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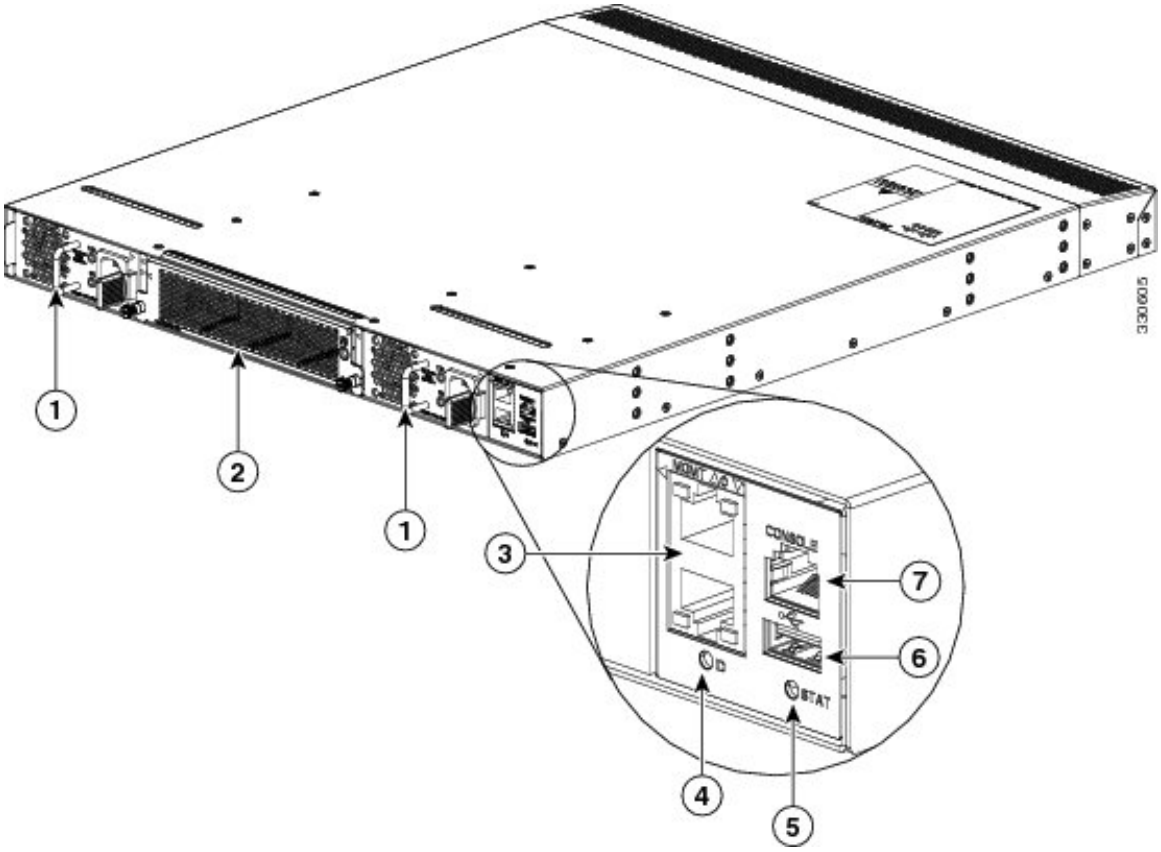
Overview of the Cisco Nexus 3016 Switch

The Cisco Nexus 3016 (N3K-C3016-40GE) is a 1 rack unit (RU) switch with 16 fixed 40-Gigabit Ethernet downlink (host-facing) and uplink (network-facing) ports, 2 fixed 100/1000 management ports, 1 RS-232 console port, and 1 USB port. This switch supports both port-side exhaust and port-side intake airflow schemes. The switch requires one AC or DC power supply for operations, but it can have a second power supply for redundancy. The switch includes Layer 3 license.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

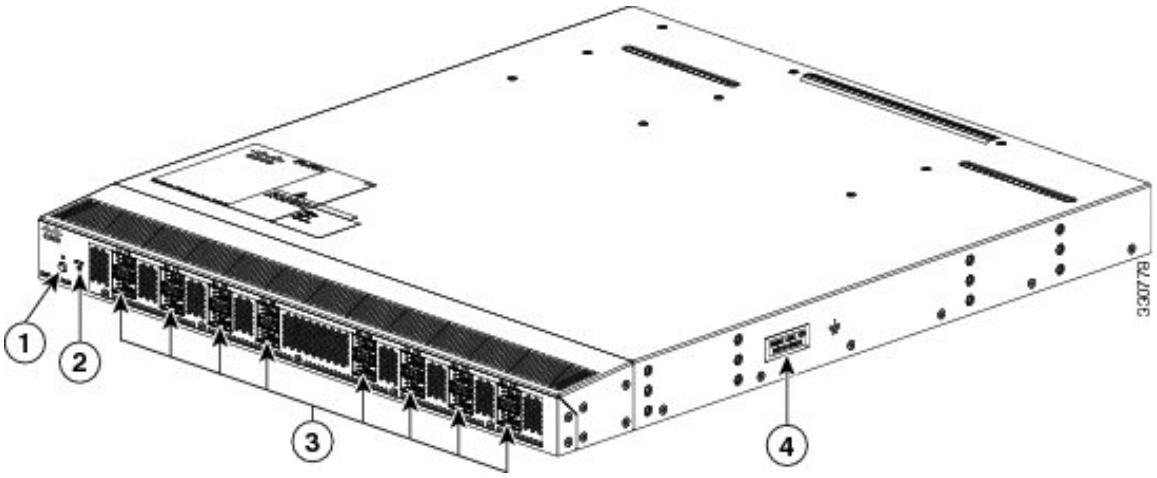
Figure 1: Fan-Side View of the Cisco Nexus 3016 Chassis



1	AC or DC power supply (1 or 2) with slots numbered 1 (left) and 2 (right)	5	Status LED
2	Fan tray (1)	6	USB port (1)
3	Management ports (2)	7	Console port (1)
4	ID LED		

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 2: Port-Side View of the Cisco Nexus 3016 Chassis



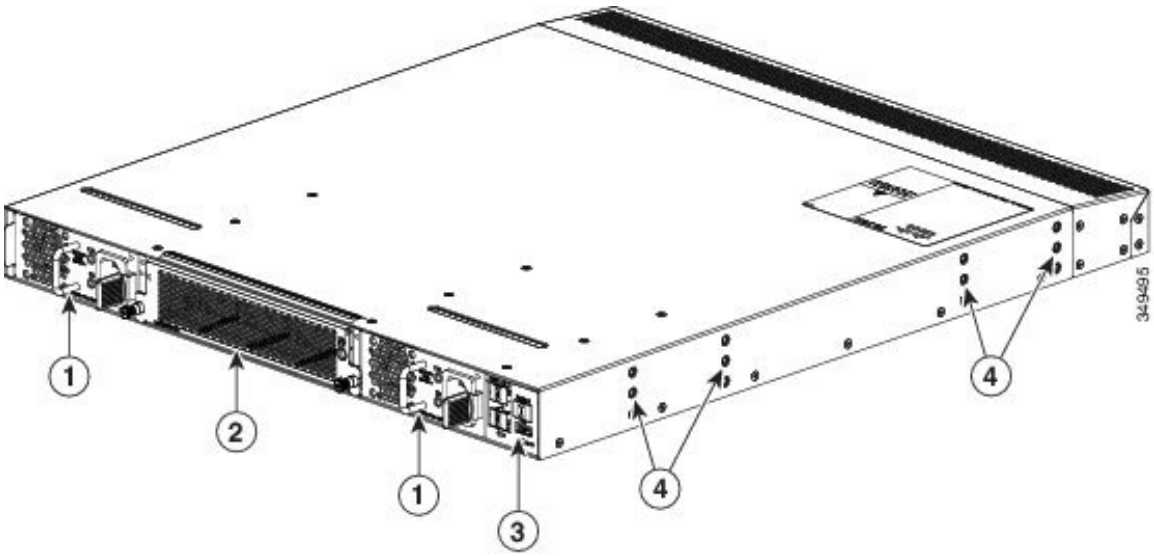
1	ID LEDs	3	40-Gigabit uplink or downlink ports (16)
2	Status LED	4	Grounding pad

Overview of the Cisco Nexus 3048TP Switch

The Cisco Nexus 3048TP (N3K-C3048TP-1GE) is a 1 rack unit (RU) switch with 48 fixed 10/100/1000 Ethernet downlink ports, 4 fixed 10-Gigabit Ethernet uplink ports, 1 console port, and 1 fixed 100/1000 management port. There is also 1 disabled management port, but there are no plans to enable this port at any future date. This switch supports both port-side exhaust and port-side intake airflow schemes. The switch requires one AC or DC power supply for operations, but it can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

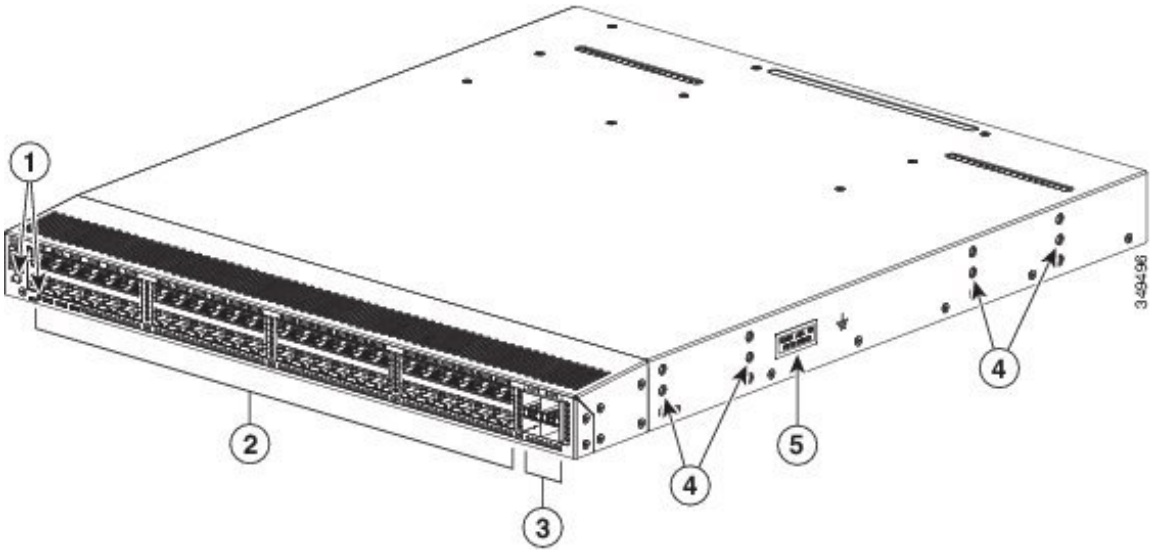
Figure 3: Fan-Side View of the Cisco Nexus 3048TP Chassis



1	AC or DC power supply (1 or 2) with slots numbered 1 (left) and 2 (right)	3	Console, Management, and USB ports
2	Fan tray (1)	4	Screw holes for mounting brackets

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 4: Port-Side View of the Cisco Nexus 3048TP Chassis



1	Status LED and Beacon Button/LED (the push-button is not utilized and currently has no function)	4	Screw holes for mounting brackets
2	10/100/1000-Mbps Ethernet downlink ports (48)	5	Grounding pad

3	1- and 10-Gigabit Ethernet uplink ports (4)		

Overview of the Cisco Nexus 3064 Switches

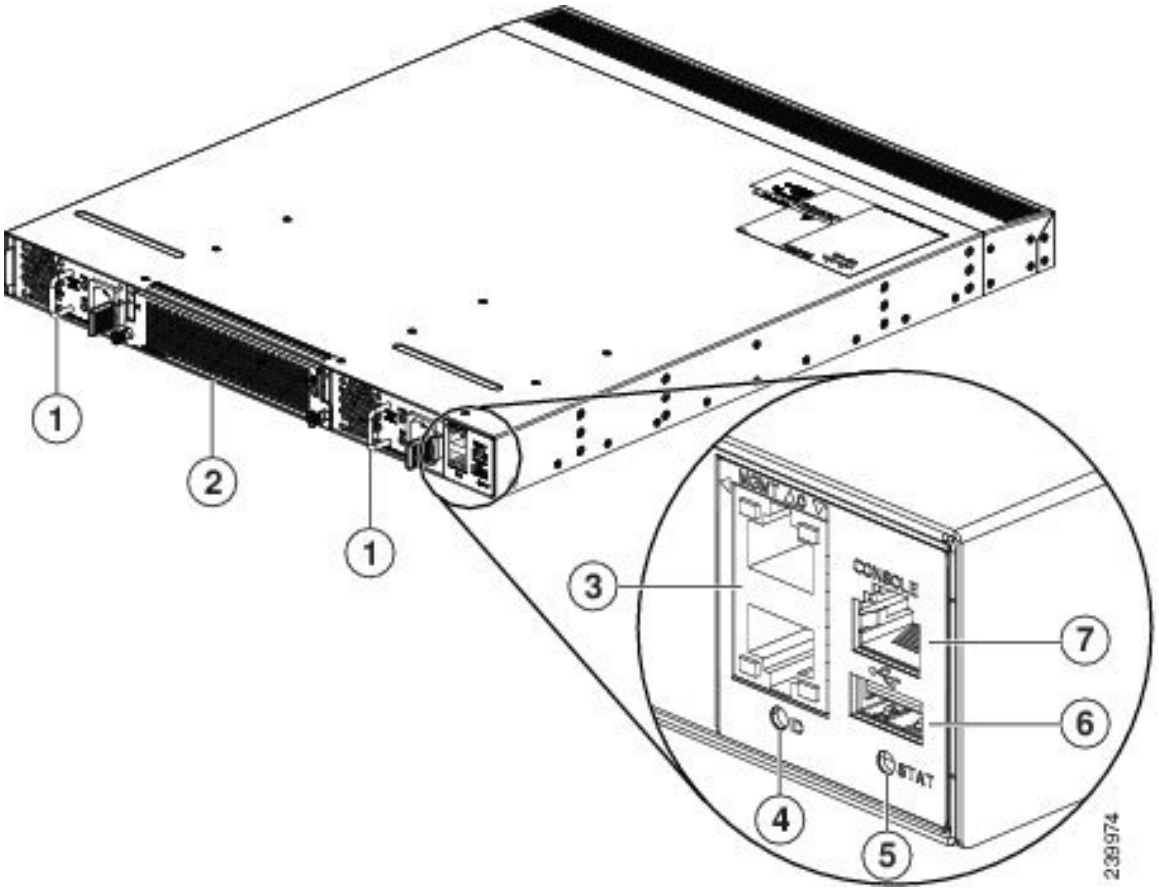
The Cisco Nexus 3064-T (N3K-C3064TQ) and 3064-32T (N3K-C3064TQ-32T) are 1 rack unit (RU) switches with 48 or 32 fixed 1- and 10-Gigabit Ethernet downlink and uplink ports, 2 fixed 100/1000 management ports, 1 console port, and 1 USB port.

The Cisco Nexus 3064-X (N3K-C3064TQ) is a 1 rack unit (RU) switch with 48 fixed 1- and 10-Gigabit Ethernet SFP+ downlink and 4 fixed 40-Gigabit Ethernet QSFP+ uplink ports (each capable of using 40-Gigabit or 4 x 10-Gigabit mode), 2 fixed 100/1000 management ports, 1 console port, and 1 USB port.

These switches support both port-side exhaust and port-side intake airflow schemes. These switches require one AC or DC power supply for operations, but can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

Figure 5: Fan-Side View of the Cisco Nexus 3064 Chassis

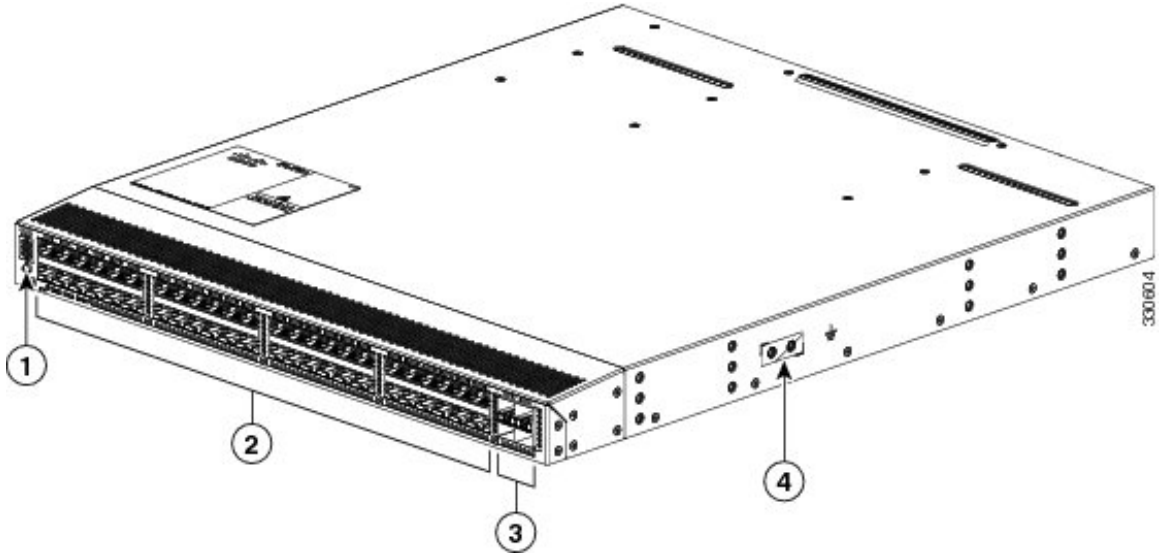


1	AC or DC power supply (2) (AC power supply shown) with slots numbered 1 (left) and 2 (right)	5	Status LED

2	Fan tray (1)	6	USB port (1)
3	Management ports (2)	7	Console port (1)
4	ID LED		

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 6: Port-Side View of the Cisco Nexus 3064 Chassis



1	ID and Status LEDs	3	40-Gigabit uplink ports (4)
2	1- and 10-Gigabit Ethernet downlink ports (48)	4	Grounding pad

Overview of the Cisco Nexus 3132Q Switches

The Cisco Nexus 3132Q (N3K-C3132Q-40GE) is a 1 rack unit (RU) switch with 32 40-Gigabit enhanced quad small form-factor pluggable (QSFP+) ports and 4 SFP+ ports that are internally multiplexed with the first QSFP+ port. Each QSFP+ port can operate in native 40-Gigabit or 4 x 10-Gigabit modes.

The Cisco Nexus 3132Q-V (N3k-C3132Q-V) is a 1 rack unit (RU) switch with 32 40-Gigabit enhanced quad small form-factor pluggable (QSFP+) ports and 4 SFP+ ports that are internally multiplexed with the first QSFP+ port. Each QSFP+ port can operate in native 40-Gigabit or 4 x 10-Gigabit modes. This switch features support of VxLAN routing, 33% more packet buffer, 2x system memory for object-model programming, and 4x ingress ACL.

The Cisco Nexus 3132Q-X (N3K-C3132Q-40GX) is a 1 rack unit (RU) switch with 32 40-Gigabit enhanced quad small form-factor pluggable (QSFP+) ports and 4 SFP+ ports that are internally multiplexed with the first QSFP+ port. Each QSFP+ port can operate in native 40-Gigabit or 4 x 10-Gigabit modes.

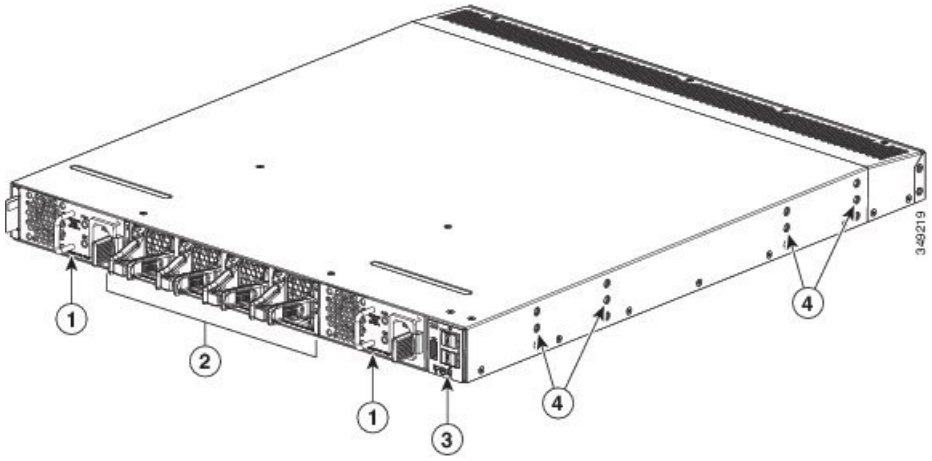
The Cisco Nexus 3132Q-XL (N3K-C3132Q-XL) is a 1 rack unit (RU) switch with 8GB of RAM and dual-core 2.5GHz x86 CPUs and 32 40-Gigabit enhanced quad small form-factor pluggable (QSFP+) ports and 4 SFP+

ports that are internally multiplexed with the first QSFP+ port. Each QSFP+ port can operate in native 40-Gigabit or 4 x 10-Gigabit modes

These switches each have 1 management port, 1 console port, and 1 USB port and support both port-side exhaust and port-side intake airflow schemes. These switches require one AC or DC power supply for operations, but can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

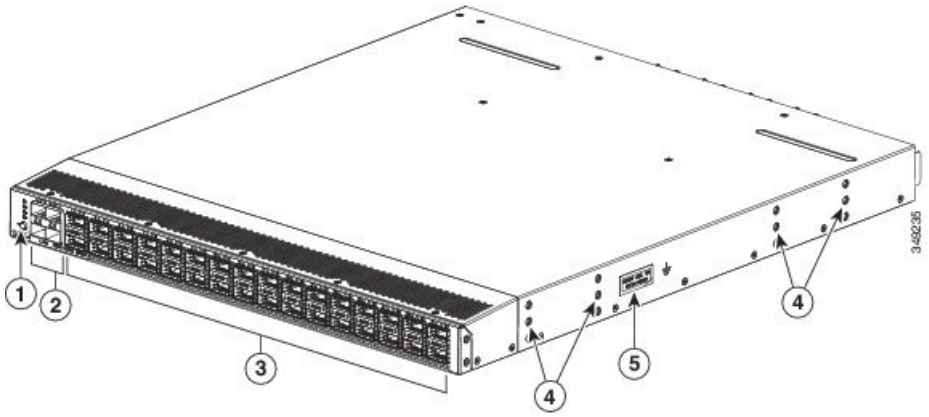
Figure 7: Fan-Side View of the Cisco Nexus 3132 Chassis



1	AC or DC power supply (1 or 2) with slots numbered 1 (left) and 2 (right)	3	Console, Management, and USB ports
2	Fan modules (4)	4	Screw holes for mounting brackets

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 8: Port-Side View of the Cisco Nexus 3132 Chassis



1	Selector switch, ID, and Status LEDs	4	Screw holes for mounting brackets

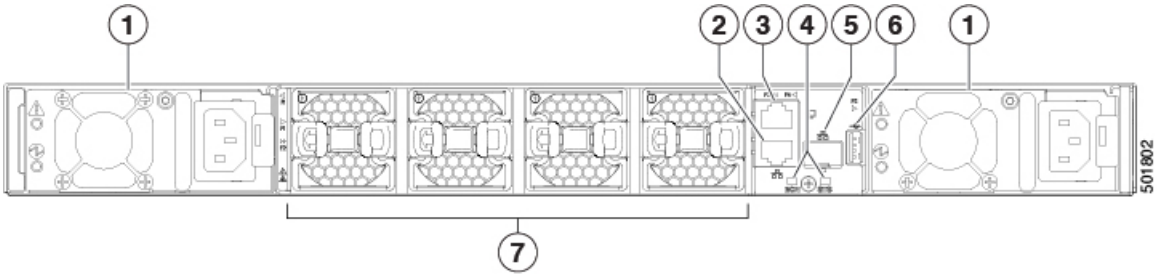
2	4 SFP+ ports (multiplexed internally to the first QSFP+ port)	5	Grounding pad
3	32 QSFP+ ports		

Overview of the Cisco Nexus 3132C-Z Switch

The Cisco Nexus 3132C-Z (N3K-C3132C-Z) is a 1 rack unit (RU) switch with 32 fixed 100-Gigabit QSFP28 ports, 2 SFP+ ports, 2 management ports, 1 console port, and 1 USB port. This switch supports both port-side exhaust and port-side intake airflow schemes. The switch requires one AC, DC, or HVAC/HVDC power supply for operations, but it can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

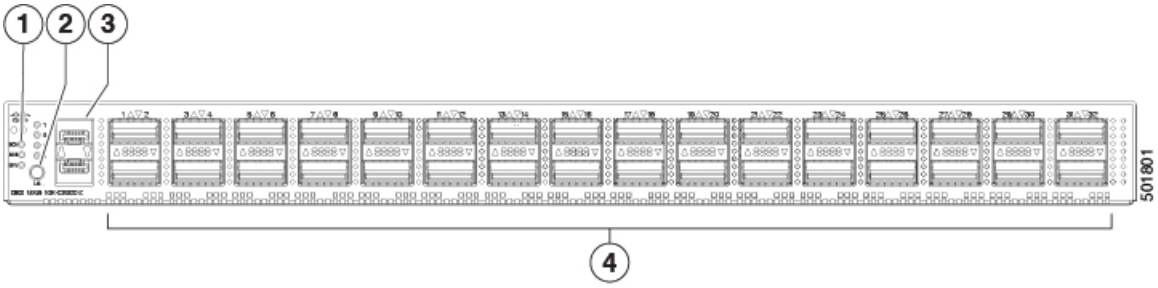
Figure 9: Fan-Side View of the Cisco Nexus 3132C-Z Chassis



1	AC or DC power supply (1 or 2) with slots numbered 1 (left) and 2 (right)	5	Management port (SFP)
2	Management port (RJ-45)	6	USB port (1)
3	Console port (RS-232)	7	Fan modules (4)
4	Beacon (BCN) and Status (STS) LEDs		

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

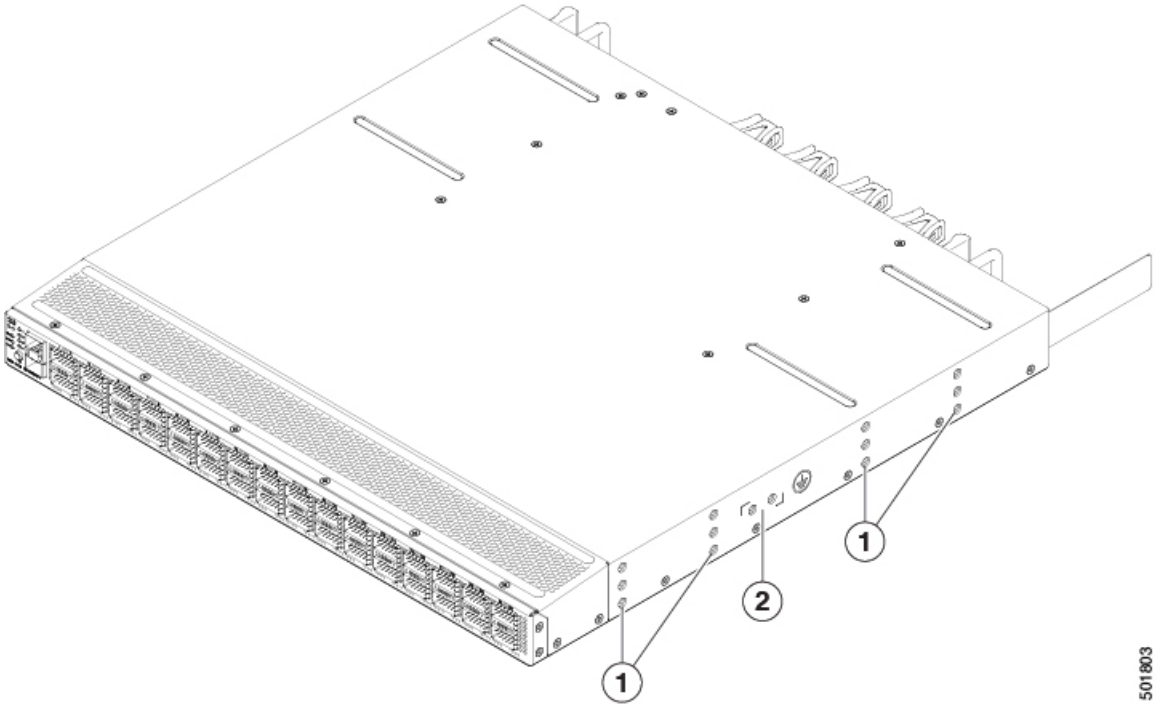
Figure 10: Port-Side View of the Cisco Nexus 3132C-Z Chassis



1	Beacon (BCN), Status (STS), Environment (ENV), and Lane select LEDs	3	SFP+ ports (2)
2	Lane select button	4	100-Gigabit QSFP28 ports (32)

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 11: Side View of the Cisco Nexus 3132C-Z Chassis



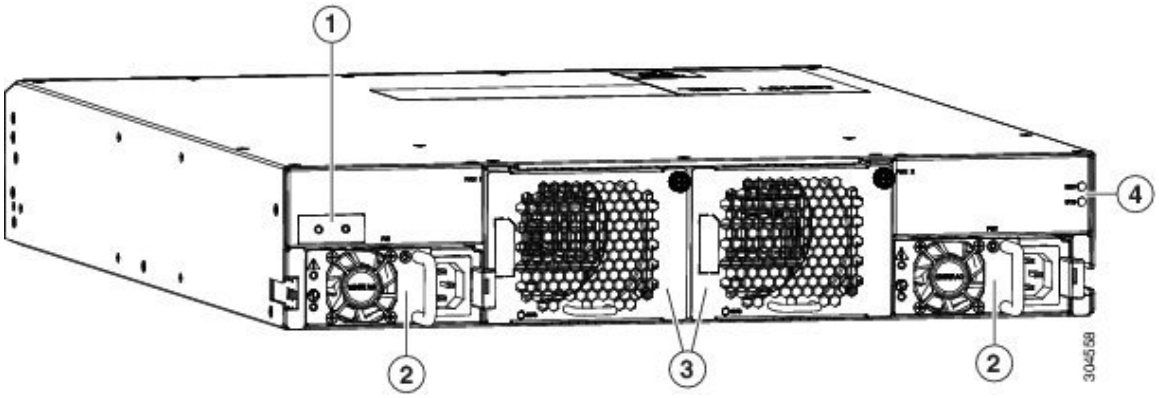
1	Screw holes for mounting brackets	2	Grounding pad

Overview of the Cisco Nexus 3164Q Switch

The Cisco Nexus 3164Q (N3K-C3164Q-40GE) is a 2 rack unit (RU) switch with 64 fixed 40-Gigabit enhanced quad small form-factor pluggable (QSFP+) ports that can run in either 40-Gigabit native mode or 4 x 10-Gigabit mode, 1 RJ-45 management port, 1 RS-232 console port, and 1 USB port. This switch supports both port-side exhaust and port-side intake airflow schemes. The switch requires one AC or DC power supply for operations, but it can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

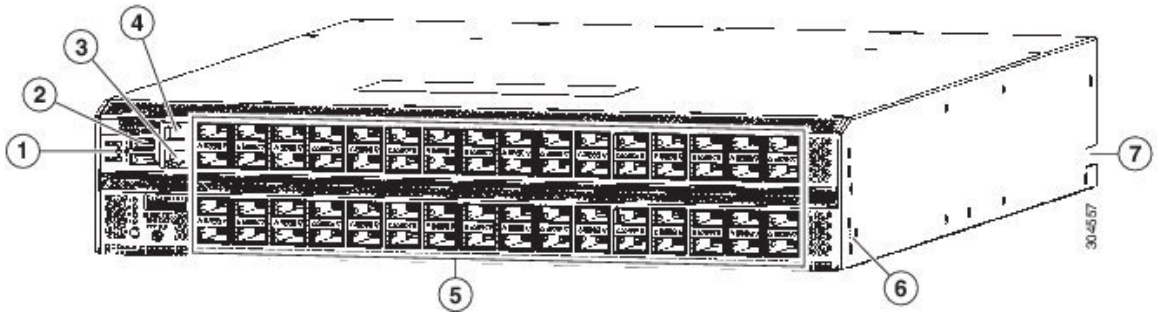
Figure 12: Fan-Side View of the Cisco Nexus 3164Q Chassis



1	Grounding pad	3	Fan modules (2)
2	Power supply modules (2) with slots numbered 1 (left) and 2 (right)	4	Beacon (BCN) and Status (STS) LEDs

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 13: Port-Side View of the Cisco Nexus 3164Q Chassis



1	Beacon (BCN), Status (STS), and Environment (ENV) LEDs	5	64 40-Gigabit QSFP+ ports
2	USB ports (2)	6	Screw holes for mounting brackets
3	Management port (1)	7	Notch in the chassis (2) (one each side) for locking into the bottom-support rails
4	Console port (1)		

Overview of the Cisco Nexus 3172 Switches

The Cisco Nexus 3172PQ (N3K-C3172PQ-10GE) is a 1 rack unit (RU), 10-Gigabit enhanced small form-factor pluggable (SFP+)-based switch with 48 SFP+ ports and 6 Quad SFP+ (QSFP+) ports. Each SFP+ port can

operate in 100-Mbps, 1-Gbps, or 10-Gbps mode, and each QSFP+ port can operate in native 40-Gbps or 4 x 10-Gbps mode.

The Cisco Nexus 3172PQ-XL (N3K-C3172PQ-XL) is a 1 rack unit (RU) switch with 8GB of RAM and dual-core 2.5GHz x86 CPUs and 10-Gigabit enhanced small form-factor pluggable (SFP+) ports with 48 SFP+ ports and 6 Quad SFP+ (QSFP+) ports. Each SFP+ port can operate in 100-Mbps, 1-Gbps, or 10-Gbps mode, and each QSFP+ port can operate in native 40-Gbps or 4 x 10-Gbps mode.

The Cisco Nexus 3172TQ (N3K-C3172TQ-10GT) is a 1 rack unit (RU), 10GBASE-T switch with 48 10GBASE-T RJ-45 ports (each port can operate at 100-Mbps and 1-Gbps speeds) and 6 Quad SFP+ (QSFP+) ports (each QSFP+ port can support 4 x 10 Gigabit Ethernet or 40 Gigabit Ethernet).

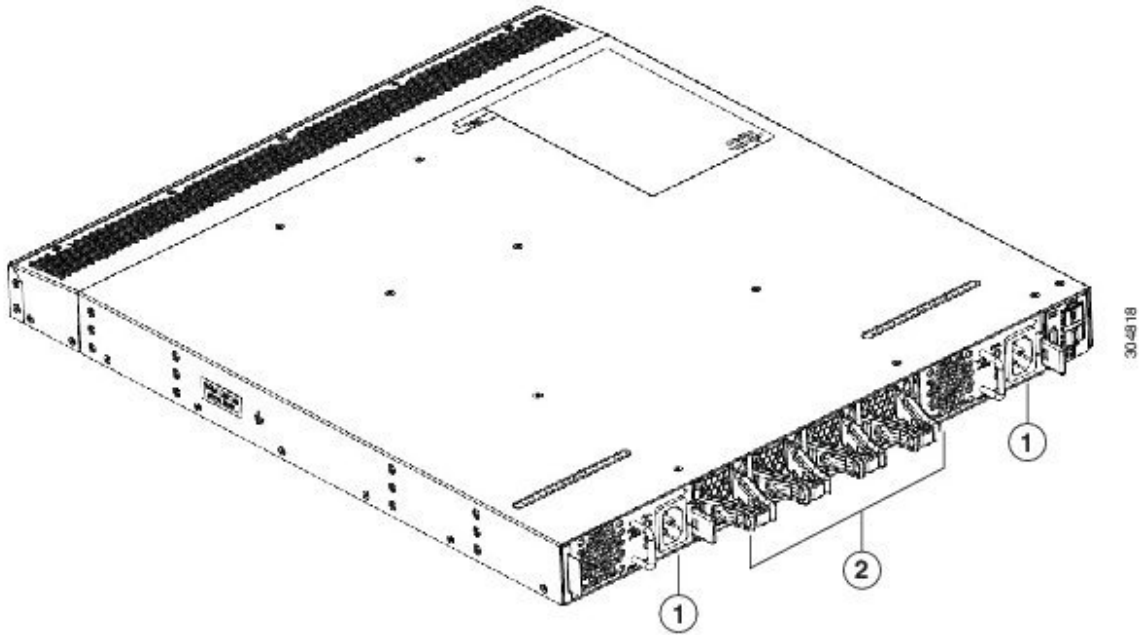
The Cisco Nexus 3172TQ-32T is the Cisco Nexus 3172TQ with 32 10GBASE-T ports (each port can operate at 100-Mbps and 1-Gbps speeds) and 6 QSFP+ ports (each QSFP+ port can support 4 x 10 Gigabit Ethernet or 40 Gigabit Ethernet) enabled. The ports are enabled through software licensing. This switch comes with a 32-10GBASE-T port license preinstalled. To enable the remaining 16 10GBASE-T ports, the customer installs the 16-port upgrade license.

The Cisco Nexus 3172TQ-XL (N3K-C3172TQ-XL) is a 1 rack unit (RU) switch with 8GB of RAM and dual-core 2.5GHz x86 CPUs and 10GBASE-T with 48 10GBASE-T RJ-45 ports (each port can operate at 100-Mbps and 1-Gbps speeds) and 6 Quad SFP+ (QSFP+) ports (each QSFP+ port can support 4 x 10 Gigabit Ethernet or 40 Gigabit Ethernet).

These switches each have 1 management port, 1 console port, and 1 USB port and support both port-side exhaust and port-side intake airflow schemes. These switches require one AC or DC power supply for operations, but can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

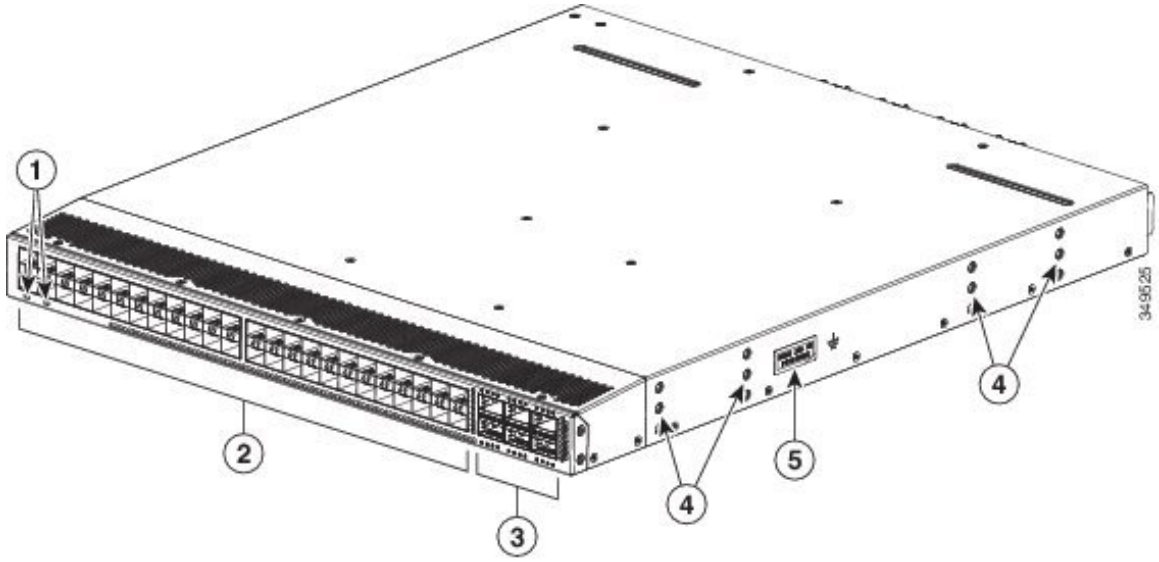
Figure 14: Fan-Side View of the Cisco Nexus 3172 Chassis



1	Power Supply modules (2) with slots numbered 1 (left) and 2 (right)	2	Fan modules (4)

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 15: Port-Side View of the Cisco Nexus 3172 Chassis



1	ID and Status LEDs	4	Screw holes for mounting brackets
2	SFP+ ports (48)	5	Grounding pad
3	QSFP+ ports (6)		

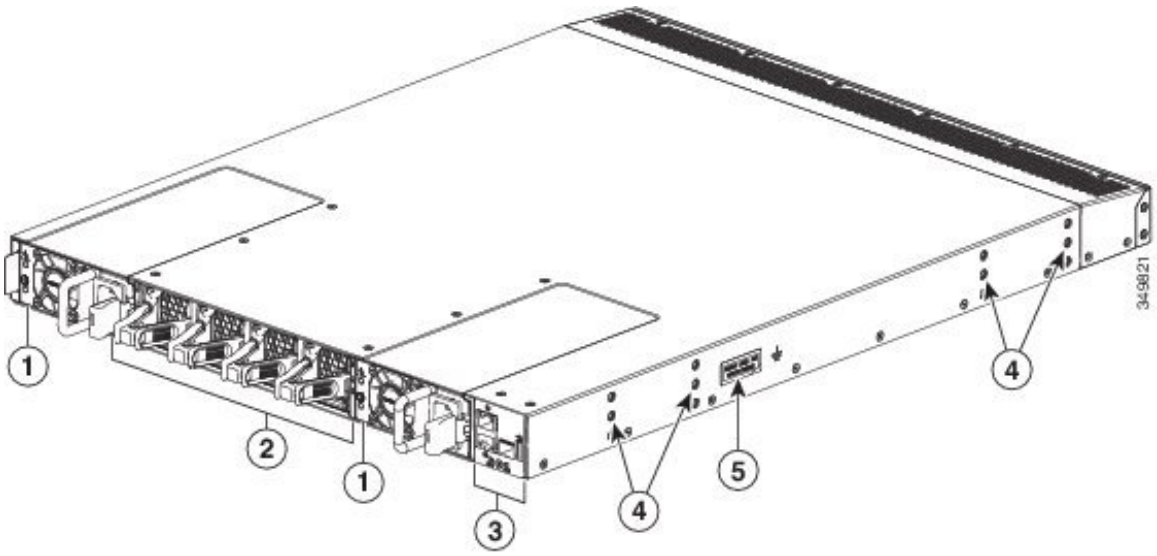
Overview of the Cisco Nexus 3232C Switch

The Cisco Nexus 3232C (N3K-C3232C) is a 1 rack unit (RU) switch with 32 10- or 100-Gigabit QSFP28-100 and 2 10G SPF+ ports. This switch supports both port-side exhaust and port-side intake airflow schemes. The switch requires one AC or DC power supply for operations, but it can have a second power supply for redundancy.

Note Each vertical pair of QSFP28 ports supports a QSFP-to-SFP adapter (such as CVR-2QSFP28-8SFP) that provides eight breakout SFP/SFP+/SFP28 ports. The top four ports connect to the upper QSFP28 port, and the bottom four ports connect to the lower QSFP28 port.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

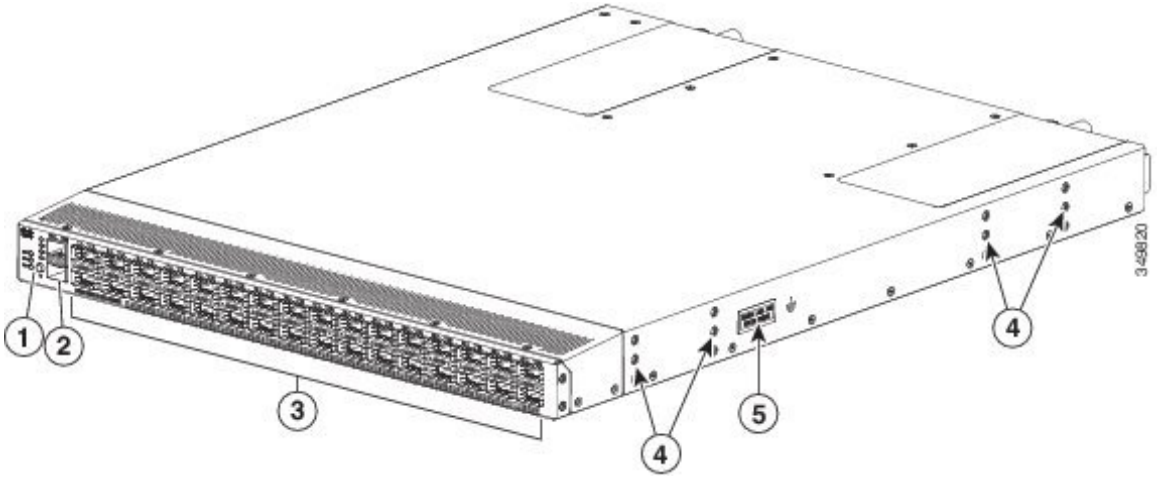
Figure 16: Fan-Side View of the Cisco Nexus 3232C Chassis



1	AC or DC power supply (1 or 2) with slots numbered 1 (left) and 2 (right)	4	Screw holes for mounting brackets
2	Fan modules (4)	5	Grounding pad
3	Console, Management, and USB ports		

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 17: Port-Side View of the Cisco Nexus 3232C Chassis



1	Selector switch, ID, and Status LEDs	4	Screw holes for mounting brackets
2	10G SPF+ ports (2)	5	Grounding pad
3	10- or 100-Gigabit QSFP28-100 ports (32) [1]		

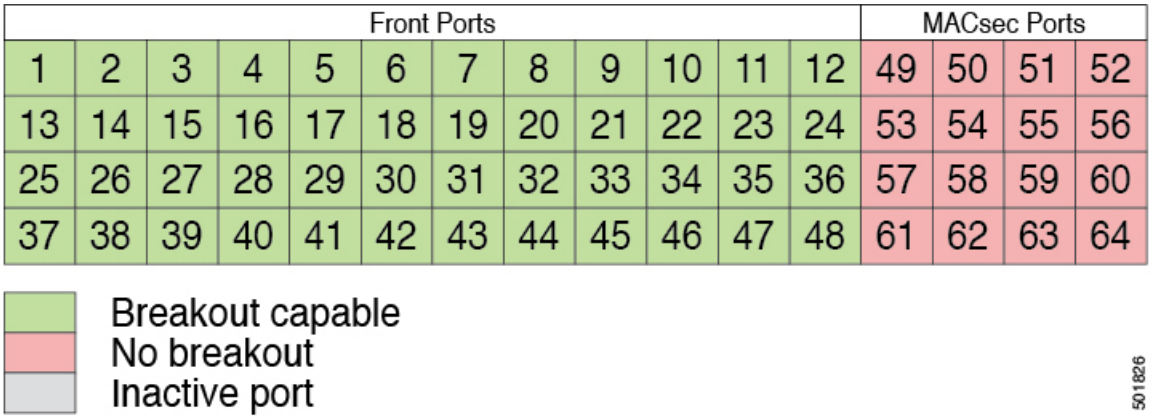
[1] 10 Gigabits require a QSFP-to-SFP adapter [CVR-QSFP-SFP10G] and an SFP+ transceiver.

Overview of the Cisco Nexus 3264C-E Switch

The Cisco Nexus 3264C-E (N3K-C3264C-E) is a 2 rack unit (RU) switch with 64 100-Gigabit QSFP28 and 2 10-Gigabit SPF+ ports. This switch supports both port-side exhaust and port-side intake airflow schemes. The switch requires one power supply for operations, but it can have a second power supply for redundancy. This switch supports the following port template configurations:

Template 1: 96-ports X 50-Gigabit + 16-ports X 100-Gigabit

- All Ports are operational.
- The first 48 ports support 2X50G dynamic breakout with these combinations, 64X100-Gigabit, 64X50-Gigabit + 32X100-Gigabit, 96X50-Gigabit + 16X100-Gigabit.
- Ports 49-64 MACsec ports support 100-Gigabit and 40-Gigabit modes.



Template 2: 96-ports X 25-Gigabit + 32-ports X 100-Gigabit

- Front ports 1-24, 29-32, 37-64 will be operational
- Ports 1-24 support 4X10-Gigabit and 4X25-Gigabit dynamic breakout.
- Ports 29-32 and 37-48 support 40-Gigabit and 100-Gigabit modes.
- 49-64 MACsec ports support 40-Gigabit and 100-Gigabit modes.
- SLIC adapter is supported on 1-24 ports.

Front Ports												MACsec Ports			
1	2	3	4	5	6	7	8	9	10	11	12	49	50	51	52
13	14	15	16	17	18	19	20	21	22	23	24	53	54	55	56
25	26	27	28	29	30	31	32	33	34	35	36	57	58	59	60
37	38	39	40	41	42	43	44	45	46	47	48	61	62	63	64

Breakout capable
No breakout
Inactive port

501827

Template 3: 128-ports X 25-Gigabit or 128-ports X 10-Gigabit

- Ports 1-28 and 33-36 are operational.
- Ports 1-28 and 33-36 support 2X50-Gigabit, 4X25-Gigabit, and 4X100-Gigabit dynamic breakout.
- SLIC adapter is supported on 1-24 ports.

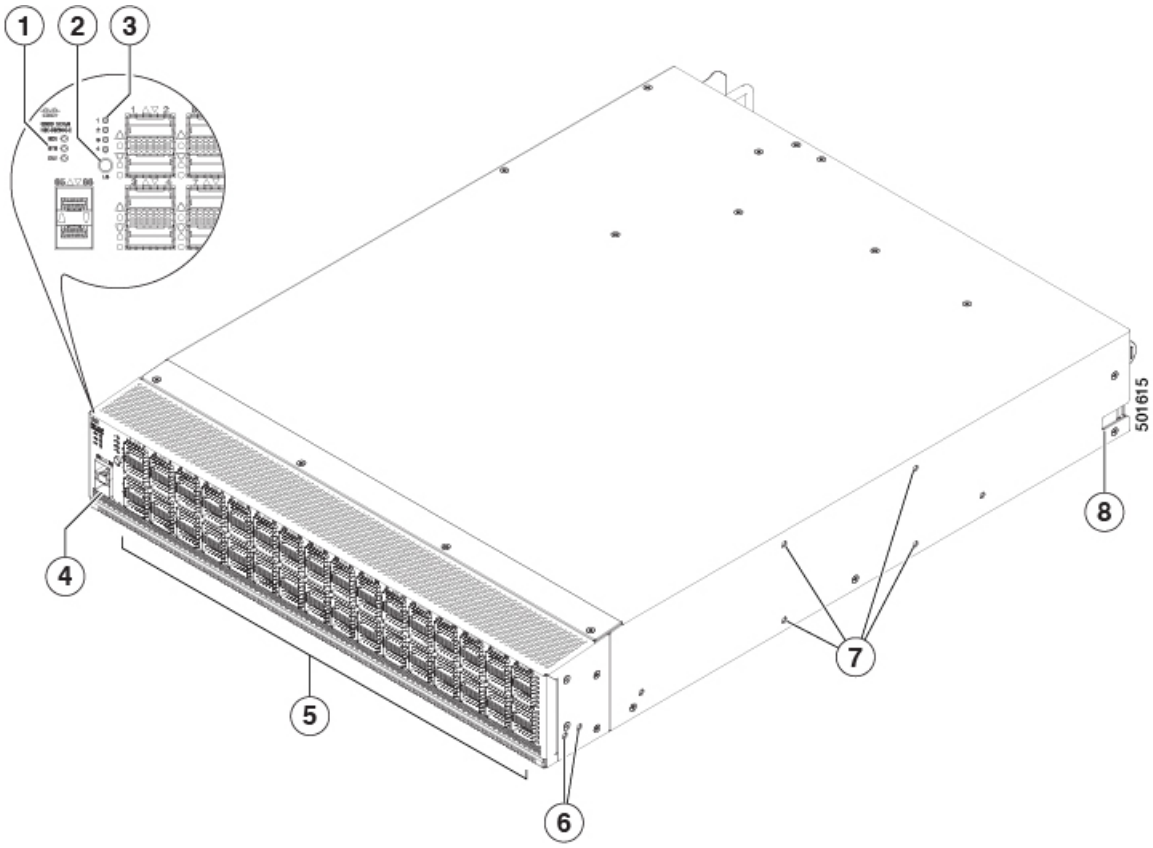
Front Ports												MACsec Ports			
1	2	3	4	5	6	7	8	9	10	11	12	49	50	51	52
13	14	15	16	17	18	19	20	21	22	23	24	53	54	55	56
25	26	27	28	29	30	31	32	33	34	35	36	57	58	59	60
37	38	39	40	41	42	43	44	45	46	47	48	61	62	63	64

Breakout capable
No breakout
Inactive port

501828

Note 930W-DC PSU is supported in redundancy mode if 3.5W QSFP+ modules or Passive QSFP cables are used & the system is used in 40C ambient temp or less; for other optics or higher ambient temps, 930W-DC is supported with 2 PSUs in non-redundancy mode only.

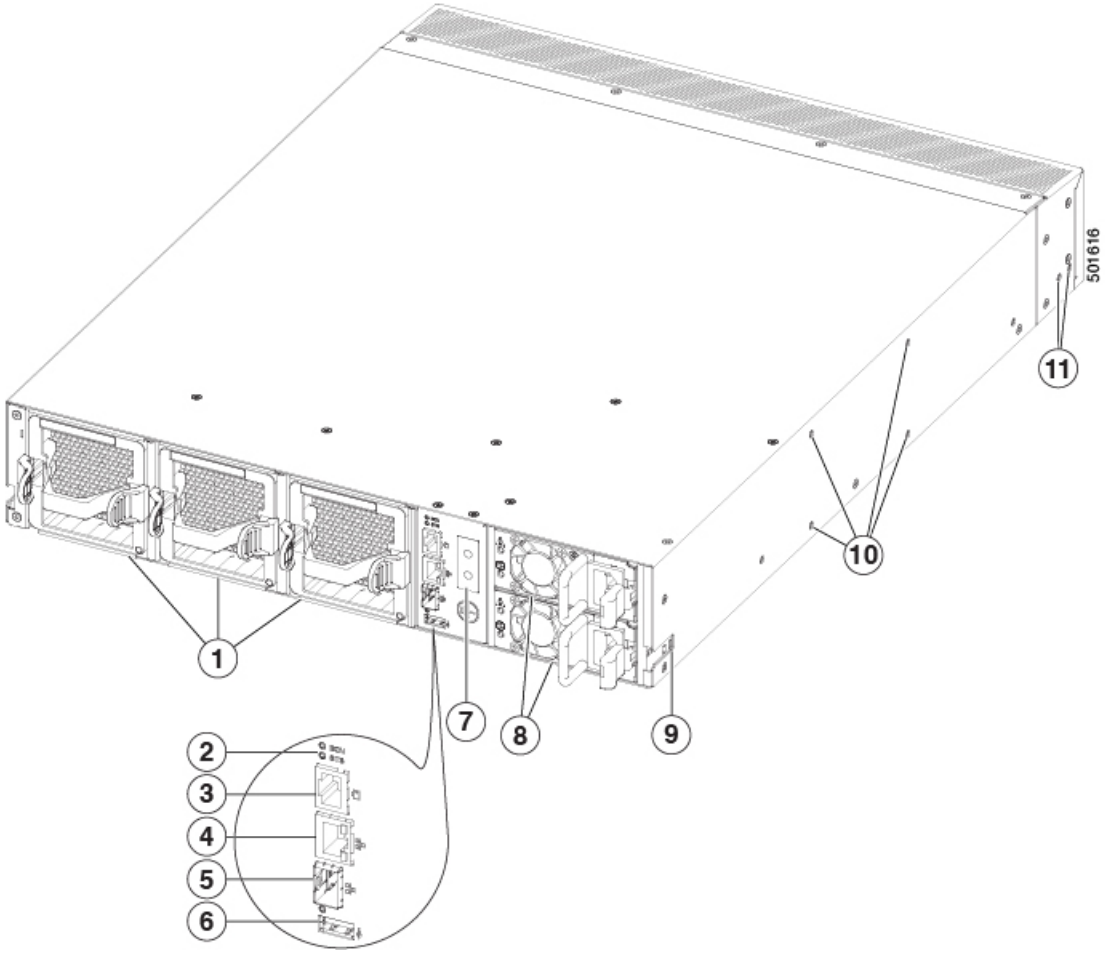
The following figure shows the switch features on the port side of the chassis.



1	Beacon (BCN), Status (STS), and Environment (ENV) LEDs	5	40-/100-Gigabit QSFP28 ports (64)
2	Lane select button	6	Screw holes for front mounting brackets (four-post rack installations)
3	Lane LEDs	7	Screw holes for center-mount bracket (two-post rack installations)
4	1-/10-Gigabit SFP+ ports (2)	8	Notch on both sides of the chassis for locking the power supply end of the chassis to the bottom support rails (four-post rack installations).

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 switch features on the power supply side of the chassis.



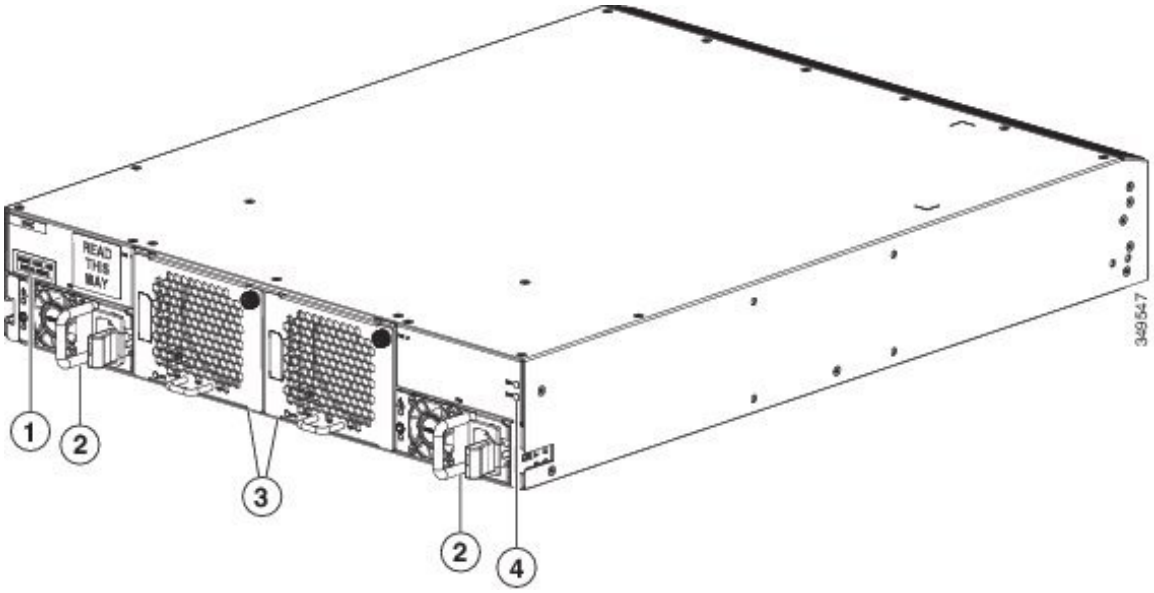
1	Fan modules (3) with slots numbered from 1 (left) to 3 (right)	7	Grounding pad
2	Beacon (BCN) and Status (STS) LEDs	8	Power supply modules (1 or 2) (AC power supplies shown) with slots numbered 1 (top) and 2 (bottom)
3	Console port (1)	9	Notch on both sides of the chassis for locking the power supply end of the chassis to the bottom support rails (four-post rack installations).
4	Management port (1—RJ-45 copper port)	10	Screw holes for center-mount bracket (two-post rack installations)
5	Management port (1—SFP optical port)	11	Screw holes for front mounting brackets (four-post rack installations)
6	USB port (1)		

Overview of the Cisco Nexus 3264Q Switch

The Cisco Nexus 3264Q (N3K-C3264Q) is a 2 rack unit (RU) switch with 64 fixed 10- or 40-Gigabit quad small form-factor pluggable (QSFP) ports, 2 SFP+ ports, 1 RJ-45 management port, 1 RS-232 console port, and 2 USB ports. This switch supports both port-side exhaust and port-side intake airflow schemes. The switch requires one AC or DC power supply for operations, but it can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

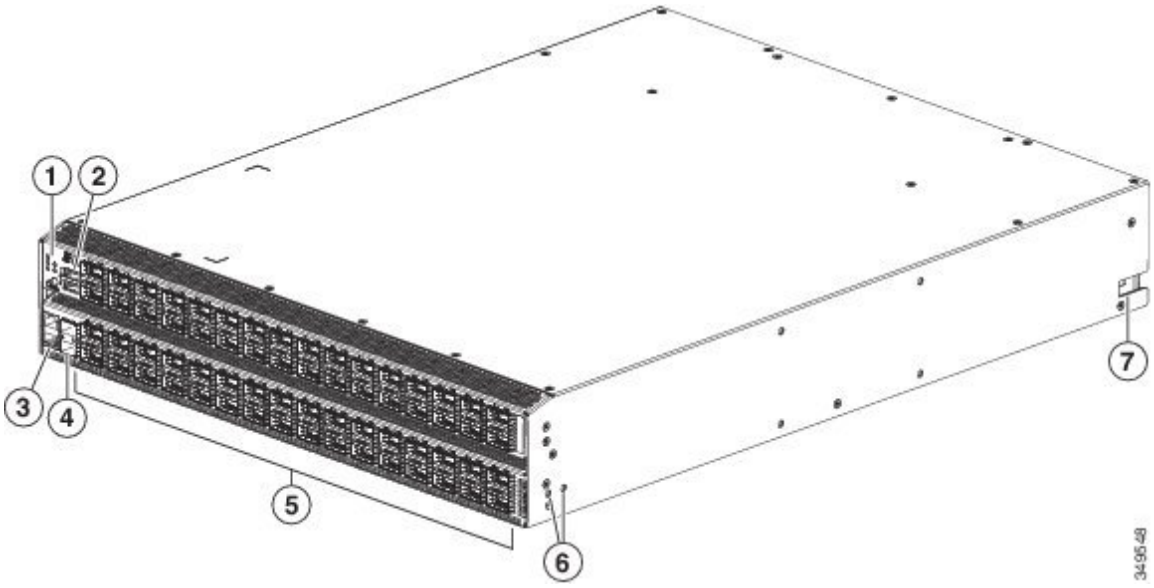
Figure 18: Fan-Side View of the Cisco Nexus 3264Q Chassis



1	Grounding pad	3	Fan modules (2)
2	Power supply modules (2) with slots numbered 1 (left) and 2 (right)	4	Beacon (BCN) and Status (STS) LEDs

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 19: Port-Side View of the Cisco Nexus 3264Q Chassis



1	LEDs	5	10- or 40-Gigabit QSFP ports (64) [2]
2	USB ports (2)	6	Screw holes for mounting brackets
3	Console port (1) and Management port (1)	7	Notch in the chassis (2) (1 each side) for locking int the bottom-support rails
4	SFP+ ports (2)		

[2] 10 Gigabits require a QSFP-to-SFP adapter [CVR-QSFP-SFP10G] and an SFP+ transceiver.

Overview of the Cisco Nexus 31108 Switch

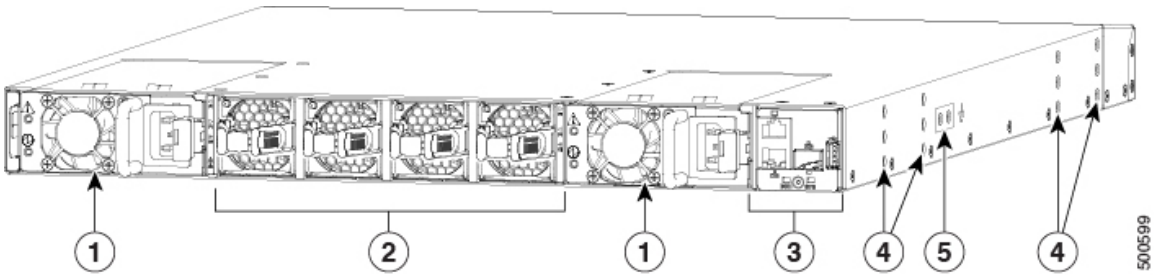
The Cisco Nexus 31108PC-V (N3K-C31108PC-V) is a 1 rack unit (RU) top of rack (ToR) L2/L3 switch with 16-GB of RAM and dual-core 2.5-GHz x86. The switch comes with 48 10G SFP+ and 6 QSFP28 ports, 1 management port (RJ-45 or SFP), 1 console port, and 1 USB port.

The Cisco Nexus 31108TC-V (N3K-C31108TC-V) is a 1 rack unit (RU) top of rack (ToR) L2/L3 switch with 16-GB of RAM and dual-core 2.5-GHz x86. The switch comes with 48 10G Base-T and 6 QSFP28 ports, 1 management port (RJ-45 or SFP), 1 console port, and 1 USB port.

These switches support both port-side exhaust and port-side intake airflow schemes. These switches require one AC power supply for operations, but can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

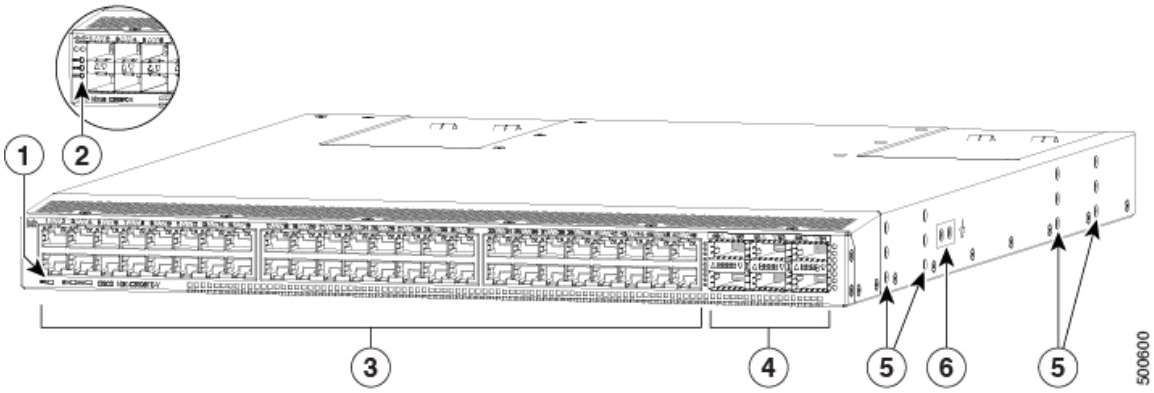
Figure 20: Fan-Side View of the Cisco Nexus 31108 Chassis



1	AC power supply (1 or 2) with slots numbered 1 (left) and 2 (right)	4	Screw holes for mounting brackets
2	Fan modules (4)	5	Grounding pad
3	Console, Management, and USB ports		

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 21: Port-Side View of the Cisco Nexus 31108 Chassis



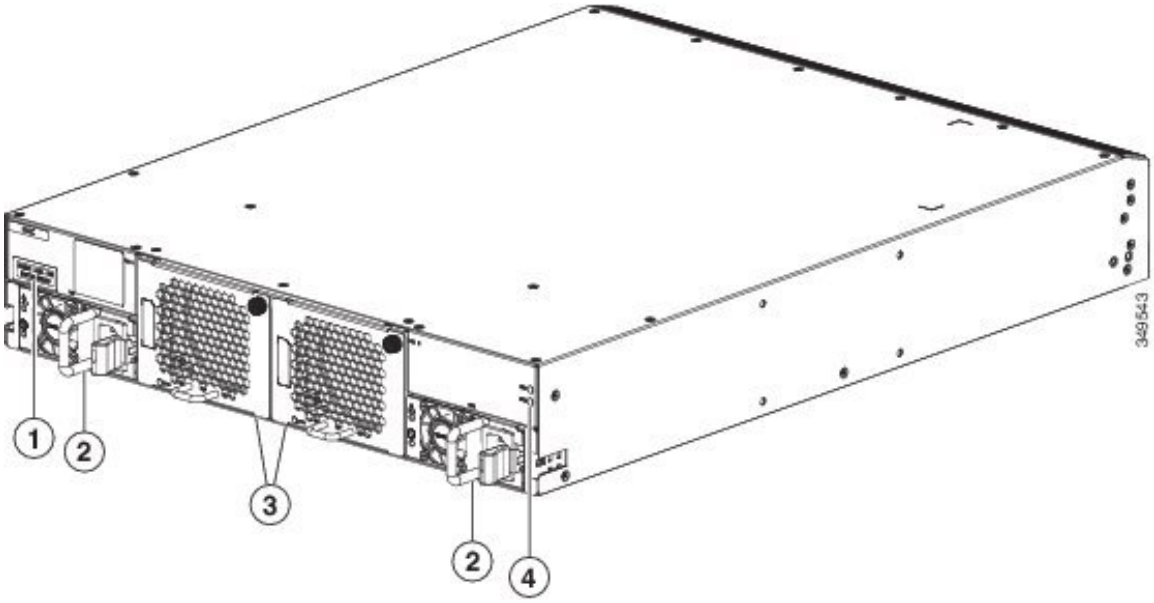
1	Beacon, Status, and Environment LEDs (N3K-C31108TC-V)	4	6 100-Gigabit QSFP28 ports
2	Beacon, Status, and Environment LEDs (N3K-C31108PC-V)	5	Screw holes for mounting brackets
3	48 10-Gigabit SFP+ ports (N3K-C31108PC-V) 48 10-Gigabit Base-T ports (N3K-C31108TC-V)		Grounding pad

Overview of the Cisco Nexus 31128PQ Switch

The Cisco Nexus 31128PQ (N3K-C31128PQ-10GE) is a 2 rack unit (RU) switch with 96 fixed 10-Gbps enhanced small form-factor pluggable (SFP+) ports and 8 fixed 40-Gbps quad small form-factor pluggable (QSFP+) ports, 1 management port, 1 console port, and 2 USB ports. This switch supports both port-side exhaust and port-side intake airflow schemes. The switch requires one AC or DC power supply for operations, but it can have a second power supply for redundancy.

The following figure shows the fan-side chassis features that you use when installing the chassis or replacing its modules.

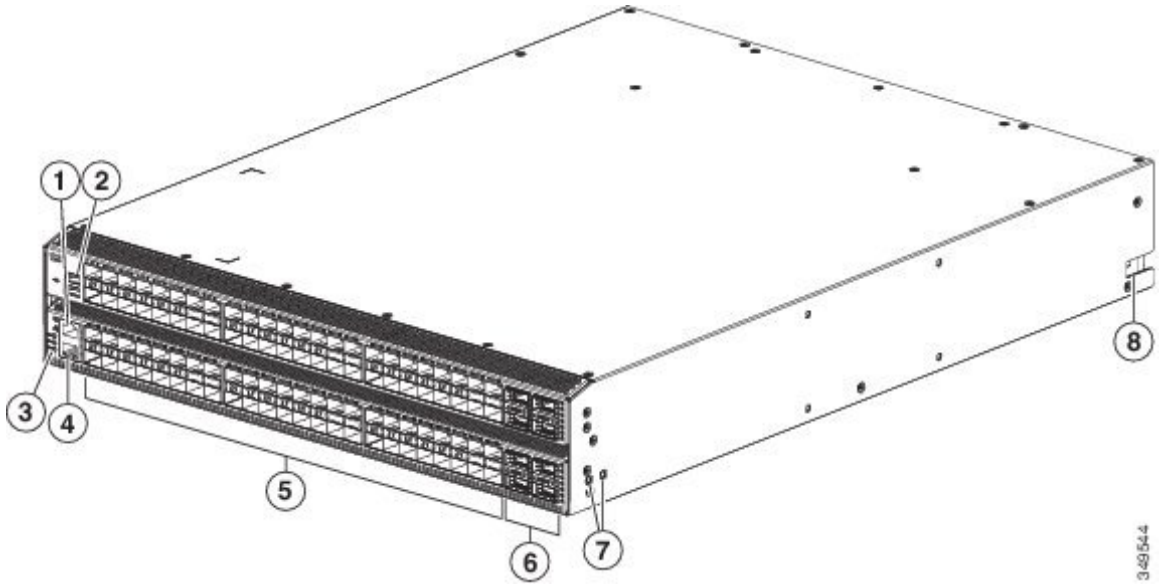
Figure 22: Fan-Side View of the Cisco Nexus 31128PQ Chassis



1	Grounding pad	3	Fan modules (2)
2	Power supply modules (2) with slots numbered 1 (left) and 2 (right)	4	Beacon (BCN) and Status (STS) LEDs

The following figure shows the port-side chassis features that you use when installing the chassis or replacing its modules.

Figure 23: Port-Side View of the Cisco Nexus 31128PQ Chassis



1	Console port (1)	5	10-Gigabit SFP+ ports that can operate at 1 or 10 Gigabits (96)
2	USB ports (2)	6	40-Gigabit uplink ports (8)
3	Beacon (BCN), Status (STS), and Environment (ENV) LEDs	7	Screw holes for mounting brackets
4	Management port (1)	8	Notch in the chassis (2) (one each side) for locking into the bottom-support rails