Cisco NCS 6000 Series Routers System Specifications

This chapter provides the system specifications for the Cisco NCS 6000 Series Routers.

Cisco NCS 6008 Line Card Chassis System Specifications

This section includes the system specifications for the Cisco NCS 6008 Line Card Chassis (LCC).

LCC Chassis Specifications

Table 1: Cisco NCS 6008 LCC Specifications

Supported Cards and Modules	Up to eight line cards, six fabric cards (FCs), two route processor (RP) cards, and two fan trays
Chassis Dimensions	
Height	81.0 in. (205.7 cm) as shipped 84.0 in. (213.4 cm) as installed with the top cap (The top cap in the cosmetic package attaches to the top of the chassis)
Width	23.6 in. (59.9 cm) 35.3 in. (89.7 cm) as installed with optional AC PDU brackets on each side of the chassis.
Depth	39.0 in. (99.1 cm) without exterior cosmetics 42.0 in. (106.7 cm) with all exterior cosmetics

Aisle spacing	To install the LCC (front): 48 in. (122 cm) To service FRUs (front): 31.7 in. (80.5 cm) To service FRUs (rear): 14.0 in. (35.6 cm)
Weights	
LCC as shipped	775 lb (352 kg)
LCC in shipping crate with pallet	1025 lb (466 kg)
LCC, fully loaded with power, fan trays, cards, and cosmetics	1450 lb (658 kg)
Floor Loading	
Chassis in rack footprint(floor contact area)	Chassis: 6.9 sq ft (0.64 sq m)
Maximum floor loading	210 lb/sq ft
Chassis Cooling	Two fan trays. Up to 1980 cubic feet (56,6000 liters) per minute
Chassis airflow	Up to 2472 cubic feet (70,792 liters) per minute
DC power system airflow	Up to 2400 cubic feet (6796 liters) per minute
AC power system airflow	Up to 1800 cubic feet (5097 liters) per minute

LCC Power Specifications

Table 2: Cisco NCS 6008 LCC Power Specifications

Power trays	Either six AC or six DC power trays (cannot mix AC and DC power trays)
AC power tray	The AC power tray has three slots for AC PMs.
DC power tray	The DC power tray has four slots for DC PMs.
Power Redundancy (N+N)	
AC	Up to 18 power modules can be installed, and only 9 are needed to be active at any time. This allows support for 9+9 power redundancy by using two independent AC power sources (9 feeds each).

DC	Up to 24 power modules can be installed, and only 12 are needed to be active at any time. This allows support for 12+12 power redundancy through "A" and "B" battery plant feeds.
DC Input	
Nominal input voltage	–48 VDC or –60 VDC (tolerance range: –40 to –72 VDC)
Input current	50 A max at –48 VDC 40 A max at –60 VDC 60 A at –40 VDC (maximum)
AC Input	Single-phase
Nominal input voltage	200 to 240 VAC (range 180 to 264 VAC)
Nominal line frequency	50/60 Hz (range 47 to 63 Hz)
Recommended AC service	20-A (North America) dedicated branch circuit 16-A (International) dedicated branch circuit
AC Power Cord Length	167 in. (4.25 m)

LCC Environmental Specifications

Table 3: Cisco NCS 6008 LCC Environmental Specifications

Temperature	Operating, nominal: 41 to 104°F (5° to 40°C) Operating, short-term: 23 to 122°F (–5° to 50°C)[1] Nonoperating: –40 to 158°F (–40° to 70°C)
Humidity	Operating, nominal: 5 to 85%, noncondensing Operating, short-term: 5 to 90%, noncondensing Nonoperating: 5 to 93%, noncondensing
Altitude	Operating: –200 to 13,800 ft (–61 to 4206 m) at 104°F (40°C) Nonoperating: Up to 16,000 ft (4877 m) at –13°F (–25°C), short-term
Chassis airflow	Up to 70,792 liters per minute
Power system airflow	Up to 6800 liters per minute

Air exhaust temperature	140°F (60°C)—at room temperatures of 95 to 102°F (35 to 39°C) 158°F (70°C)—maximum exhaust temperature on a fully loaded system during worst-case operating conditions (50°C and 6000 ft altitude) The air temperature rise is 68°F (20°C) on a fully loaded system with fans running at maximum speed.
Air velocity (at exhaust)	1000 ft/min (5.1m/s) under typical conditions 27°C 2250 ft/min(11.4m/s) at maximum speed The software controls the speed of the fans based on measurements from the chassis thermal sensors.
Sound power level(AC and DC power)	76.4 dBA declared
Shock and vibration	Designed and tested to meet the NEBS shock and vibration standards defined in GR-63 Issue 4 2012.

[1] 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. This refers to a total of 360 hours in any given year, but no more than 15 occurrences during that 1-year period.

LCC Regulatory, Compliance, and Safety Specifications

For information about the regulatory, compliance, and safety standards to which the Cisco NCS 6008 chassis conforms, see: Regulatory Compliance and Safety Information for the Cisco Network Convergence System 6000 Series Routers.

Cisco NCS 6000 Fabric Card Chassis System Specifications

This section includes the system specifications for the Cisco NCS 6000 Fabric Card Chassis (LCC).

FCC Chassis Specifications

Table 4: Cisco NCS 6000 FCC Chassis Specifications

Supported Cards and Modules	Up to 12 S2 fabric cards (FCs), two SC or SC-SW shelf controller cards, and two fan trays.
Fabric Chassis Dimensions	
Height	76.60 in. (205.7 cm) as shipped 84.0 in. (213.4 cm) as installed with the power shelf

Width	23.6 in. (59.9 cm) 35.3 in. (89.7 cm) as installed with optional AC PDU brackets on each side of the FCC
Depth	39.0 in. (99.1 cm) without exterior cosmetics 42.0 in. (106.7 cm) with all exterior cosmetics
Aisle spacing	To install the FCC (front): 48 in. (122 cm) To service FRUs (front): 31.7 in. (80.5 cm) To service FRUs (rear): 14.0 in. (35.6 cm)
Weights	
FCC as shipped	708 lb (321 kg)
FCC in shipping crate with pallet	925 lb (420 kg)
FCC, fully loaded with power enclosure, cards, and cosmetics	1130 lb (513 kg)
Floor Loading	
FCC in rack footprint(floor contact area)	FCC: 6.9 sq ft (0.64 sq m)
Maximum floor loading	164 lb/sq ft
Fabric Chassis Cooling	Two fan trays
FCC airflow	Up to 1980 cubic feet (56,6000 liters) per minute
DC power system airflow	Up to 120 cubic feet (3400 liters) per minute
AC power system airflow	Up to 88 cubic feet (2500 liters) per minute

FCC Power Specifications

Table 5: Cisco NCS 6000 FCC Power Specifications

Power Enclosure Components	
Power Trays	Either four AC or four DC power trays. AC and DC power trays cannot be mixed.
Power modules (PMs)	The AC power tray has three slots for AC PMs. The DC power tray has four slots for DC PMs.
Power control modules (PCMs)	Two PCMs are preinstalled in the power enclosure (one per each set of power trays).

Power Enclosure Components	
Power Redundancy (N+N)	AC: Up to 12 power modules can be installed, and only 6 are needed to be active at any time. This allows support for 6+6 power redundancy by using two independent AC power sources (6 feeds each). DC: Up to16 power modules can be installed, and only 8 are needed to be active at any time. This allows support for 8+8 power redundancy through “A” and “B” battery plant feeds.
DC Input	
Nominal input voltage	–48 VDC or –60 VDC (tolerance range: –40 to –72 VDC)
Input current	50 A max at –48 VDC 40 A max at –60 VDC 60 A at –40 VDC (maximum)
AC Input	Single-phase
Nominal input voltage	200 to 240 VAC (range 180 to 264 VAC)
Nominal line frequency	50/60 Hz (range 47 to 63 Hz)
Recommended AC service	20-A (North America) dedicated branch circuit 16-A (International) dedicated branch circuit
AC Power Cord Length	167 in. (4.25 m)

FCC Environmental Specifications

Table 6: Cisco NCS 6000 FCC Environmental Specifications

Temperature	Operating, nominal: 41 to 104°F (5° to 40°C) Operating, short-term: 23 to 122°F (–5° to 50°C)[2] Nonoperating: –40 to 158°F (–40° to 70°C)
Humidity	Operating, nominal: 5 to 85%, noncondensing Operating, short-term: 5 to 90%, noncondensing Nonoperating: 5 to 93%, noncondensing
Altitude	Operating: –200 to 13,800 ft (–61 to 4206 m) at 104°F (40°C) Nonoperating: Up to 16,000 ft (4877 m) at –13°F (–25°C), short-term

FCC airflow	2000 CFM (Cubic Feet per Minute) Up to 56,600 liters per minute
Power system airflow	Up to 3400 liters per minute
Air exhaust temperature	122°F (50°C)—at room temperatures of 95 to 102°F (35 to 39°C) 140°F (60°C)—maximum exhaust temperature on a fully loaded system during worst-case operating conditions (50°C and 6000 ft altitude)
Air velocity (at exhaust)	1000 ft/min (5.1m/s) under typical conditions 27°C 2250 ft/min(11.4m/s) at maximum speed **Note** Software controls the speed of the fans based on measurements from the fabric chassis thermal sensors.
Sound power level(AC and DC power)	76.6 dBA declared
Shock and vibration	Designed and tested to meet the NEBS shock and vibration standards defined in GR-63 Issue 4 2012.

[2] 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. This refers to a total of 360 hours in any given year, but no more than 15 occurrences during that 1-year period.

FCC Regulatory, Compliance, and Safety Specifications

For information about the regulatory, compliance, and safety standards to which the Cisco NCS 6000 Fabric Card Chassis conforms, see: Regulatory Compliance and Safety Information for the Cisco Network Convergence System 6000 Series Routers.