

About This Book

Audience • Organization • Related Documentation • Notation

This document provides an overview of the LightStream enterprise ATM switch. It introduces the LightStream switch and the Asynchronous Transfer Mode (ATM) technology on which the LightStream product is based. It also describes the traffic flow through a LightStream network. In addition, it describes key features, such as traffic and network management.

Audience

The *LightStream 2020 System Overview* is for anyone who installs, configures, operates, or maintains a LightStream network or anyone who wants a high-level overview of the LightStream switch.

Users of the LightStream document set are expected to have a general understanding of basic data communications concepts, some knowledge of UNIX, and a familiarity with the interfaces used by the devices connecting to their LightStream network.

If you are planning to use the bridging features of the LightStream product, working knowledge of bridging standards and conventions is recommended. It is also recommended that you have a working knowledge of TCP/IP networks.

Organization

The following table shows the organization of this book.

- About This Book—Describes the audience, organization, and conventions for this book.
- ATM Technology—Describes cell relay and ATM technology.
- Introduction to LightStream—Provides a high-level description of the LightStream switch, including sections on why the LightStream product is needed, product structure, and key features.
- Network Connections—Describes the different network connections that can be used to pass traffic through the network. It also describes the services provided by a LightStream network.
- Traffic Management—Explains how the traffic management system allows the LightStream network to maximize available resources.
- Network Management—Describes the different kinds of network management tools and functions used for network operation.
- Detecting and Correcting Failures Failures—Describes features provided to help diagnose and correct failures.

Related Documentation

The following is a list of Cisco Lightstream manuals and other material relevant to LS2020 users.

- *LightStream 2020 System Overview*

This overview introduces the LightStream switch and the Asynchronous Transfer Mode (ATM) technology on which the LightStream product is based. It describes the traffic flow through a LightStream network. In addition, it describes key features, such as traffic and network management.

- *LightStream 2020 Site Planning and Cabling Guide*

This guide tells you how to prepare your site to receive LightStream hardware. It includes space, environmental and electrical requirements, rack selection guidelines, requirements for the management workstation, and information on cables and connectors.

- *LightStream 2020 Installation and Troubleshooting Manual*

This guide tells you how to install and set up LightStream switches and how to install LightStream management software on your network management workstation as well as providing a detailed description of LightStream hardware and tells you how to diagnose hardware problems and how to replace faulty hardware components.

- *LightStream 2020 Configuration Guide*

This guide provides the information you need to configure LightStream switches. It provides a functional overview of the configuration programs. It describes the configuration database and gives detailed information on all configurable attributes and their settings. The guide also provides step-by-step configuration procedures.

- *LightStream 2020 Operations Guide*

This guide is a task-oriented book that tells you how to operate a network of LightStream switches. The guide presents an overview of network operations tasks, describes the command line interface (CLI), and presents procedures for performing monitor and control tasks such as displaying the status of nodes, cards and ports, viewing statistics, and creating collections of traffic data.

- *LightStream Administration Guide*

This administrative guide describes LightStream system management functions, the presents step-by-step procedures.

- *LightStream 2020 Traps Reference Manual*

This manual presents an overview of LightStream traps and how they are generated by the LightStream switch. It provides the procedures for managing trap reporting, such as setting trap levels, enabling/disabling individual traps, and determining where the traps are displayed. It also describes all SNMP and operational traps: the descriptions include trap name, text, cause and user response.

- *LightStream 2020 Command and Attribute Reference Guide*

This manual provides detailed descriptions of the syntax and functions of all CLI commands. It also describes the LightStream private MIB.

- *LightStream 2020 Command Line Interface (CLI) Reference Card*

The reference card compactly summarizes the syntax and arguments of CLI commands.

- *LightStream 2020 Release Notes*

The release notes provide a software upgrade procedure and describe new features and special considerations, including known software bugs.

Note The release notes contain important information that was not available when the other documents were printed.

- *LightStream 2020 Online Help*

The LightStream command line interface (CLI) and configuration program both support online help facilities.

The graphic on the following page identifies tasks associated with a LightStream network and gives a reading path for each task. Use this graphic to determine which manuals you should read and the order in which you should read them.

Reading Path

Before attempting to install, configure, operate, or troubleshoot LightStream switches, read Chapters 1 and 3 in the latest version of the *LightStream 2020 Release Notes* for important, release-specific information that does not appear in any other document. After reading the *Release Notes*, refer to the following reading paths to determine which manuals to read next.

Table 1 LightStream Reading Path	
If you want to	Read the Following
Install LightStream switches	<i>LightStream 2020 Release Notes</i> ¹
	<i>LightStream 2020 Site Planning and Cabling Guide</i>
	<i>LightStream 2020 Installation and Troubleshooting Manual</i>
Configure LightStream switches	<i>LightStream 2020 Release Notes</i> ¹
	<i>LightStream 2020 Configuration Guide</i> ¹
	<i>LightStream 2020 Online Help Screens</i> ¹
Set up or expand a LightStream network	<i>LightStream 2020 Release Notes</i> ¹
	<i>LightStream 2020 Administration Guide</i> ¹
	<i>LightStream 2020 Online Help Screens</i> ¹
Operate a LightStream network	<i>LightStream 2020 Release Notes</i> ¹
	<i>LightStream 2020 Operations Guide</i>
	<i>LightStream 2020 Administration Guide</i>
	<i>LightStream 2020 Command and Attribute Reference Guide</i>
	<i>LightStream 2020 Command Line Interface (CLI) Reference Card</i>
	<i>LightStream 2020 Traps Reference Manual</i>
	<i>LightStream 2020 Online Help Screens</i>

Manage or troubleshoot a LightStream network	<i>LightStream 2020 Release Notes</i> ¹
	<i>LightStream 2020 Operations Guide</i>
	<i>LightStream 2020 Administration Guide</i>
	<i>LightStream 2020 Command and Attribute Reference Guide</i>
	<i>LightStream 2020 Command Line Interface (CLI) Reference Card</i>
	<i>LightStream 2020 Traps Reference Manual</i>
Troubleshoot LightStream hardware	<i>LightStream 2020 Online Help Screens</i>
	<i>LightStream 2020 Release Notes</i> ¹
	<i>LightStream 2020 Installation and Troubleshooting Manual</i>
	<i>LightStream 2020 Site Planning and Cabling Guide</i>

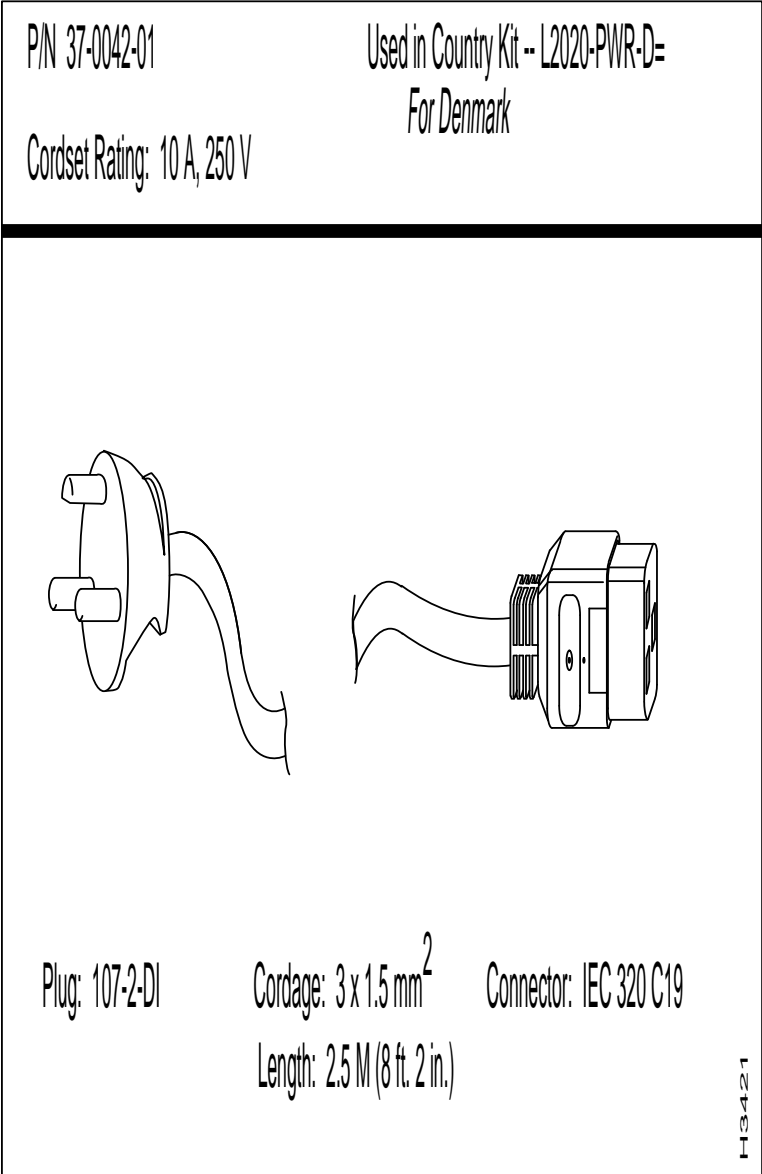
1. We recommend that you review the release notes before attempting to install, configure, operate, or troubleshoot a LightStream Switch. The release notes contain important information that does not appear in other documentation.

Notation

In this document, several conventions distinguish different types of graphics and text.

Graphics Conventions

Figure 1 Icons



Text Conventions

Convention	Purpose	Example
Bold screen literal type	Represents user input.	\$ date
Screen literal type	Represents system output	Wed May 6 17:01:03 EDT 1994
Boldface type	Denotes names of commands, command arguments, and switches. Command names are case sensitive; enter them exactly as they appear in the text.	Issue the clear command.
<i>Italic</i> type	Used for titles of documents and for emphasis.	<i>LightStream 2020 Configuration Guide</i> File names are <i>case</i> sensitive.
Angle brackets <>	Indicate user-specified parameters or classes of user responses. When you see this notation in a syntax statement, make the substitution but do not type the angle brackets.	If you see: set port <c.p> <state>
Square brackets []	Indicate keys on the keyboard, or optional arguments or parameters for commands. You can omit optional arguments and parameters in any command.	you might type: set port 4.3 active Press [Return] . cli> help [<topic>]
Caret symbol ^	When the caret symbol precedes a character, it refers to the control key.	^X is the same as [Control] X
Curly braces { }	Indicate a choice of arguments or parameters for commands. Arguments or parameters are separated by a vertical line {}, and you must select <i>one</i> .	cli> set cli traplevel { off info oper trace debug }