About This Manual

This section discusses the objectives, audience, organization, and conventions of the Cisco Systems *AGS+ Hardware Installation and Maintenance* publication.

Document Objectives

This publication contains the installation and maintenance procedures for the Cisco Systems AGS+ router. It will guide you through the initial site preparation, installation, and startup of your new router. After your hardware is installed, you will use the appropriate companion publications to configure your system. Descriptions of software-driven configuration commands and the procedures for implementing them are contained in the optional companion publications *Router Products Configuration Guide*, *Command Summary*, and *Router Products Getting Started Guide*

As you use the Cisco product, the maintenance chapters in this publication will help you with the general care and upkeep, as well as provide some general information on maintenance requirements. In the future, when you order additional hardware, software, and microcode upgrades, individualized documents called *configuration notes* will ship with each part ordered.

Audience

Setting up and maintaining a network requires the knowledge and expertise of people with a variety of skills. In many environments, the people responsible for installing and maintaining hardware and wiring are not those who configure the software and administer the network. This publication provides information specific to installing and maintaining the chassis. To use this publication, you should be familiar with electronic circuitry, wiring practices, networks, and preferably have experience as an electronic or electromechanical technician.

Document Organization

The organization of this publication follows a recommended linear installation sequence: starting with Chapter 1, "Product Overview," and continuing through Chapter 3, "Installing the Chassis." The length of time it takes you to cover each chapter depends on the configuration you are installing.

This publication also includes some information that you may not need at initial installation but will be useful when you upgrade or add components to the system. Additional reference information is included in Chapter 5 and the appendixes.

Following is a brief description of each chapter and appendix:

- Chapter 1, "Product Overview," describes the router chassis, components, specifications, and interface options.

- Chapter 2, "Preparing for Installation," is a preparatory section that describes site considerations, safety measures, tools required, and any procedures you should perform *before* actual installation. The tables describe the environmental, power, and cooling specifications for the chassis.

- Chapter 3, "Installing the Chassis," provides information about cabling and rack mounting the chassis. An installation checklist is included to keep track of what should be done. Illustrations of the connectors used with interface cables also are included.

- Chapter 4, "Troubleshooting the Initial Hardware Configuration," describes how to test for problems with system memory and the processor cards using the bootstrap program. It provides a summary of the bootstrap diagnostic tests and command options. Also included is general troubleshooting information to help you become operational quickly.

- Chapter 5, "Maintenance," provides general descriptions of the chassis components, a list of tools and equipment with which to maintain the chassis, procedures for accessing the chassis interior and components, and any user-configurable options for cards and appliques. Illustrations of the interface, processor, and controller cards used in the chassis are also included and can be used as a point of reference.

- Appendix A, "Cabling Specifications," lists the interfaces necessary to connect the chassis to your network and the respective pinouts for building your own cables.

- Appendix B, "Reading LED Indicators," discusses how to interpret the various LED indicators used on chassis cards and appliques. This appendix is helpful in troubleshooting the chassis hardware installation and can be used in conjunction with the troubleshooting guidelines presented in Chapter 4.

- Appendix C, "Industry-Standard Wiring Plans," lists the telephone industry color-code scheme for 25-pair wires, including the pin numbers.

- Appendix D, "Operating Conditions for the United Kingdom," provides the guidelines and agency specifications for using these products in the United Kingdom.

- Appendix E, "References and Recommended Reading," lists additional related readings.

- Appendix F, "Products Still Supported," provides reference information for products that are no longer shipping from the factory, but that are still supported in the field.

Document Conventions

Software and hardware documentation uses the following convention:

- The symbol ^ represents the key labeled *Control*.

  For example, the key combination *^D* means hold down the *Control* key while you press the *D* key.

Command descriptions use these conventions:

- Commands and keywords are in **boldface** font.

- Variables for which you supply values are in *italic* font.

- Elements in square brackets ([ ]) are optional.

- Alternative but required keywords are grouped in braces ({ }) and separated by vertical bars (|).

Examples use these conventions:

- Terminal sessions and information the system displays are in `screen` font.

- Information you enter is in `boldface screen` font.

- Nonprinting characters, such as passwords, are in angle brackets (< >).

- Default responses to system prompts are in square brackets ([ ]).

Caution Means *reader be careful*. You are capable of doing something that might result in equipment damage or loss of data.

Note Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

Timesaver Means *the described action saves time*. You can save time by performing the action described in the paragraph.

Warning 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 standard practices for preventing accidents.