



APPENDIX **A**

Cisco CRS 4-Slot Line Card Chassis System Specifications

This appendix provides the specifications for the Cisco CRS Carrier Routing System 4-Slot Line Card Chassis. It contains the following sections:

- [Compliance and Safety Reference, page A-1](#)
- [Cisco CRS 4-Slot Line Card Chassis Specifications, page A-1](#)
- [Environmental Specifications, page A-3](#)

Compliance and Safety Reference

For information about the compliance and safety standards with which the Cisco CRS-1 router conforms, see *Cisco CRS-1 Carrier Routing System Regulatory Compliance and Safety Information*.



Note

Statement 273, Blower Handle Warning, is applicable only to the Cisco CRS 4-slot line card chassis.

Cisco CRS 4-Slot Line Card Chassis Specifications

[Table A-1](#) lists the specifications for the Cisco CRS Carrier Routing System 4-Slot Line Card Chassis.

Table A-1 Cisco CRS 4-Slot Line Card Chassis Specifications

Physical Dimensions	
Height	30 in. (76.2 cm)
Depth	30.28 in. (76.9 cm) (including front doors)
Width	17.65 in. (44.8 cm)
Weight	
Chassis with fan tray, power shelf, and impedance carriers installed (as shipped)	260 lb (117.9 kg), chassis only 338 lb (153.3 kg), chassis including packaging and pallet

Table A-1 Cisco CRS 4-Slot Line Card Chassis Specifications (continued)

Chassis with all components installed (without exterior cosmetic components and packaging)	361 lb (163.7 kg)
Cards and Modules Supported	4 modular services cards (MSCs), forwarding processor (FP) cards, or label switch processor (LSP) cards (line cards) 4 physical layer interface modules (PLIMs) or 4 shared port adapter (SPA) interface processors (SIPs), each of which supports one or more SPAs 2 route processor (RP) cards or 2 performance route processor (PRP) cards 4 switch fabric cards 1 fan tray
Power Shelves	
AC power shelf	Supports four AC-to-DC rectifiers
DC power shelf	Supports four DC power supplies
Maximum Power Consumption	Total input power
Maximum AC input power	4185 W (assuming 92% efficiency)
Maximum DC input power	4278 W (assuming 90% efficiency)
DC power lug torque ranges	
Minimum torque	20 in-lb (2.2 N-m)
Maximum torque	30 in-lb (3.3 N-m)
Power Redundancy	
AC	1:1—Requires two independent AC sources
DC	We recommend two independent -48 VDC power sources
AC Input Power	2W+PE (2 wire + protective earthing ¹)
Nominal input voltage	200 to 240 VAC (range: 180 to 264 VAC)
Nominal line frequency	50 or 60 Hz (range: 47 to 63 Hz)
Recommended AC service	20 A (per AC rectifier)
DC Input Power	DC power lug torque ranges
Nominal input voltage	Supports -48 VDC and -60 VDC systems (range: -40 to -72 VDC)
Input line current	50-A maximum at -48 VDC 40-A maximum at -60 VDC
Inrush current	60-A peak at 75 VDC (maximum for 1 ms)
Chassis Cooling	1 fan tray, pull configuration

Table A-1 Cisco CRS 4-Slot Line Card Chassis Specifications (continued)

Chassis airflow	Up to 880 cubic ft (24,919 liters) per minute
Power shelf airflow	60 cubic ft (1699 liters) per minute

1. Protective earthing conductor (ground wire).

Environmental Specifications

Table A-2 lists the environmental specifications for the Cisco CRS 4-slot line card chassis.

Table A-2 Cisco CRS-1 4-Slot Line Card Chassis Environmental Specifications

Description	Value
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: 5% to 85% noncondensing Nonoperating: 5% to 90% noncondensing, short-term operation
Altitude	–197 to 5906 ft (–60 to 1800 m) at 122°F (50°C), short-term Up to 10,000 ft (3048 m) at 104°F (40°C) or below
Heat dissipation	<ul style="list-style-type: none"> • AC: 14,280 BTU per hour (maximum) • DC: 14,597 BTU per hour (maximum)
Power density	12,406 W per sq. meter (maximum)
Average air exhaust temperature	129°F (54°C)—At room temperatures of 95 to 102°F (35 to 39°C) 149°F (65°C)—Maximum exhaust temperature on a fully loaded system during worst-case operating conditions (50°C and 6000 ft altitude)
Acoustic noise	Fans at normal to moderate speed: 67 dBA—front of chassis 77 dBA—rear of chassis Fans at maximum speed (7500 RPM): 83 dBA—front of chassis 93 dBA—rear of chassis
Shock and vibration	Designed and tested to meet the NEBS shock and vibration standards defined in GR-63-CORE (Issue 2, April 2002).

1. “Short-term” refers to a period of not more than 96 consecutive hours and a total of not more than 15 days in one year. This refers to a total of 360 hours in any given year, but no more than 15 occurrences during that one-year period.

