



## Preface

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This preface explains the objectives and intended audience for this *Cisco CRS Carrier Routing System 4-Slot Line Card Chassis Site Planning Guide* (referred to in this document as the site planning guide). This preface also describes the document organization and the conventions used in the document.

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## Objectives

This guide describes the basic facilities requirements, such as floor space, power requirements, environmental requirements, and so on, for the Cisco CRS 16-Slot Line Card Chassis (LCC). This guide is intended to help you in planning the site where the chassis will be installed. It should be used with Cisco Systems, Inc. site planning coordinators and site inspectors, well in advance of the delivery of the chassis.

## Audience

This guide is intended for anyone who plans the facilities, including space, rack-mounting, power, cooling, cabling, delivery, and storage, for the delivery and installation of a Cisco CRS 16-Slot LCC.

## Organization

This document contains the following chapters and appendices:

Title	Description
Cisco CRS Carrier Routing System 16-Slot Line Card Chassis Overview	Describes the Cisco CRS routing system and presents an overview of the steps required to prepare the site for the installation of a LCC.
<i>Space Planning</i>	Provides information about chassis space requirements and other site preparation details (for example, floor loading and securing the chassis to the floor).
<i>Power and Cooling Requirements</i>	Describes the power and cooling requirements for the chassis.
<i>Shipping and Receiving</i>	Describes the things to consider as you plan for the shipment of the chassis and transport to the installation site.
<i>System Planning Considerations</i>	Provides information about system planning considerations, such as high availability.
<i>Product IDs</i>	Provides the product identifiers (IDs) for orderable chassis components.
<i>Preliminary Site Survey</i>	Contains a sample preliminary site survey in which to enter information about the installation site and site-preparation process.
<i>Cisco CRS Series Carrier Routing System 16-Slot Line Card Chassis Specifications</i>	Lists the chassis specifications and provides information about wire gauges and resistances for DC power cabling.

## Documentation Conventions

This document uses the following conventions:

Convention	Description
<b>bold</b> font	Commands and keywords and user-entered text appear in <b>bold</b> font.
<i>Italic</i> font	Document titles, new or emphasized terms, and arguments for which you supply values are in <i>italic</i> font.
[ ]	Elements in square brackets are optional.
{x   y   z}	Required alternative keywords are grouped in braces and separated by vertical bars.

Convention	Description
[x   y   z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
<code>courier font</code>	Terminal sessions and information the system displays appear in <code>courier font</code> .
	Indicates a variable for which you supply values, in context where italics cannot be used.
<>	Nonprinting characters such as passwords are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

**Note**

*Means reader take note.* Notes contain helpful suggestions or references to material not covered in the manual.

**Tip**

*Means the following information will help you solve a problem.* The tips information might not be troubleshooting or even an action, but could be useful information, similar to a Timesaver.

**Caution**

*Means reader be careful.* In this situation, you might perform an action that could result in equipment damage or loss of data.

**Warning****IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

**SAVE THESE INSTRUCTIONS****Warning**

Statements using this symbol are provided for additional information and to comply with regulatory and customer requirements.

## Related Documentation

This section refers you to other documentation that contains complete planning, installation, and configuration information.

The documentation listed below is available online.

- [Cisco CRS Carrier Routing System 16-Slot Line Card Chassis Site Planning Guide](#)
- [Cisco CRS Carrier Routing System 16-Slot Line Card Chassis Installation Guide](#)
- [Cisco CRS Carrier Routing System 16-Slot Line Card Chassis Unpacking, Moving, and Securing Guide](#)
- [Cisco CRS Carrier Routing System Ethernet Physical Layer Interface Module \(PLIM\) Installation Note](#)
- [Cisco CRS Carrier Routing System Packet-over-SONET/SDH Physical Layer Interface Module Installation Note](#)
- [Cisco CRS Carrier Routing System SIP and SPA Hardware Installation Guide](#)
- [Cisco CRS-1 Carrier Routing System 16-Slot Line Card Chassis Hardware Operations and Troubleshooting Guide](#)
- [Cisco CRS Carrier Routing System Regulatory Compliance and Safety Information](#)

## Changes to This Document

This table lists the technical changes made to this document since it was first created.

**Table 1: Changes to This Document**

Date	Summary
July 2014	Added support for new 2x100GE-FLEX-40 PLIM. Added updates to support the Cisco CRS-X back-to-back and multishelf systems, which include new CRS-16-FC400/M switch fabric card.
January 2014	Added updates to support the Cisco CRS-X, which includes new line cards, switch fabric cards, and PLIMs.
September 2011	Updated Appendix A, <i>Product IDs</i> and Appendix C, <i>Cisco CRS Series Carrier Routing System 16-Slot Line Card Chassis Specifications</i> .
May 2011	Updated the <i>Shipping and Receiving</i> with information about moving the chassis using the dolly supplied by Cisco.

Date	Summary
April 2011	Added information about new CRS-16-PRP-6G and CRS-16-PRP-12G Performance Route Processor (PRP) cards. Technical updates and minor editorial changes were also made.
March 2011	Added information about new modular configuration AC and DC power systems. Added product IDs for the modular configuration power components.
October 2010	Added information about new MSC140 and FP140 line cards; 4-port, 8-port, 14-port, and 20-port 10-GE XFP PLIMS; and 1-port 100-GE CFP PLIM. Technical updates and minor editorial changes were also made.
January 2010	Updated weight and floor loading values.
February 2008	Updated the document with technical corrections.
August 2007	Revision includes technical corrections and other updates throughout the document.
June 2007	Updated the two-pole DC power requirements.
September 2006	Revision includes general technical corrections.
April 2006	Changed document title.
December 2005	<p>Reorganized the document to more closely align with the steps in the site preparation process.</p> <p>Updated the <i>Space Planning</i>, and <i>Shipping and Receiving</i> chapters, with information about chassis dimensions and weight, required aisle clearances, and floor loading.</p> <p>Updated the <i>Power and Cooling Requirements</i> chapter, with new information on general power and grounding requirements and DC power requirements, and a few clarifications were made in the AC power section.</p> <p>Updated the <i>System Planning Considerations</i> chapter, with information about high availability.</p> <p>Added several new product IDs to Appendix A <i>Product IDs</i>.</p> <p>Updated chassis specifications in Appendix C <i>Cisco CRS Series Carrier Routing System 16-Slot Line Card Chassis Specifications</i>. Added the <i>DC Wire Gauge and Resistance</i> section.</p>

Date	Summary
July 2004 December 2004	The document was released in July and updated with technical corrections in December.

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*, at: <http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html>.

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