Cisco Nexus 7000 Series Switches Environment

Product Overview

The Cisco Nexus® 7000 Series Switches comprise a modular data center-class product line designed for highly scalable 10 Gigabit Ethernet networks with a fabric architecture that scales beyond 17 terabits per second (Tbps) and that supports high-density 40 and 100 Gigabit Ethernet deployments. Designed to meet the requirements of the most mission-critical data centers, it delivers continuous system operation and virtualized, pervasive services. The Cisco Nexus 7000 Series is based on a proven operating system, with enhanced features to deliver real-time system upgrades with exceptional manageability and serviceability.

The Cisco Nexus 7000 Series chassis (Figures 1, 2, 3, and 4) incorporate significant enhancements in design, power, airflow, cooling, and cabling. The 10-slot chassis has front-to-back airflow, making it a good solution in hot-aisle and cold-aisle deployments. The 9- and 18-slot chassis use side-to-side airflow to deliver high density in a compact form factor. The 4-slot chassis has side-to-back airflow in the smallest form factor, making it a good solution in smaller operation locations. The power supplies, fan trays, and fabrics can be replaced from the back of the chassis without any obstruction from the I/O cables, thereby enabling operation efficiency. In addition, the Cisco Nexus 7000 Series has many power saving enhancements such as temperature sensors, variable-speed fans, and high-efficiency power supplies that reduce the total cost of ownership (TCO) for customers.

Figure 1.   Cisco Nexus 7000 4-Slot Switch Chassis

Figure 2.   Cisco Nexus 7000 9-Slot Switch Chassis

Figure 3.   Cisco Nexus 7000 10-Slot Switch Chassis

Figure 4.   Cisco Nexus 7000 18-Slot Switch Chassis

Physical Specifications

The Cisco Nexus 7000 4-Slot Switch chassis has two supervisor module slots, two I/O module slots, and purpose-built integrated cable management. The 4-slot chassis does not have fabric modules, and the backplane capacity is determined by the I/O modules. Power supplies and fan tray are accessible from the front.

The Cisco Nexus 7000 9-Slot Switch chassis has two supervisor module slots, seven I/O module slots, five fabric modules, dual-side integrated cable management, and a dual-hinged protective front door, allowing unobstructed access to the cables and modules. On the back are two power supply bays and one system fan tray.

The Cisco Nexus 7000 10-Slot Switch chassis has two supervisor slots, eight I/O module slots, a cable management door, and an optional air filter on the front of the chassis. On the back, it has five fabric slots, three power supply bays, two system fan trays, and two fabric fan trays.

The Cisco Nexus 7000 18-Slot Switch chassis has two supervisor module slots, 16 I/O module slots, dual-side integrated cable management, and a dual-hinged protective front door, allowing unobstructed access to the cables and modules. On the back are five fabric module slots, four power supply bays, and two system fan trays.

Table 1 summarizes the physical features of the chassis.

Table 1.   Physical Specifications

Item	Description			
	Cisco Nexus 7000 4-Slot Chassis	Cisco Nexus 7000 9-Slot Chassis	Cisco Nexus 7000 10-Slot Chassis	Cisco Nexus 7000 18-Slot Chassis
	Dimensions			
(H x W x D)	• 12.2 x 17.4 x 24.5 in. (30.9 x 44.1 x 62.2 cm)	• 24.5 x 17.3 x 24 in. (62.2 x 43.9 x 61 cm)	• 36.5 x 17.3 x 33.1 in. (92.7 x 43.9 x 84.1 cm)	• 43.5 x 17.3 x 33.1 in. (110.5 x 43.9 x 84.1 cm)
Chassis depth with cable management and doors	29.6 in. (75.2 cm)	29 in. (73.7 cm)	38 in. (96.5 cm)	38 in. (96.5 cm)
Rack units (RUs)	7RU; can fit six 4-slot chassis in a 42RU rack	14RU; can fit three 9-slot chassis in a 42RU rack	21RU; can fit two 10-slot chassis in a 42RU rack	25RU; can support up to 17RU of cabling patch panels in the same 42RU rack
	Weight			
Chassis only	45 lb (20 kg)	100 lb (45 kg)	200 lb (90 kg)	187 lb (85 kg)
Fully configured	120 lb (54 kg)	300 lb (136 kg)	507 lb (230 kg)	684 lb (311 kg)
Module orientation	• Supervisor and I/O modules: Horizontal • No fabric cards	• Supervisor and I/O modules: Horizontal • Fabric cards (at the front): Horizontal	• Supervisor and I/O modules: Vertical • Fabric cards (at the back): Horizontal	• Supervisor and I/O modules: Horizontal • Fabric cards (at the back): Vertical
Airflow	• Side to rear • Designed for end-of-row deployments	• Side to side • Designed for end-of-row deployments	• Front to back • Designed for hot-aisle and cold-aisle deployments	• Side to side • Designed for end-of-row deployments
Cable management	Purpose-built integrated cable management	Integrated dual side for flexible cabling deployments	On the front of the chassis above the I/O modules	Integrated dual side for flexible cabling deployments
Air filter	(Optional)	-	(Optional) On the front of the chassis below the I/O modules	-
Doors	Lockable front module door	(Optional) 1 dual-hinged door that opens to either side for access to cabling and modules, covering the I/O modules	• Door, hinged on the top for the cable management system • (Optional) 2 doors, each hinged on the side, covering the I/O modules	(Optional) 1 dual-hinged door that opens to either side for access to cabling and modules, covering the I/O modules
System LEDs	• 5 system LEDs that summarize the device status: ◦ LED 1: Power supplies ◦ LED 2: Fans ◦ LED 3: Supervisors ◦ LED 4: Fabric modules ◦ LED 5: I/O modules ◦ Each LED is green if the status is normal, and amber otherwise			

Power

The Cisco Nexus 7000 4-Slot chassis has four power supply bays that can hold 3.0-kilowatt (kW) AC or DC power supplies. Each 3000-watt (W) power supply has one universal (100 to 240 volt [V]) input that can be connected to one AC source using an AC power cord with a C19 connector. Two versions are available: one for International markets, with an IEC 60309 AC plug; and one for U.S markets, with a NEMA L6-30 AC plug.

Table 2 shows the power output provided by one Cisco Nexus 7000 3.0-kW AC Power Supply Module.

Table 2. Power Supply Output

Power Supply Input		Output
Single input	220V	3000W
	110V	1500W

Table 3 shows the power output provided by one Cisco Nexus 7000 3.0-kW DC Power Supply Module.

Table 3. Power Supply Output

Power Supply Input	Input	Output
Single input	48V	1500W
Dual Input	48V	3000W

The Cisco Nexus 7000 9-Slot chassis has two power supply bays, the Cisco Nexus 7000 10-Slot chassis has three power supply bays, and the Cisco Nexus 7000 18-Slot chassis has four power supply bays that can hold either 6.0-kW AC or DC power supplies or 7.5-kW AC power supplies. Each 6000W power supply has two universal (100 to 240V) inputs that can be connected to two AC sources using AC power cords with C19 connectors. The 7500W power supply has two input power cords that are hard wired directly to the power supply. Two versions are available: one for International markets, with an IEC 60309 AC plug; and one for the U.S. market, with a NEMA L6-30 AC plug.

Table 4 shows the power output provided by one Cisco Nexus 7000 6.0-kW AC Power Supply Module for combinations of input voltage and the number of connected inputs.

Table 4. Power Supply Output

Power Supply Input		Output
Single input	220V	3000W
	110V	1200W
Dual input	220V	6000W
	110V	2400W
Dual input	110 and 220V	4200W

Table 5 shows the output power provided by one Cisco Nexus 7000 7.5-kW AC Power Supply Module.

Table 5. Available Output Based on Input Power: 7.5-kW AC Power Supply Module

Number of Inputs	Input Power	Output Power
Single input	220V	3750W
Dual input	220V	7500W

Table 6 shows the output power provided by one Cisco Nexus 7000 6.0-kW DC Power Supply Module.

Table 6.   Available Output Based on Input Power: 6.0-kW DC Power Supply Module

Number of Inputs	Input Power	Output Power
Single input	48V	3000W
Dual input	48V	6000W

The power supplies are hot swappable, enabling continuous system operation. Mixed combinations of 6.0-kW and 7.5-kW as well AC and DC power supplies are supported. The power supplies also incorporate advanced features such as internal fault monitoring, temperature sensing, real-time power draw statistics, and variable-speed fans.

Cisco Nexus 7000 Series power supplies are more than 90 percent efficient, so less power is wasted as heat, and more power is available for the system to use than with typical power supplies. The Cisco Nexus 7000 Series systems can operate in four user-configurable power redundancy modes, listed in Table 7. The power redundancy modes are designed to determine the optimum power for the combination of power supplies installed, helping ensure system availability.

Table 7.   Power Redundancy Modes

Redundancy Mode	Description
Combined	Does not provide redundancy; power available to the system is the sum of power outputs of all power supplies (Cisco does not recommend this mode.)
Power supply redundancy (N+1 redundancy)	System default redundancy mode; guards against failure of one of the power supplies, and power available to the system is the sum of the two least-rated power supplies.
Input source redundancy (grid redundancy)	Guards against failure of one input circuit (grid); power available to the system is the minimum power provided by either of the input sources (grids).
Power supply and input source (full) redundancy	Guards against failure of either one power supply or one grid, and the available power is the minimum power for input source and power supply redundancy.

The platform software requires a minimum of 860W of power to run the 4-slot system, 1557W of power to run the 9-slot system, 2400W to run the 10-slot system, and 2193W to run the 18-slot system. If the power available from the power supplies is more than the minimum, the additional power is used to activate the I/O modules. If there is not enough power to activate the line cards, the line cards are kept in a power-denied state. After more power is provisioned, the user must turn on power to the line cards manually to activate them.

Under typical operating conditions, the system consumes significantly less power than the maximum values. The platform software uses the maximum values to reserve sufficient power for the modules. The typical power rating is the value that is commonly seen in a temperature-controlled environment.

Table 8 shows the maximum and typical power ratings for the system and modules.

Table 8.   Maximum and Typical Power Requirements

Component	Part Number	Maximum Power	Typical Power
Supervisor 1 module	N7K-SUP1	210W	190W
Supervisor 2 module	N7K-SUP2	210W	175W
Supervisor 2E module	N7K-SUP2E	265W	170W
8-port 10 Gigabit Ethernet module (XL)	N7K-M108X2-12L	650W	520W
48-port 10/100/1000 module	N7K-M148GT-11	400W	358W
48-port Gigabit Ethernet module (XL)	N7K-M148GS-11L	400W	358W

Component	Part Number	Maximum Power	Typical Power
32-port 10 Gigabit Ethernet module	N7K-M132XP-12	750W	611W
32-port 10 Gigabit Ethernet module (XL)	N7K-M132XP-12L	750W	611W
24-port 10 Gigabit Ethernet module (XL)	N7K-M224XP-23L	795W	720W
6-port 40 Gigabit Ethernet module (XL)	N7K-M206FQ-23L	795W	720W
2-port 100 Gigabit Ethernet module (XL)	N7K-M202CF-22L	795W	690W
32-port 1/10 Gigabit Ethernet module	N7K-F132XP-15	385W	283W
48-port 10 Gigabit Ethernet module	N7K-F248XP-25	450W	350W
48-port 1/10 Gigabit Ethernet (SFP+) Enhanced module	N7K-F248XP-25E	450W	350W
48-port 1/10 Gigabit Ethernet (RJ-45) Enhanced module	N7K-F248XT-25E	550W	420W
10-slot chassis: Fabric 1 module	N7K-C7010-FAB-1	60W	55W
18-slot chassis: Fabric 1 module	N7K-C7010-FAB-2	100W	90W
9-slot chassis: Fabric 2 module	N7K-C7009-FAB-2	75W	55W
10-slot chassis: Fabric 2 module	N7K-C7010-FAB-2	80W	55W
18-slot chassis: Fabric 2 module	N7K-C7018-FAB-2	150W	90W
4-slot system fan	N7K-C7004-FAN	450W	185W
9-slot system fan	N7K-C7009-FAN	650W	185W
10-slot system fan	N7K-C7010-FAN-S	720W	100W
10-slot fabric fan	N7K-C7010-FAN-F	120W	50W
18-slot system fan	N7K-C7018-FAN	636.50W	284.5W

Climatic Environment

Table 9 summarizes the climatic environment for the Cisco Nexus 7000 4-, 9-, 10-, and 18-Slot chassis.

Table 9. Climatic Environment

Item	Description			
	Cisco Nexus 7000 4-Slot Chassis	**Cisco Nexus 7000 9-Slot Chassis**	**Cisco Nexus 7000 10-Slot Chassis**	**Cisco Nexus 7000 18-Slot Chassis**
Temperature	• Operating: 32 to 104℉ (0 to 40℃) • Short term: 23 to 131℉ (-5 to 55℃) [*] • Nonoperating: -40 to 158℉ (-40 to 70℃) [*] **Note:** • Chassis external thermal requirements are defined in the GR-63-CORE Network Equipment Building Standards (NEBS) specification published by Telcordia Technologies in Section 4.1.2, Operating Temperature and Humidity Criteria. • Short term refers to a period of not more than 96 consecutive hours and a total of not more than 15 days in 1 year (a total of 360 hours in any given year, but no more than 15 occurrences during that 1-year period). [*] 131℉ (55℃) and 25% relative humidity for equipment shelves that fill less than half the frame (length)			
Humidity	• Relative humidity (nonoperating): 5 to 95%, noncondensing • Relative humidity (operating): 5 to 90%, noncondensing **Note:** An ambient relative humidity between 45 and 50% is suggested to reduce corrosive problems, to provide an operating time buffer in the event of failures, and to reduce interference from static discharges.			
Altitude	• -500 to 13,123 ft; agency certified 0 to 6500 ft • Storage altitude: -1000 ft to 30,000 ft			
Operational vibrations	• GR63 Section 5.4.2 • ETS 300 019-1-3 Class 3.1 Section 5.5			
Floor loading	42 lb. per sq ft	104 lb per sq ft	160 lb per sq ft	223 lb per sq ft
Seismic	Zone 4 per GR63			
Heat dissipation	3500W per chassis	7500W per chassis	12000W per chassis	18000W per chassis

Item	Description			
	(maximum)	(maximum)	(maximum)	(maximum)

Airflow and Cooling

The 4-slot chassis cooling system consists of one system fan tray with built-in fan and controller redundancy to help ensure the reliability of the system and support hot swapping of fan trays. Table 10 summarizes the airflow and cooling features of the Cisco Nexus 7000 4-Slot chassis.

Table 10. Cisco Nexus 7000 4-Slot Chassis Airflow and Cooling Features

Feature	Description
Airflow	• Air flows from side to rear. • Air enters through the inlet located on the right side of the chassis and exits on the back side of the chassis.
Fan module	1 system fan module incorporating I/O and fabric fans
Fan module removable from the rear	The fan module is on the top left on the front and is removable from the front and does not interfere with the I/O cabling. This arrangement enables continuous system operation during maintenance.
Variable fan speeds	• The fan speed changes based on the I/O module type (and supervisor) and the inlet temperature reading on the supervisor. • Power consumption and noise emission by fans is optimized.
Self-healing mechanism	The software tracks the temperature of the most critical components of the I/O modules and the supervisors. If the recorded temperature is higher than a system-defined threshold, the fan speed automatically increases and stays at that speed until the temperature falls below the threshold.
Fan redundancy	• The fan module incorporates fan and controller redundancy. • The system fan is required for normal operation. If the software detects fan module removal, it warns the user with a syslog message and will shut down the system in 3 minutes unless the removed fan module is replaced. Failure of an individual fan does not result in system shutdown.

The 9-slot chassis cooling system consists of one system fan module that delivers cooling for the I/O and supervisor modules as well as for the fabric modules. The fan module is composed of multiple independent fans. The fan tray is designed with independent zone cooling to optimize power use and cooling. Each row of fans is designed to cool a set of slots and can be turned off if the slots are not occupied. Also, each fan has an independent power bus connection and software control. The fans can be removed from the rear of the chassis, allowing continuous system operation during maintenance. Table 11 summarizes the airflow and cooling features of the Cisco Nexus 7000 9-Slot chassis.

Table 11. Cisco Nexus 7000 9-Slot Chassis Airflow and Cooling Features

Feature	Description
Airflow	• Air flows from side to side. • Air enters through the inlet located at the right side of the chassis and exits at the left side the chassis.
Fan module	1 system fan module incorporating I/O and fabric fans.
Fan module removable from the rear	Fan module is removable from the rear, and hence there is no obstruction from the I/O cabling on the front. This arrangement enables continuous system operation during maintenance.
Variable fan speeds	• Fans have 256 speed levels controlled by software. • The fan speed changes based on the I/O module type (and supervisor) and the inlet temperature reading on the supervisor. • Power consumption and noise emission by fans is optimized.
Self-healing mechanism	The software tracks the temperature of the most critical components of the I/O modules and the supervisors. If the recorded temperature is higher than a system-defined threshold, the fan speed automatically increases and stays at that speed until the temperature falls below the threshold.
Fan redundancy	• The fan module incorporates fan and controller redundancy. • The system fan is required for normal operation. If the software detects fan module removal, it warns the user with a syslog message and will shut down the system in 3 minutes unless the removed fan module is replaced. Failure of an individual fan does not result in system shutdown.

The 10-slot chassis cooling system consists of two system fan trays that deliver cooling for the I/O and supervisor modules, and two fabric fan trays that cool the fabric modules. Each system fan tray is composed of multiple independent fans. All fan trays are removable from the rear of the chassis, allowing continuous system operation during maintenance. Table 12 summarizes the airflow and cooling features of the Cisco Nexus 7000 10-Slot chassis.

Table 12.   Cisco Nexus 7000 10-Slot Chassis Airflow and Cooling Features

Feature	Description
Air flow	• Air flows front to back. • Air enters through the inlet located at the bottom front of the chassis and exits at the rear of the chassis, making the Cisco Nexus 7000 10-Slot chassis excellent for hot-aisle and cold-aisle designs.
Fan trays	• 2 system fan trays. • 2 fabric fan trays.
Fan trays removable from the rear	All fan trays are removable from the rear, and hence there is no obstruction from the I/O cabling on the front. This arrangement enables continuous system operation during maintenance.
Variable fan speeds	• Current fans have 256 speed levels. • The fan speed changes based on the type of I/O module (and supervisor), the inlet temperature reading on the supervisor, and the presence or absence of an air filter. • Power consumption and noise emission by fans is optimized.
Self-healing mechanism	The software tracks the temperature of the most critical components on the I/O modules and the supervisors. If the recorded temperature is higher than a certain system-defined threshold, the fan speed automatically increases and stays at that speed until the temperature falls below the threshold.
Fan redundancy	• Both system and fabric fan trays are redundant and hot swappable. • If either a system or fabric fan tray is removed, the speed of the other fan increases to provide the required cooling.
Air filter	• The air filter filters dust and keeps the chassis interior clean. • Use of an air filter increases the fan speed; higher fan speeds result in higher levels of noise.

The 18-slot chassis cooling system consists of two identical system fan modules that deliver cooling for the I/O and supervisor modules as well as for the fabric modules. Each system fan tray cools half of the chassis: The top fan tray cools slots 1 to 9 and the fabric modules, and the bottom fan tray cools slots 10 to 18. The fan modules are interchangeable. Each fan module is composed of multiple independent fans. Both fan trays are removable from the rear of the chassis, allowing continuous system operation during maintenance. Each fan module incorporates fan redundancy and fan controller redundancy that delivers resilience to either a fan or controller failure. Table 13 summarizes the airflow and cooling features of the Cisco Nexus 7000 18-Slot chassis.

Table 13.   Cisco Nexus 7000 18-Slot Chassis Airflow and Cooling Features

Feature	Description
Air flow	• Air flows side to side. • Air enters through the inlet located at the right side of the chassis and exits at the left side the chassis.
Fan modules	2 system fan modules incorporating I/O and fabric fans.
Fan modules removable from the rear	Both fan modules are removable from the rear, and hence there is no obstruction from the I/O cabling on the front. This arrangement enables continuous system operation during maintenance.
Variable fan speeds	• Fans have 256 speed levels controlled by software. • The fan speed changes based on the I/O module type (and supervisor) and the inlet temperature reading on the supervisor. • Power consumption and noise emission by fans is optimized.
Self-healing mechanism	The software tracks the temperature of the most critical components of the I/O modules and the supervisors. If the recorded temperature is higher than a system-defined threshold, the fan speed automatically increases and stays at that speed until the temperature falls below the threshold.

Feature	Description
Fan redundancy	• Both fan modules incorporate fan and controller redundancy and are hot swappable.
	• All the fans are required for normal operation. If the software detects any fan module removal, it warns the user with a syslog message and will shut down the system in 3 minutes unless the removed fan module is replaced. Failure of an individual fan does not result in system shutdown.

Acoustics

The fan speed detection and control mechanism reduces noise and maintains reliability while maintaining the system temperature within operating parameters (Table 14).

Table 14.   Cisco Nexus 7000 Series Chassis Acoustics

Feature	Cisco Nexus 7000 4-Slot Chassis	Cisco Nexus 7000 9-Slot Chassis	Cisco Nexus 7000 10-Slot Chassis**	Cisco Nexus 7000 18-Slot Chassis
Measured	80 dBA	74.7 dBA	74.3 dBA	74.2 dBA
Declared	83 dBA	77.7 dBA[*]	77.3 dBA[*]	77.2 dBA[*]
Sound pressure level	70 dBA	64.4 dBA	67.2 dBA	65.0 dBA

[*] Within the NEBS requirement (GR-63-Core, R4-96); declared sound power level for equipment to be located in attended telecommunication room is 78 dBA).
[**] Without air filter.

Note: As required by NEBS, 3 dBA is added to the measured sound power levels to approximate statistical upper-limit values.

Cabling and Cabinet

The cable management system for the Cisco Nexus 7000 9- or 18-Slot chassis is located on both sides of the chassis aligned with the module slots. The cable management is designed for high-density Cat6A cabling groomed to either side or both sides.

The cable management system for the Cisco Nexus 7000 10-Slot chassis is located on the front of the chassis above the modules. In the largest configuration, the chassis can support 384 Cat6A copper cables plus 8 management port cables. All cables can be groomed either to one side of the chassis or to the left and right. A top-hinged door covers the cable management system. The cable management system can be removed to support alternative ways of managing the cables.

The Cisco Nexus 7000 9- and 18-Slot chassis should be installed in either a four-post rack or a four-post cabinet that meets the depth, total equipment weight, and network cabling requirements. Sufficient space must be provided for cabling and for airflow on both sides. Multiple third-party vendor solutions are available to meet the system cabling and airflow requirements and support the installation of external ducts to deflect air into the inlets and return the warm air to the hot aisle in a hot-aisle and cold-aisle design. Use of ducting is recommended for environments in which a cold-aisle and hot-aisle environment is required. Use of other four-post solutions that meet the minimum requirements is supported.

The Cisco Nexus 7000 9-Slot chassis can also be installed in a two-post rack along with a four-post rack or a four-post cabinet that meets the depth, total equipment weight, and network cabling requirements.

The Cisco Nexus 7000 10-Slot chassis should be installed in either a standard four-post rack or a four-post cabinet that meets the depth, total equipment weight, and network cabling requirements. Multiple third-party vendor cabinet solutions that meet the specifications for the 10-slot chassis are currently available.

Regulatory Compliance

The Cisco Nexus 7000 4-, 9-, 10-, and 18-Slot chassis are designed to meet regulator emissions and immunity requirements when tested with existing and future cards and power supplies, as summarized in Table 15.

Table 15.   Emissions and Immunity Specifications

Specification	Description
Regulatory compliance	• EMC compliance • FCC Part 15 (CFR 47) (USA) Class A • ICES-003 (Canada) Class A • EN55022 (Europe) Class A • CISPR22 (International) Class A • AS/NZS CISPR22 (Australia and New Zealand) Class A • VCCI (Japan) Class A • KN22 (Korea) Class A • CNS13438 (Taiwan) Class A • CISPR24 • EN55024 • EN50082-1 • EN61000-3-2 • EN61000-3-3 • EN61000-6-1 • EN300 386

The Cisco Nexus 7000 Series is designed to meet GR-1089 issue 4 and service providers' acoustic specifications. The sound level is within the NEBS criteria when operated without a filter (10-slot chassis only). Table 16 summarizes NEBS compliance.

Table 16.   NEBS Specifications

Specification	Description
Environmental standards	• NEBS criteria levels • SR-3580 NEBS Level 3 (GR-63-CORE, issue 3, and GR-1089-CORE, issue 4) • Verizon NEBS compliance • Telecommunications Carrier Group (TCG) Checklist • Qwest NEBS requirements • Telecommunications Carrier Group (TCG) Checklist • ATT NEBS requirements • ATT TP76200 level 3 and TCG Checklist • ETSI • ETSI 300 019-1-1, Class 1.2 Storage • ETSI 300 019-1-2, Class 2.3 Transportation • ETSI 300 019-1-3, Class 3.2 Stationary Use • Reduction of Hazardous Substances (ROHS) 5

The Cisco Nexus 7000 Series is designed to meet regulator safety requirements when tested with existing and future cards and power supplies, as summarized in Table 17.

Table 17.   Safety Specifications

Specification	Description
Safety	• UL/CSA/IEC/EN 60950-1 • AS/NZS 60950

Service and Support

Cisco offers a wide range of services to help accelerate your success deploying and optimizing Cisco Nexus 7000 Series Switches in your data center. Our innovative services are delivered through a unique combination of people, processes, tools, and partners, and are focused on helping you increase operating efficiency and improve your data center network. Cisco® Advanced Services uses an architecture-led approach to help you align your data center infrastructure with your business goals and provide long-term value. Cisco SMARTnet® Service helps you resolve mission-critical problems with direct access at any time to Cisco network experts and award-winning resources. With this service, you can take advantage of the Cisco Smart Call Home service capability that offers proactive diagnostics and real-time alerts for your Cisco Nexus 7000 Series Switches. Spanning the entire network lifecycle, Cisco Services help increase investment protection, optimize network operations, provide migration support, and strengthen your IT expertise. For more information about Cisco Data Center Services, visit http://www.cisco.com/go/dcservices.

For More Information

For more information about the Cisco Nexus 7000 Series Switches, visit the product homepage at http://www.cisco.com/go/nexus7000 or contact your local account representative.

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