airflow. Otherwise, the switch can overheat and shut down.



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.

