Overview

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The Cisco Nexus 93240YC-FX2 (N9K-C93240YC-FX2) is a 1.2 RU, fixed-port switch designed for deployment in data centers. This switch has 48 1/10/25-Gigabit Ethernet SFP28 ports and 12 40/100-Gigabit Ethernet QSFP28 ports. The ports on this switch can operate in multiple template configurations.

Note You can configure the 12 40/100-Gigabit Ethernet QSFP28 ports as downlink ports.

This switch includes the following user-replaceable components:

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

Note

Table 1: Fan Speeds for This Switch

	Port-Side Intake Fan Speed %	Port-Side Exhaust Fan Speed %
Typical/Minimum	50%	70%
Maximum	100%	100%

  - Port-side exhaust airflow with blue coloring (NXA-SFAN-35CFM-PE)
  - Port-side intake airflow with burgundy coloring (NXA-SFAN-35CFM-PI)

Note To enable or disable displaying the serial number of the NXA-SFAN-35CFM-PI or NXA-SFAN-35CFM-PE fan, enter the [**no**] **hardware fan-sprom** command.

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:
  - 750-W AC power supply with port-side exhaust airflow (blue coloring) (NXA-PAC-750W-PE)
  - 750-W AC power supply with port-side intake airflow (burgundy coloring) (NXA-PAC-750W-PI)
  - 1100-W AC power supply with port-side intake airflow (burgundy coloring) (NXA-PAC-1100W-PI2)
  - 1100-W AC power supply with port-side exhaust airflow (blue coloring) (NXA-PAC-1100W-PE2)
  - 1100-W DC power supply with port-side intake airflow (burgundy coloring) (NXA-PDC-1100W-P1)
  - 1100-W DC power supply with port-side exhaust airflow (blue coloring) (NXA-PDC-1100W-PE)
  - 1100-W HVAC/HVDC power supply with port-side intake airflow (burgundy coloring) (NXA-PHV-1100W-PI)
  - 1100-W HVAC/HVDC power supply with port-side exhaust airflow (blue coloring) (NXA-PHV-1100W-PE)

Note The 750-W AC PSU is compatible only with software versions ACI-N9KDK9-14.2 or NXOS-9.3.3 and onwards.

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.

Deployment Scheme for SFP-10G-T-X Transceivers

The following figure shows the maximum configuration density of SFP-10G-T-X SFP+ transceivers for this switch.

Maximum Configuration with Port-Side Intake Fans

1	4	7	10	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58
2	5	8	11	14	17	20	23	26	29	32	35	38	41	44	47	50	53	56	59
3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60

Maximum Configuration with Port-Side Exhaust Fans

1	4	7	10	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58
2	5	8	11	14	17	20	23	26	29	32	35	38	41	44	47	50	53	56	59
3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60

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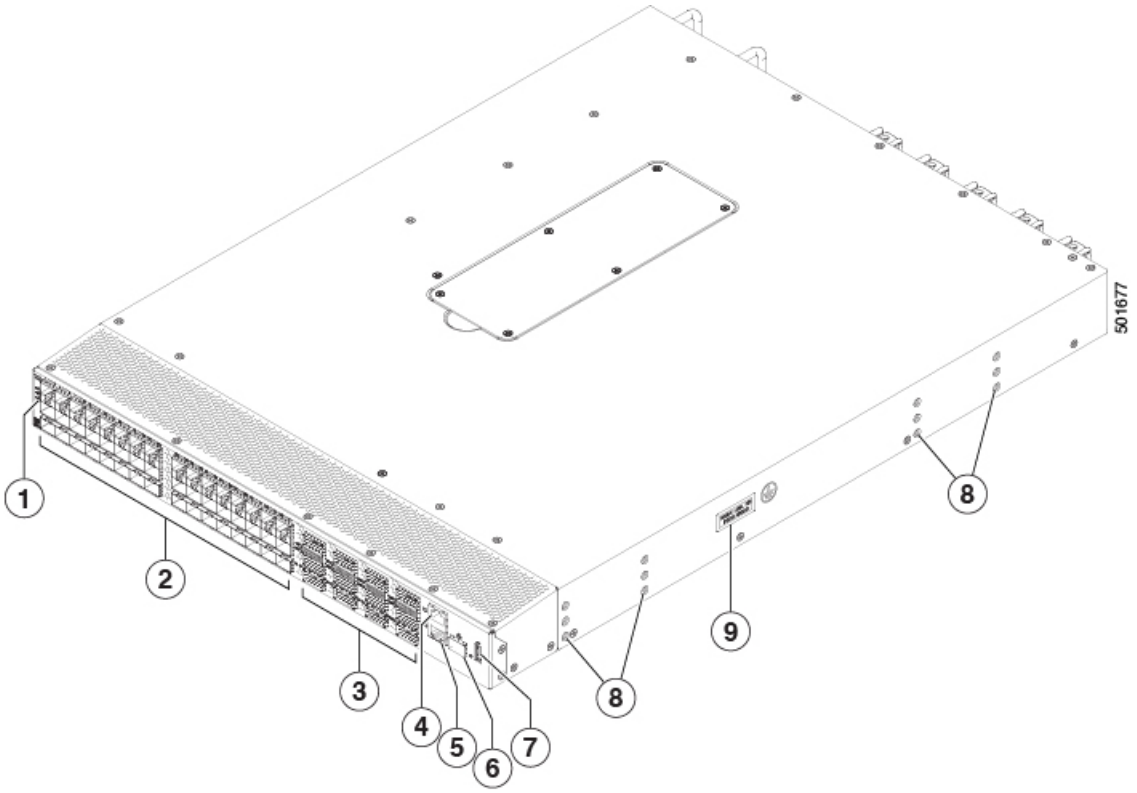
	Active Port deploying the SFP+ 10GBASE-T transceiver, with max power consumption up to 2.5W. Once configured with “media-type 10g-tx” in NX-OS or “Link Level Policy -> Physical Media Type -> SFP 10G TX” in ACI, these ports can deploy SFP-10G-T-X. Without such configuration, they behave like normal ports.
	Port Shutdown or Active with Passive Copper Cables only (Max. power consumption up to 0.1W). Once 10g-tx is configured on yellow ports, ports to the left, right, top and bottom of the yellow port are referenced as blue ports. These adjacent ports will then support only low power Passive Copper DAC cable, or these can be left empty to conserve power. If 10g-tx configuration is removed from adjacent yellow ports, the blue ports will revert to behaving like normal ports.
	Active Port deploying any Cisco 1/10/25G optics (SFP, SFP+, SFP28) EXCLUDING SFP+ 10GBASE-T, with max power consumption up to 1.5W. These ports are not part of any scheme and can deploy all regular Cisco optics and behave like normal ports.
	Active Uplink QSFP+, QSFP28 ports with Incoming and outgoing traffic (40G/100G).

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

Overview

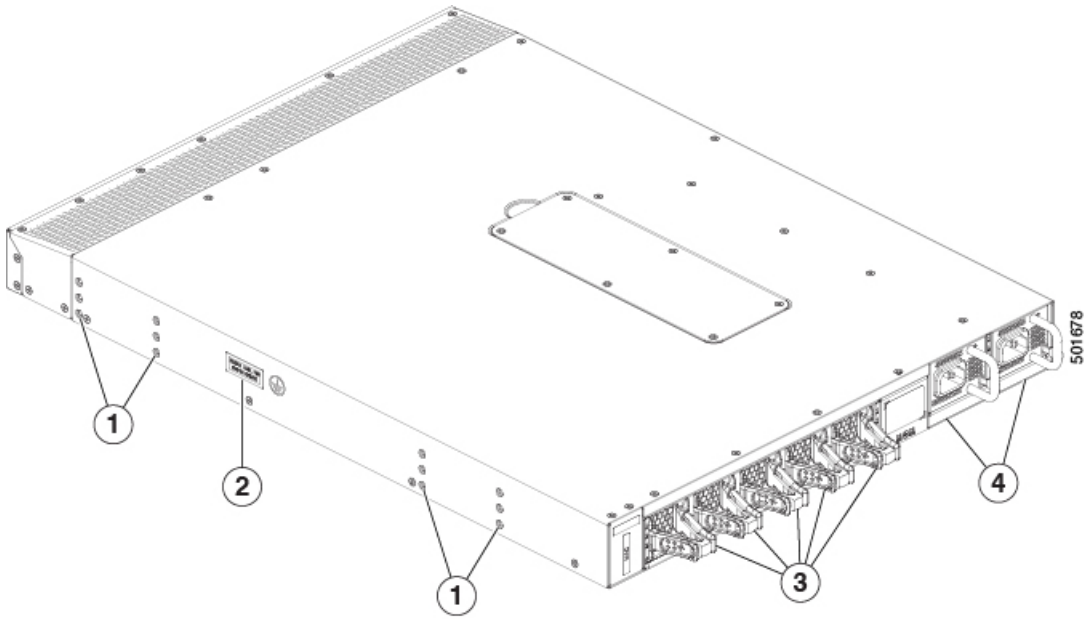


1	Chassis LEDs (Beacon [BCN], Status [STS], and Environment [ENV])	6	Management port (SFP+ port)
2	10-/25-Gigabit Ethernet SFP28 ports (48) [1]	7	USB port
3	40-/100-Gigabit Ethernet QSFP28 ports (12)	8	Screw holes (6) for attaching rack mounting brackets
4	Console port (RS232 port)	9	Grounding pad
5	Management port (RJ-45 port)		

[1] 10/25G-LR-S with QSA is not supported in Release 14.0(1)

To determine which transceivers, adapters, and cables this switch supports, see the Cisco Transceiver Modules Compatibility Information document.

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



1	Screw holes (6) for attaching rack mounting brackets	3	Fan modules (5) with fan slot 1 on the left and fan slot 5 on the right
2	Grounding pad	4	Two power supplies (one used for operations and one used for redundancy) (AC power supplies shown). Power supply slot 1 is on the left and slot 2 is on the right.

Note The limit of USB support is to USB 2.0 devices that use less than 2.5 W (less than 0.5 A inclusive of surge current). There is no support for devices, such as external hard drives, that instantaneously draw more than 0.5 A.

You can order the fan and power supply modules with port-side intake or port-side exhaust airflow. The PSU you order depends on whether you plan to position the ports in a hot or cold aisle. To determine the airflow direction of the modules installed in your switch, see the following table.

Replaceable Modules	Port-Side Intake Airflow Coloring	Port-Side Exhaust Airflow Coloring
Fans	Burgundy	Blue
AC power supplies	Burgundy	Blue
HVAC/HVDC power supplies	White	
DC power supplies	Burgundy	Blue

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 installed modules are operating. If you have only one power supply that is installed, you can install the replacement power supply in the open slot before removing the original power supply.

Note 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 automatically uses 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.

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