



Preface

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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Document Revision History

The Document Revision History table below, beginning with version OL-3462-04, records technical changes to this document.

Document Version	Date	Change Summary
OL-3462-04	March, 2010	Added table 4-7 in chapter Configuring the PA-A3-IMA.
OL-3462-04	April, 2007	Adds Cisco 7201 router information.

Objectives

This document describes how to install and configure the eight-port T1/E1 inverse multiplexing over ATM (IMA) port adapters (PA-A3-8T1 IMA and PA-A3-8E1 IMA), hereafter referred to as the PA-A3-IMA, which are used in the following platforms:

- FlexWAN module in the Catalyst 6000 family switches
- Cisco 7100 series routers, consisting of the Cisco 7120 series and Cisco 7140 series
- Cisco 7200 series routers and Cisco 7200 VXR routers, consisting of the two-slot Cisco 7202, four-slot Cisco 7204 and Cisco 7204VXR, and the six-slot Cisco 7206 and Cisco 7206VXR
- Cisco 7201 router
- Cisco 7301 router
- Cisco 7304 PCI Port Adapter Carrier Card in the Cisco 7304 router

- Cisco 7401ASR router



Note PA-A3-8E1 IMA is not supported on the Cisco 7401ASR router.

- Versatile Interface Processor (VIP2, VIP4, and VIP6-80) in Cisco 7500 series routers, consisting of the five-slot Cisco 7505, the seven-slot Cisco 7507, and the thirteen-slot Cisco 7513
- FlexWAN module in Cisco 7600 series routers

Organization

This document contains the following chapters:

Section	Title	Description
Chapter 1	Overview	Describes the PA-A3-IMA and its LED displays, cables, and receptacles.
Chapter 2	Preparing for Installation	Describes safety considerations, tools required, and procedures you should perform before the actual installation.
Chapter 3	Removing and Installing Port Adapters	Describes the procedures for installing and removing PA-A3-IMA port adapters in the supported platforms.
Chapter 4	Configuring the PA-A3-IMA	Provides instructions for configuring your port adapter 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 6000 family switches with FlexWAN module:
 - For an online directory to quickly access documents for Cisco Catalyst 6000 family switches, refer to the *Cisco Catalyst 6500 Series Switches Documentation Roadmaps* index at the following URL:
http://www.cisco.com/en/US/products/hw/switches/ps708/products_documentation_roadmaps_list.html
 - For hardware installation and maintenance information, refer to the following documents:
 - *Catalyst 6000 Family FlexWAN Module Installation and Configuration Note*
 - The hardware and software publications for your Catalyst 6000 family switch
- Cisco 7100 series routers:
 - For an online directory to quickly access documents for Cisco 7100 series routers, refer to the *Cisco 7100 Series Documentation* roadmap at the following URL:
http://www.cisco.com/en/US/products/hw/vpndevc/ps333/products_product_index09186a00800fa142.html
 - For hardware installation and configuration information refer to the *Cisco 7100 Series VPN Router Installation and Configuration Guide*.
 - For information on setting up a Virtual Private Network, refer to the *Cisco 7100 Series VPN Configuration Guide*.
- Cisco 7200 series routers:
 - For an online directory to quickly access documents for Cisco 7200 series routers, refer to the *Cisco 7200 Series Routers Documentation Roadmap* at the following URL:
http://www.cisco.com/en/US/products/hw/routers/ps341/products_documentation_roadmap09186a00801c0915.html
 - For hardware installation and configuration information (including the Cisco 7206 or Cisco 7206VXR as a router shelf in a Cisco AS5800 Universal Access Server), refer to the online installation and configuration guide and quick start for your Cisco 7200 series router.
 - For port adapter hardware and memory configuration guidelines, refer to the *Cisco 7200 Series Port Adapter Hardware Configuration Guidelines*.
 - For information on network processing engines or network services engines, refer to the *Network Processing Engine and Network Services Engine Installation and Configuration* document.
- Cisco 7200 VXR routers:
 - *Cisco 7200 Series Routers Documentation Roadmap* at the following URL:
http://www.cisco.com/en/US/products/hw/routers/ps341/products_documentation_roadmap09186a00801c0915.html
 - For hardware installation and maintenance information, refer to the *Cisco 7200 VXR Installation and Configuration Guide* or the *Cisco 7200 VXR Routers Quick Start Guide*.

- Cisco 7201 router:
 - For an online directory to quickly access documents for the Cisco 7201 router, refer to the *Cisco 7201 Router Documentation Roadmap* at the following URL:
http://www.cisco.com/en/US/customer/products/hw/routers/ps341/products_documentation_roadmap09186a00807f635a.html
 - For hardware installation and maintenance information, refer to the *Cisco 7201 Installation and Configuration Guide* or the *Cisco 7201 Router Quick Start Guide*.
- Cisco 7301 router:
 - For an online directory to quickly access documents for the Cisco 7301 router, refer to the *Cisco 7301 Internet Router Documentation Roadmap* at the following URL:
http://www.cisco.com/en/US/products/hw/routers/ps352/products_documentation_roadmap09186a00801c0f21.html
 - For hardware installation and maintenance information, refer to the *Cisco 7301 Installation and Configuration Guide* or the *Cisco 7301 Router Quick Start Guide*.
- Cisco 7304 PCI port adapter carrier card in Cisco 7304 router:
 - For an online directory to quickly access documents for the Cisco 7304 PCI Port Adapter Carrier Card in the Cisco 7301 router, refer to the *Cisco 7304 Router Line Card, Carrier Card, Port Adapter, Modular Services Card, and Shared Port Adapter Documentation Roadmap* at the following URL:
http://www.cisco.com/en/US/products/hw/routers/ps352/products_documentation_roadmap09186a00801c0f5e.html
 - For hardware installation and maintenance information, refer to the *Cisco 7304 PCI Port Adapter Carrier Card Installation and Configuration Guide*.
- Cisco 7401ASR router:
 - For an online directory to quickly access documents for the Cisco 7401ASR router, refer to the *Cisco 7401ASR Router Documentation Roadmap* at the following URL:
http://www.cisco.com/en/US/products/hw/routers/ps354/products_documentation_roadmap09186a00801c0fd5.html
 - For hardware installation and maintenance information, refer to the *Cisco 7401ASR Installation and Configuration Guide* or the *Cisco 7401ASR Router Quick Start Guide*.
- Cisco 7500 series routers:
 - For an online directory to quickly access documents for the Cisco 7500 series routers, refer to the *Cisco 7500 Series Routers Documentation Roadmap* at the following URL:
http://www.cisco.com/en/US/products/hw/routers/ps359/products_documentation_roadmap09186a00801c0f9b.html
 - For hardware installation and maintenance information, refer to the following documents:
 - *Cisco 7500 Series Installation and Configuration Guide* or the quick start for your Cisco 7500 series router.
 - *Second-Generation Versatile Interface Processor (VIP2) Installation and Configuration*
 - *Fourth-Generation Versatile Interface Processor (VIP4) Installation and Configuration*
 - *Versatile Interface Processor (VIP6-80) Installation and Configuration Guide*

- Cisco 7600 series routers with the FlexWAN module:
 - For an online directory to quickly access documents for the Cisco 7600 series routers, refer to the *Cisco 7600 Series Routers Documentation Roadmap* at the following URL:
http://www.cisco.com/en/US/products/hw/routers/ps368/products_documentation_roadmap09186a00801ebed9.html
 - For hardware installation and maintenance information, refer to the online installation and configuration guide for your Cisco 7600 series router.
- For international agency compliance, safety, and statutory information for WAN interfaces, refer to the following documents. Use the documentation roadmap for your particular router to link to the appropriate documents for your router:
 - *Regulatory Compliance and Safety Information for the Catalyst 6000 Family Switches*
 - *Regulatory Compliance and Safety Information for the Cisco 7100 Series VPN Routers*
 - *Regulatory Compliance and Safety Information for the Cisco 7200 Series Routers*
 - *Regulatory Compliance and Safety Information for the Cisco 7301 Internet Router*
 - *Regulatory Compliance and Safety Information for the Cisco 7304 Internet Router*
 - *Regulatory Compliance and Safety Information for the Cisco 7401ASR Internet Router*
 - *Regulatory Compliance and Safety Information for the Cisco 7500 Series Routers*
 - *Regulatory Compliance and Safety Information for the Cisco 7600 Series Internet Routers*

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly What's New in Cisco Product Documentation, which also lists all new and revised technical documentation at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>