Cisco CRS Modular Power System

The Cisco® CRS Carrier Routing System offers industry-leading performance, advanced services intelligence, environmentally conscious design, and system longevity.

Packet-based data communications are being replaced by video and rich media traversing the IP Next-Generation Network (NGN) in multiple directions, straining the architectural foundations of both public and private networks serving businesses and consumers. As part of the medianet, a media-aware Cisco IP NGN, the Cisco CRS delivers continuous, always-on operations and scales easily from numerous single-chassis form factors to a massive multi-chassis system. Its design provides an industry-leading efficiency consuming lowest power, cooling, and rack-space resources for an intelligent service-rich bandwidth capacity. The CRS-3 platform builds on the CRS-1 being backward and forward compatible, protecting existing and future investments for decades to come.

This data sheet provides detailed product specifications for the Cisco CRS Modular Power System. For more information about the Cisco CRS Family and other available interfaces, visit: http://www.cisco.com/go/crs.

Figure 1.   Cisco CRS Modular Power System

The Cisco CRS Modular Power System offers the following key benefits:

- Modular design for easy power-capacity growth
- Pay-as-you-grow model (add power in tandem with bandwidth-capacity increase)
- Standard power module across 8 slots, 16 slots, and fabric chassis
- Single-phase AC input allowing granular addition of power module
- Two shelves per chassis, providing 1+1 redundancy
- Non-disruptive, hitless upgrade of modules
- No power zone restrictions
- Reduced maximum power capacity requirements for lower operational expenses
- Intelligent control with Power Management Software(future)

Product Specifications

Table 1.　　Product Specifications

Feature	Description
Chassis compatibility	Compatible with 8-slot, 16-slot and fabric card chassis
Software compatibility	Cisco IOS XR Software Release 3.9.0 or later
AC power module	Single phase, 200 to 240 VAC, 16A
DC power module	–48VDC/50A, –60VDC/40A
8 slots AC	9 KW
8 slots DC	8.4 KW
16 slots AC	15 KW
16 slots DC	12.6 KW
Fabric chassis AC	9 KW
Fabric chassis DC	8.4 KW

Approvals and Compliance

Table 2 gives standards compliance information for the Cisco CRS Modular Power System.

Table 2.　　Compliance and Agency Approvals

Feature	Description
Safety Standards	- UL/CSA/IEC/EN 60950-1 - IEC/EN 60825 Laser Safety - ACA TS001 - AS/NZS 60950 - FDA—Code of Federal Regulations Laser Safety
EMI	- FCC Class A - ICES 003 Class A - AS/NZS 3548 Class A - CISPR 22 (EN55022) Class A - VCCI Class A - BSMI Class A - IEC/EN 61000-3-2: Power Line Harmonics - IEC/EN 61000-3-3: Voltage Fluctuations and Flicker
Immunity (Basic Standards)	- IEC/EN-61000-4-2: Electrostatic Discharge Immunity (8-kV contact, 15-kV air) - IEC/EN-61000-4-3: Radiated Immunity (10V/m) - IEC/EN-61000-4-4: Electrical Fast Transient Immunity (2-kV power, 1-kV signal) - IEC/EN-61000-4-5: Surge AC Port (4-kV CM, 2-kV DM) - IEC/EN-61000-4-5: Signal Ports (1 kV) - IEC/EN-61000-4-5: Surge DC Port (1 kV) - IEC/EN-61000-4-6: Immunity to Conducted Disturbances (10 Vrms) IEC/EN-61000-4-8: Power Frequency Magnetic Field Immunity (30A/m) - IEC/EN-61000-4-11: Voltage Dips, Short Interruptions, and Voltage Variations
ETSI and EN	- EN300 386: Telecommunications Network Equipment (EMC) EN55022: Information Technology Equipment (Emissions) EN55024: Information Technology Equipment (Immunity) - EN50082-1/EN-61000-6-1: Generic Immunity Standard
Network Equipment Building Standards (NEBS)	This product is designed to meet the following requirements (qualification in progress): - SR-3580: NEBS Criteria Levels (Level 3) - GR-1089-CORE: NEBS EMC and Safety - GR-63-CORE: NEBS Physical Protection

Ordering Information

To place an order, contact your local Cisco representative or visit the Ordering page on http://www.cisco.com. Use the ordering information in Table 3.

Table 3.   Ordering Information

Production ID	Description
CRS-16-ACKIT-M(=)	CRS Modular power AC kit for 16 slots Chassis, 15KW
CRS-16-ACKIT-M-B(=)	CRS Modular power AC kit for 16 slots Chassis Enhanced, 15KW
CRS-16-DCKIT-M(=)	CRS Modular power DC kit for 16 slots Chassis, 12.6KW
CRS-16-DCKIT-M-B(=)	CRS Modular power DC kit for 16 slots Chassis Enhanced, 12.6KW
CRS-FCC-ACKIT-M(=)	CRS Modular power AC kit for Fabric Chassis, 9KW
CRS-FCC-DCKIT-M(=)	CRS Modular power DC kit for Fabric Chassis, 8.4KW
CRS-8-ACKIT-M(=)	CRS Modular power AC kit for 8 slots Chassis, 9KW
CRS-8-ACKIT-M-B(=)	CRS Modular power AC kit for 8 slots Chassis Enhanced, 9KW
CRS-8-DCKIT-M(=)	CRS Modular power DC kit for 8 slots Chassis, 8.4KW
CRS-8-DCKIT-M-B(=)	CRS Modular power DC kit for 8 slots Chassis Enhanced, 8.4KW

Service and Support

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For More Information

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