# Cisco CRS SPA Interface Processor-800

The Cisco<sup>®</sup> 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<sup>®</sup> 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.

The Cisco<sup>®</sup> I-Flex design combines shared port adapters (SPAs) and SPA interface processors (SIPs), leveraging an extensible design that enables service prioritization for voice, video and data services. Enterprise and service provider customers can take advantage of improved slot economics resulting from modular port adapters that are interchangeable across Cisco routing platforms. The I-Flex design maximizes connectivity options and offers superior service intelligence through programmable interface processors that deliver line-rate performance. I-Flex enhances speed-to-service revenue and provides a rich set of QoS features for premium service delivery while effectively reducing the overall cost of ownership This data sheet contains the specifications for the Cisco CRS-1 SPA Interface Processor-800 (Cisco CRS-1 SIP-800; refer to Figure 1).



Figure 1. Cisco CRS-1 SIP-800 with SPAs

## **Product Specifications**

Table 1 gives specifications of the Cisco CRS-1 SIP-800.

Table 1.	Product Specifications
----------	------------------------

Feature	Description
Chassis Compatibility	Compatible with all current Cisco CRS-1 and CRS-3 line-card chassis
Software Compatibility	Cisco IOS XR Software Release 3.2 or higher for CRS-1 Cisco IOS XR Software Release 4.0.0 or later for CRS-3
Interface Types	Packet over SONET/SDH (POS) • OC-3c/STM-1c • OC-192c/STM-64c Gigabit Ethernet
Port Density	Six normal-height SPAs or three double-height SPAs or any combination in between

Feature	Description
Reliability and Availability	Online insertion and removal (OIR) without affecting system traffic
Network Management	Cisco IOS XR Software Command-Line Interface (CLI)     Simple Network Management Protocol (SNMP)     Extensible Markup Language (XML) interface     Cisco CRS-1 Craft Works Interface (CWI)
Physical Dimensions	<ul> <li>Occupies one physical-layer-interface-module (PLIM) slot on Cisco CRS-1 16- and 8-slot line card chassis</li> <li>Weight: Minimum 5.8 lb (without any SPAs), Maximum 15 lb (with 6 SPAs)</li> <li>Height: 20.6 in. (52.32 cm)</li> <li>Depth: 11.2 in. (28.4 cm)</li> <li>Width: 1.8 in. (4.57 cm)</li> </ul>
Power	<ul><li> 30W without any SPA</li><li> 150W with maximum SPA configuration</li></ul>
Environmental Conditions	<ul> <li>Storage temperature: -40 to 70°C (-40 to 158°F)</li> <li>Operating temperature: <ul> <li>Normal: 5 to 40°C (41 to 104°F)</li> <li>Short term: -5 to 50°C (23 to 122°F)</li> </ul> </li> <li>Relative humidity: <ul> <li>Normal: 5 to 85%</li> <li>Short term: 5 to 90% but not to exceed 0.024 kg of water per kg of dry air</li> </ul> </li> <li>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.)</li> </ul>

# **Approvals and Compliance**

Table 2 gives compliance information for the Cisco CRS-1 SIP-800.

Feature	Description
Safety Standards	<ul><li>UL/CSA/IEC/EN 60950-1</li><li>AS/NZS 60950</li></ul>
EMI	<ul> <li>FCC Class A</li> <li>ICES 003 Class A</li> <li>AS/NZS 3548 Class A</li> <li>CISPR 22 (EN55022) Class A</li> <li>VCCI Class A</li> </ul>
Immunity (basic standards)	<ul> <li>IEC/EN-61000-4-2: Electrostatic Discharge Immunity (8-kV Contact, 15-kV Air)</li> <li>IEC/EN-61000-4-3: Radiated Immunity (10V/m)</li> </ul>
ETSI and EN	<ul> <li>EN300 386: Telecommunications Network Equipment (EMC)</li> <li>EN55022: Information Technology Equipment (Emissions)</li> <li>EN55024: Information Technology Equipment (Immunity)</li> <li>EN50082-1/EN-61000-6-1: Generic Immunity Standard</li> </ul>
Network Equipment Building System (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

 Table 2.
 Compliance and Agency Approvals

## **Ordering Information**

To place an order, visit <u>Cisco Ordering Home Page</u> or refer to Table 3.

## Table 3. Ordering Information

Product Part Number	Product Name
CRS1-SIP-800 (=)	Cisco CRS-1 SPA Interface Processor-800

#### 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 protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, visit <u>Cisco Technical Support Services</u> or <u>Cisco Advanced Services</u>.

### For More Information

For more information about the Cisco CRS-1 SIP-800, contact your local Cisco account representative or visit: <u>http://www.cisco.com/go/crs</u>



Americas Headquarters Cisco Systems, Inc. San Jose, CA Asia Pacific Headquarters Cisco Systems (USA) Pte. Ltd. Singapore Europe Headquarters Cisco Systems International BV Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

CCDE, CCENT, CCSI, Cisco Eos, Cisco Explorer, Cisco HealthPresence, Cisco IronPort, the Cisco logo, Cisco Nurse Connect, Cisco Pulse, Cisco SensorBase, Cisco StackPower, Cisco Stadum/Vision, Cisco TelePresence, Cisco TrustSec, Cisco Unified Computing System, Cisco WebEx, DCE, Flip Channels, Flip for Good, Flip Mino, Flipshare (Design), Flip Ultra, Flip Video, Flip Video, Flip Video, Instant Broadband, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn, Cisco Capital, Cisco Capital (Design), Cisco-Financed (Stylized), Cisco Store, Flip Gift Card, and One Million Acts of Green are service marks; and Access Registrar, Aironet, AllTouch, AsyncoS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Lumin, Cisco Nexus, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, Continuum, EtherFast, EtherSwitch, Event Center, Explorer, Follow Me Browsing, GainMaker, ILYNX, IOS, iPhone, IronPort, the IronPort logo, Laser Link, LightStream, Linksys, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, PCNow, PIX, PowerKEY, PowerPanels, PowerTV, PowerTV (Design), PowerVu, Prisma, ProConnect, ROSA, SenderBase, SMARTnet, Spectrum Expert, StackWise, WebEx, and the WebEx logo are registered trademarks of Cisco and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1002R)

Printed in USA

C78-518340-00 02/10