



Preface

This preface explains the audience, purpose, and organization of the *Cisco 6160 Hardware Installation Guide*. It also defines the conventions that are used to present instructions and information.

Audience

The *Cisco 6160 Hardware Installation Guide* is intended for use by central office (CO) technicians and maintenance personnel who are responsible for installing, configuring, and maintaining the Cisco 6160 system. A familiarity with telco products and networking systems is recommended.

Purpose

The *Cisco 6160 Hardware Installation Guide* describes how to set up, install, and troubleshoot the Cisco 6160 system. After completing the installation procedures covered in this guide, refer to the appropriate related documents to provision your Cisco 6160 system. For additional information on related documentation, see the [“Related Documentation” section on page xvii](#).

Organization

The *Cisco 6160 Hardware Installation Guide* is organized as follows:

- [Chapter 1, “Product Overview,”](#) provides an overview of the Cisco 6160 system.
- [Chapter 2, “Preparing for Installation,”](#) provides the requirements necessary to prepare for the installation of the Cisco 6160 system.
- [Chapter 3, “Installing a Cisco 6160 with a POTS Splitter Configuration,”](#) provides installation procedures for a Cisco 6160 with a POTS splitter configuration for xDSL data and voice traffic.
- [Chapter 4, “Installing a Cisco 6160 Without a POTS Splitter Configuration,”](#) provides installation procedures for a Cisco 6160 without a POTS splitter for an xDSL data traffic.
- [Chapter 5, “Troubleshooting,”](#) provides troubleshooting procedures for hardware and software conditions of the Cisco 6160 system.
- [Chapter 6, “Upgrading and Maintaining the Cisco 6160 System,”](#) provides upgrade and maintenance procedures for the Cisco 6160 system.

- [Appendix A, “Technical Specifications,”](#) provides the technical specifications for the Cisco 6160 system.
- [Appendix B, “Cable and Port Mapping Specifications,”](#) provides a port mapping table for the Cisco 6160 subscriber connections and a cable standard telco color chart.
- [Appendix C, “Connector and Pinout Specifications,”](#) provides information about connectors and pinouts for the Cisco 6160 system.
- Glossary.

Conventions

This publication uses the document conventions listed in this section.

Table 1 Font Conventions

Convention	Definition	Sample
boldface font	Commands and keywords are in boldface . Also used for names of some GUI elements.	This is similar to the UNIX route command.
<i>italic font</i>	Arguments for which you supply values are in <i>italics</i> . Also used for publication names and for emphasis	See the <i>Cisco 6160 Hardware Installation Guide</i> for further details.
screen font	Terminal sessions and information the system displays are in screen font.	Are you ready to continue? [Y]
boldface screen font	Information you must enter is in boldface screen font .	Login: root Password: < password >
^	The symbol ^ represents the key labeled Ctrl.	^D—The key combination in a screen display means hold down the Control key while you press the D key.
[]	Elements in square brackets are optional. Also used for default responses to system prompts.	[no] offset-list {in out} offset
{ x y z }	Alternative keywords are grouped in braces and separated by vertical bars.	offset-list {in out} offset
< >	Nonprinting characters such as passwords are in angle brackets.	DSLAM> Password: <cisco123>
{ }	Indicate a required choice.	offset-list {in out} offset
{ ({ }) }	Indicate a required choice within an optional element.	[({ <i>letter</i> \ <i>number</i> }) Enter]



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 or information that might save time.

**Caution**

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

**Warning**

Means *danger*. You are in a situation that could cause bodily injury. Before you work on any equipment, you must be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. To see translated versions of the warning, refer to the *Regulatory Compliance and Safety* document that accompanied the device.

Related Documentation

A complete list of all DSL product related documentation is available on the World Wide Web at http://www.cisco.com/univercd/cc/td/doc/product/dsl_prod/index.htm

Obtaining Documentation

The following sections explain how to obtain documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following URL:

<http://www.cisco.com>

Translated documentation is available at the following URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription. Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:

<http://www.cisco.com/go/subscription>

Ordering Documentation

Most Cisco documentation is available only online at:

<http://www.cisco.com/univercd/home/home.htm>

You can order some printed Cisco documentation in the following ways:

- Registered Cisco Direct Customers can order Cisco product documentation from the Networking Products MarketPlace:
http://www.cisco.com/cgi-bin/order/order_root.pl
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

We appreciate your comments and feedback about Cisco documentation. There are several ways to submit comments to Cisco.

- If you are reading Cisco product documentation on Cisco.com, you can obtain a comment form electronically. Click **Leave Feedback** at the bottom of the Cisco Documentation home page. After you complete the form, print it out and fax it to Cisco at 408 527-0730.
- You can e-mail your technical documentation comments to bug-doc@cisco.com.
- You can submit your comments by mail. Write to the following address:

Cisco Systems
Attn: Document Resource Connection
170 West Tasman Drive
San Jose, CA 95134-9883

- If you are a registered Cisco.com user, you can submit comments electronically.
 - To report problems, click **Feedback** in the toolbar at the top of any document web page, press the **Contact Cisco Now** button, and under Problem Type, select **CD/Online Documentation**. After you complete the form, click **Submit** to send it to Cisco.
 - To send your opinion of the DSL documentation, go to the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/dsl_prod/

and click **here** at the top of the page in the sentence “Is this Cisco documentation helpful? Click here to give us your feedback.” This displays a Documentation Survey that you can complete and submit to Cisco electronically.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you to

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

You can self-register on Cisco.com to obtain customized information and service. To access Cisco.com, go to the following URL:

<http://www.cisco.com>

Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available through the Cisco TAC: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Inquiries to Cisco TAC are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

Which Cisco TAC resource you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

Cisco TAC Web Site

The Cisco TAC Web Site allows you to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to the following URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco services contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to the following URL to register:

<http://www.cisco.com/register/>

If you cannot resolve your technical issues by using the Cisco TAC Web Site, and you are a Cisco.com registered user, you can open a case online by using the TAC Case Open tool at the following URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, it is recommended that you open P3 and P4 cases through the Cisco TAC Web Site.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses issues that are classified as priority level 1 or priority level 2; these classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer will automatically open a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to the following URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled; for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). In addition, please have available your service agreement number and your product serial number.