Preface

Welcome to the product specification for the Cisco MGX™ 8250 Edge Concentrator.

This section discusses:

- Objectives
- Audience
- Related Documentation
- Conventions

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more current than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at http://www.cisco.com, http://www-china.cisco.com, or http://www-europe.cisco.com.

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Objectives

This *Product Specification* describes the system components and functionality of the Cisco MGX 8250 wide area edge switch from a technical perspective.

This Product Specification reflects the first-generation product in the series, the MGX 8250 switch. It will be updated regularly to incorporate information about product enhancements and new features. The most recent version available will be the one that is posted on the Cisco Connections Web site.

User manuals and configuration guides for the Cisco MGX 8250 wide area edge switch are also available on the Cisco Connections Web site.

Audience

This publication is designed for internal Cisco use by software and hardware engineering, marketing, manufacturing, and technical publications. A customer-focused version of the content presented in this document is available in Release 1.1 of the *Cisco MGX 8250 Edge Concentrator Overview.*

Organization

This manual describes the features, functions, construction and operation of the MGX 8250 switch in the following chapters.

Chapter 1   System Overview

Describes the features and functions of the MGX 8250 switch.

Chapter 2   Physical Architecture

Describes the physical layout of the MGX 8250, the core cards, slot allocation, power modules and fan assemblies.

Chapter 3   Processor Switch Module

Describes the PXM-1 core processor module available in Release 1.1.3.

Chapter 4   Service Modules

Describes the individual service modules available in Release 1.1.3.

Chapter 5   Software Architecture

Provides an overview of the Cisco MGX 8250 software components.

Chapter 6   Network Management

Provides an overview of the Cisco multiservice management tools.

Chapter 7   Traffic Management

Provides an overview of the Cisco MGX 8250 traffic management features.

Chapter 9   Reliability, Availability, and Serviceability (RAS)

Describes the Reliability, Availability, and Serviceability (RAS) features supported on the Cisco MGX 8250 system.

Chapter 10   Network Synchronization

Provides an overview of the role of the Cisco MGX 8250 switch in network-wide clock synchronization.

Appendix A   Statistics Collected

Provides information about the Cisco MGX 8250 statistics.

Appendix B   Acronym

Provides information about acronyms pertinent to the Cisco MGX 8250 system in particular, as well as to wide area networking in general.

Related Documentation

The following Cisco publications contain additional information related to the operation of the Cisco MGX 8250 Edge Concentrator.

MGX 8250 Edge Concentrator, Release 1.1 Related Documentation

The following table lists documentation that contains additional information related to the installation and operation of the MGX 8250 Edge Concentrator.

Table 1 MGX 8250 Edge Concentrator Related Documentation

Documentation	Description
Cisco MGX 8250 Edge Concentrator Installation and Configuration, Release 1.1.3 DOC-7811217=	Provides installation instructions for the MGX 8250 Edge Concentrator.
Cisco MGX 8250 Edge Concentrator Command Reference, Release 1.1.3 DOC-7811212=	Provides detailed information on the general command line interface commands.
Cisco MGX 8250 Error Messages, Release 1.1.3 DOC-7811216=	Provides error message descriptions and recovery procedures.
WAN CiscoView for the MGX 8250 Edge Concentrator, Release 1.1.3 DOC-7811241=	Provides instructions for using WAN CiscoView for the MGX 8250 Edge Concentrator.
Cisco MGX 8250 Edge Concentrator Overview, Release 1.1.3 DOC-7811576=	Provides a technical description of the system components and functionary of the Cisco MGX 8250 wide area edge switch from a technical perspective.

Cisco WAN Manager, Release 10, Related Documentation

The following table lists the documentation for the Cisco WAN Manager (CWM) network management system for Release 10.

Table 2 Cisco WAN Manager Release 10 Related Documentation

Documentation	Description
Cisco WAN Manager Installation for Solaris, Release 10 DOC-7810308=	Provides procedures for installing Release 10 of the CWM network management system on Solaris systems.
Cisco WAN Manager User's Guide, Release 10 DOC-7810658=	Provides procedures for operating Release 10 of the CWM network management system.

Table 2   Cisco WAN Manager Release 10 Related Documentation

Documentation	Description
Cisco WAN Manager SNMP Service Agent Guide, Release 10 DOC-7810786=	Provides information about the CWM Simple Network Management Protocol Service Agent components and capabilities.
Cisco WAN Manager Database Interface Guide, Release 10 DOC-7810785=	Provides the information to gain direct access to the CWM Informix OnLine database that is used to store information about the elements within your network.

Cisco WAN Switching Software, Release 9.3 Related Documentation

This table lists related documentation for the installation and operation of the Cisco WAN Switching Software, Release 9.3 and associated equipment in a Cisco WAN switching network.

Table 3   Cisco WAN Switching Release 9.3 Related Documentation

Documentation	Description
Cisco BPX 8600 Series Installation and Configuration, Release 9.3.10 DOC-7811603=	Provides a general description and technical details of the BPX broadband switch.
Cisco IGX 8400 Installation and Configuration DOC-7810722=	Provides installation instructions for the IGX multiband switch.
Update to the IGX 8400 Installation and Configuration, Release 9.3.10 DOC-7811029=	Update for Release 9.3.10 to the *Cisco IGX 8400 Installation and Configuration* manual.
Cisco IGX 8400 Series Reference DOC-7810706=	Provides a general description and technical details of the IGX multiband switch.
Cisco WAN Switching Command Reference, Release 9.3.05 DOC-7810703=	Provides detailed information on the general command line interface commands.
Update to the Cisco WAN Switching Command Reference, Release 9.3.10 DOC-7811457=	Provides detailed information on updates to the command line interface commands for features new to switch software release 9.3.10.
Cisco WAN Switching SuperUser Command Reference, Release 9.3.10 DOC-7810702=	Provides detailed information on the command line interface commands requiring SuperUser access authorization
Cisco MPLS Controller Software Configuration Guide, Release 9.3.10 DOC-7811658=	Provides information on a method for forwarding packets through a network.

Conventions

This publication uses the following conventions to convey instructions and information.

Command descriptions use these conventions:

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

- Arguments for which you supply values are in *italics*.

- Required command arguments are inside angle brackets (< >).

- Optional command arguments are in square brackets ([ ]).

- Alternative keywords are 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 ([ ]).

Notes, tips, cautions, and warnings use the following conventions and symbols:

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.

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

Warning **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.**

Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

World Wide Web

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

- http://www.cisco.com

- http://www-china.cisco.com

- http://www-europe.cisco.com

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships 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 as an annual subscription.

Ordering Documentation

Cisco documentation is available 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

- 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 corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

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You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, for your convenience many documents contain a response card behind the front cover. Otherwise, you can mail your comments to the following address:

Cisco Systems, Inc.
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 documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

Cisco.com provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through Cisco.com, you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

http://www.cisco.com

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.

- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

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

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

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

Contacting TAC by Telephone

If you have a priority level 1(P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

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

P1 and P2 level problems are defined as follows:

* P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.

* P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.