Cisco CRS-1 Fabric Chassis Integrated Switch Controller Card

The Cisco® CRS-1 Carrier Routing System is the industry's first carrier router offering continuous system operation, unprecedented service flexibility, and system longevity. The Cisco CRS-1 is powered by Cisco IOS® XR Software – a unique self-healing, distributed operating system designed for always-on operation while scaling system capacity up to 92 Tbps. The innovative system architecture combines the Cisco Silicon Packet Processor, the first programmable 40-Gbps application-specific integrated circuit (ASIC), with the Cisco Service Separation Architecture for unprecedented service flexibility and speed to service. The Cisco CRS-1 marks a new era in carrier IP communications by powering the foundation for network and service convergence today while protecting investments for decades to come.

This data sheet provides detailed product specifications for the Cisco CRS-1 Fabric Chassis Integrated Switch Controller Card. The card supports 22 Gigabit Ethernet ports for control plane connectivity between line card and fabric card chassis in a Cisco CRS-1 multichassis system. The card controls the shelf management functions for the fabric chassis and its components. By eliminating the need for external switches, the Cisco CRS-1 card simplifies configuration and improves manageability for a multichassis control network. For more information about the Cisco CRS-1 or about other interfaces available for the Cisco CRS-1, visit: http://www.cisco.com/go/crs.

Product Specifications

Table 1. Product Specifications

Feature	Description
Chassis Compatibility	Compatible with the Cisco CRS-1 24-slot fabric card chassis
Software Compatibility	Cisco IOS XR Software Release 3.4.1 and later
Protocols	• Rapid Spanning Tree Protocol (RSTP) • Unidirectional Link Detection (UDLD)
Connectivity	• Console port (RJ-45 connector) • Auxiliary port (RJ-45 connector) • One 10/100/1000 Ethernet port (RJ-45 connector) • Two 10/100/1000 Ethernet ports (1000BASE-LX SFP-LC connector, 10 km) for control plane connectivity

Feature	Description
Memory	• 2 GB of main memory • 64 MB of boot Flash • 2 MB of nonvolatile RAM (NVRAM) • One 1-GB PCMCIA card (internal) • One 40-GB hard drive
Options	Up to 22 SFP modules One 1-GB PCMCIA card
Performance	1.2 GHz PowerPC
Reliability and Availability	• Online insertion and removal (OIR) • Control network redundancy • In-Service Software Upgrade
MIBs	Chassis: • ENTITY-MIB (RFC 2737) • CISCO-entity-asset-MIB • CISCO-entity-sensor-MIB • CISCO-FRU-MIB (Cisco-Entity-FRU-Control-MIB) Fabric: • CISCO-Fabric-HFR-MIB • CISCO-Fabric-Mcast-MIB • CISCO-Fabric-Mcast-Appl-MIB
Network Management	• Enhanced command-line interface (CLI) • Extensible Markup Language (XML) interface • XML schemas • Craft Works Interface (CWI) • Simple Network Management Protocol (SNMP) and MIB support
Programmatic Interfaces	XML Schema support
Physical Dimensions	• Weight: 17.65 lb (8.023 kg) • Height: 20.558 in. (52.217 cm) • Width: 2.02 in. (5.131 cm) • Depth: 20.62 in. (52.375 cm)
Power	110W

Regulatory Standards Compliance

Table 2. Regulatory Standards Compliance

Feature	Description
Safety Standards	• UL/CSA 60950-1 • IEC/EN 60950-1 • AS/NZS 60950.1
EMI	• FCC Class A • ICES 003 Class A • AS/NZS 3548 Class A • CISPR 22 (EN55022, KN22: 2005) Class A • VCCI 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 (KN 61000-4-2: 05): Electrostatic Discharge Immunity (8kV Contact, 15kV Air) • IEC/EN-61000-4-3 (KN 61000-4-3:05): Radiated Immunity (10V/m) • IEC/EN-61000-4-4 (KN 61000-4-4:2005): Electrical Fast Transient Immunity (2kV Power, 1kV Signal) • IEC/EN-61000-4-5: Surge AC Port (4kV CM, 2kV DM) • IEC/EN-61000-4-5: Signal Ports (1kV)

Feature	Description
	• IEC/EN-61000-4-5: Surge DC Port (1kV) • IEC/EN-61000-4-6 (KN 61000-4-6:2005): Immunity to Conducted Disturbances (10Vrms) • 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 Systems (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, visit: Cisco Ordering Home Page.

Table 3. Ordering Information

Product Part Number	Product Name
CRS-FCC-SC-22GE(=)	Cisco CRS-1 Fabric Chassis Integrated Switch Controller Card (spare)
GLC-LH-SM(=)	Cisco Gigabit Ethernet SFP LC connector LX/LH transceiver (spare)
GLC-LH-SMD(=)	Cisco Gigabit Ethernet SFP LC connector LX/LH transceiver; with DOM (spare)

End-of-Sale and End-of-Life Announcement for the Select Cisco Gigabit Ethernet SFP Modules: http://www.cisco.com/en/US/prod/collateral/modules/ps5455/eol_c51-698060.html

To Download the IOS XR Software, visit: Cisco Software Center.

Service and Support

Cisco offers numerous innovative services programs to accelerate customer success. These programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you to protect your network investment, optimize network operations, and prepare the network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, visit: Cisco Technical Support Services or Cisco Advanced Services.

For More Information

For more information about the Cisco CRS-1 Fabric Chassis Integrated Switch Controller Card, contact your local account representative or visit Cisco at: http://www.cisco.com/go/crs.

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