



## Preface

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This preface describes the objectives and organization of this document and explains how to find additional information on related products and services. This preface contains the following sections:

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- [Organization, page viii](#)
- [Related Documentation, page viii](#)
- [Obtaining Documentation, page x](#)
- [Obtaining Technical Assistance, page xi](#)

## Objectives

This document describes how to install and configure the A1 ATM port adapter (PA-A1-OC3SMI[=], PA-A1-OC3MM[=]), hereafter referred to as the PA-A1 ATM, which is used in the following platforms:

- Catalyst 5000 family switches with the Route Switch Module (RSM)/ second-generation Versatile Interface Processor (VIP2)
- Cisco 7100 series routers, consisting of the Cisco 7120 series and Cisco 7140 series
- Cisco 7200 series routers, consisting of the two-slot Cisco 7202, four-slot Cisco 7204, and Cisco 7204VXR, and the six-slot Cisco 7206 and the Cisco 7206VXR
- Cisco uBR7200 series universal broadband routers, consisting of the six-slot Cisco uBR7246 and the three-slot Cisco uBR7223
- Second-generation Versatile Interface Processor (VIP2) in Cisco 7500 series and Cisco 7000 series routers with the 7000 Series Route Switch Processor (RSP7000) and 7000 Series Chassis Interface (RSP7000CI)
- Fourth-generation Versatile Interface Processor (VIP4) in Cisco 7500 series and Cisco 7000 series routers with the 7000 Series Route Switch Processor (RSP7000) and 7000 Series Chassis Interface (RSP7000CI)



### Note

The Cisco 7206 and Cisco 7206VXR can be used as router shelves in a Cisco AS5800 Universal Access Server. For information about the Cisco 7206 and Cisco 7206VXR as router shelves, refer to the Cisco AS5800 Universal Access Server documentation listed in the [“Related Documentation” section on page viii](#).

# Organization

This document note contains the following chapters:

| Section   | Title  | Description  |
|-----------|--|--|
| Chapter 1 | <a href="#">Overview</a>                                 | Describes the PA-A1 ATM and its LED displays, cables, and receptacles.   |
| Chapter 2 | <a href="#">Preparing for Installation</a>               | Describes safety considerations, tools required, and procedures you should perform before the actual installation. |
| Chapter 3 | <a href="#">Removing and Installing Port Adapters</a>    | Describes the procedures for installing and removing PA-A1 ATM port adapters in the supported platforms.           |
| Chapter 4 | <a href="#">Attaching the PA-A1 ATM Interface Cables</a> | Provides instructions for connecting port adapter cables on the supported platforms.                               |
| Chapter 5 | <a href="#">Configuring the PA-A1 ATM</a>                | Provides instructions for configuring the PA-A1 ATM on the supported platforms.                                    |

## Related Documentation

Your router and the Cisco IOS software running on it contain extensive features and functionality, which are documented in the following resources:

- Cisco IOS software:

For configuration information and support, refer to the modular configuration and modular command reference publications in the Cisco IOS software configuration documentation set that corresponds to the software release installed on your Cisco hardware.



**Note** You can access Cisco IOS software configuration and hardware installation and maintenance documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

- Catalyst RSM/VIP2:

For hardware installation and maintenance information, refer to the following publications:

- Route Switch Module Catalyst VIP2-15 and VIP2-40 Installation and Configuration Note
- Catalyst 5000 Series Route Switch Module Installation and Configuration Note
- The installation and configuration guide that shipped with your Catalyst 5000 family switch

- Cisco 7100 series routers:

- For hardware installation and maintenance information, refer to the *Cisco 7100 Series VPN Router Installation and Configuration Guide* that shipped with your Cisco 7100 series router.
- For information on setting up a Virtual Private Network, refer to the *Cisco 7100 Series VPN Configuration Guide*

- Cisco 7200 series routers:

- For port adapter hardware and memory configuration guidelines, refer to the *Cisco 7200 Series Port Adapter Hardware Configuration Guidelines*.
- For hardware installation and maintenance information (including the Cisco 7206 or Cisco 7206VXR as a router shelf in a Cisco AS5800 Universal Access Server), refer to the installation and configuration guide that shipped with your Cisco 7200 series router.
- Cisco 7200 VXR routers:  
For hardware installation and maintenance information, refer to the *Cisco 7200 VXR Installation and Configuration Guide* that shipped with your Cisco 7200 VXR router.
- Cisco uBR7200 series routers:  
For hardware installation and maintenance information, refer to the installation and configuration guide that shipped with your Cisco uBR7200 series router.
- VIP2 in Cisco 7000 series and Cisco 7500 series routers:  
For hardware installation and maintenance information, refer to the following publications:
  - The installation and configuration guide that shipped with your Cisco 7000 series or Cisco 7500 series router
  - Second-Generation Versatile Interface Processor (VIP2) Installation and Configuration
- VIP4 in Cisco 7000 series and Cisco 7500 series routers:  
For hardware installation and maintenance information, refer to the following publications:
  - The installation and configuration guide that shipped with your Cisco 7000 series or Cisco 7500 series router
  - Fourth-Generation Versatile Interface Processor (VIP4) Installation and Configuration
- Determining Attenuation and Power Budget
  - T1E1.2/92-020R2 ANSI, the Draft American National Standard for Telecommunications entitled “Broadband ISDN Customer Installation Interfaces: Physical Layer Specification.”
  - *Power Margin Analysis, AT&T Technical Note, TN89-004LWP, May 1989*
- For international agency compliance, safety, and statutory information for WAN interfaces:
  - Site Preparation and Safety Guide
  - Regulatory Compliance and Safety Information for the Cisco 7000 Series Routers
  - Regulatory Compliance and Safety Information for Cisco 7100 Series VPN Routers
  - Regulatory Compliance and Safety Information for the Cisco 7200 Series Routers
  - “Regulatory Compliance and Safety Information” appendix in the *Cisco uBR7200 Series Universal Broadband Router Hardware Installation Guide*
  - Regulatory Compliance and Safety Information for the Cisco 7500 Series Routers
- To view Cisco documentation or obtain general information about the documentation, refer to the following sources:
  - [“Obtaining Documentation” section on page x](#)
  - [“Obtaining Technical Assistance” section on page xi](#)
  - Customer Service at 800 553-6387 or 408 526-7208. Customer Service hours are 5:00 a.m. to 6:00 p.m. Pacific time, Monday through Friday (excluding Cisco-observed holidays). You can also send e-mail to [cs-rep@cisco.com](mailto:cs-rep@cisco.com).
  - *Cisco Information Packet* that shipped with your router.

# Obtaining Documentation

These 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 this URL:

<http://www.cisco.com>

Translated documentation is available at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](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.

## Ordering Documentation

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:  
[http://www.cisco.com/cgi-bin/order/order\\_root.pl](http://www.cisco.com/cgi-bin/order/order_root.pl)
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:  
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, U.S.A.) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

## Documentation Feedback

You can submit comments electronically on Cisco.com. In the Cisco Documentation home page, click the **Fax** or **Email** option in the “Leave Feedback” section at the bottom of the page.

You can e-mail your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit your comments by mail by using the response card behind the front cover of your document or by writing to the following address:

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

We appreciate your comments.

## Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain online 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 with these tasks:

- 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

If you want to obtain customized information and service, you can self-register on Cisco.com. To access Cisco.com, go to this URL:

<http://www.cisco.com>

### Technical Assistance Center

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

Cisco TAC inquiries 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.

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

## Cisco TAC Web Site

You can use the Cisco TAC Web Site 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 this URL:

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

All customers, partners, and resellers who have a valid Cisco service 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 this URL to register:

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

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

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

If you have Internet access, we recommend that you open P3 and P4 cases through the Cisco TAC Web Site.

## Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. 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 automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this 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). When you call the center, please have available your service agreement number and your product serial number.