About This Guide

This section discusses the objectives, audience, organization, and conventions used in the *Cisco LightStream 100 User Guide* (formerly the *Cisco HyperSwitch A100 User Guide*).

Document Objectives

Use this publication to install and maintain the Cisco LightStream 100 (formerly the Cisco HyperSwitch A100). This publication contains initial site preparation, installation, troubleshooting, and selected upgrade and maintenance procedures.

Audience

This publication is designed for people who are responsible for installing the Asynchronous Transfer Mode (ATM) switch. You should be familiar with electronic circuitry and wiring practices and have experience as an electronic or electromechanical technician.

Note   This publication, as well as other Cisco technical documentation and selected marketing material, is available on UniverCD, Cisco's online library of product information. To order UniverCD or printed publications, refer to *Ordering Cisco Documentation*, which is included in your warranty package. You can also access Cisco technical documentation on the World Wide Web URL `http://www.cisco.com`.

Document Organization

The major sections of this publication follow:

- Chapter 1, "LightStream 100 ATM Switch Overview," provides an overview of the LightStream 100 switch features and physical specifications.

- Chapter 2, "Preparing for Installation," provides safety information and describes the tasks you must perform before you install the LightStream 100 switch.

- Chapter 3, "Installing the LightStream 100 ATM Switch," includes tools and equipment, complete installation instructions, and initial software configuration instructions.

- Chapter 4, "Maintaining and Upgrading the LightStream 100 ATM Switch," explains how to add and replace equipment, upgrade the software, and move equipment.

- Chapter 5, "Configuring the Software," provides instructions for software configuration following the initial installation.

- Chapter 6, "Troubleshooting," provides procedures for identifying system errors.

- Appendix A, "Command Reference," contains the complete command set for the LightStream 100 switch, including detailed command syntax and examples.

- Appendix B, "Translated Safety Warnings," contains warning messages in multiple languages.

Document Conventions

This section explains the conventions used in this manual to convey instructions and information.

Command descriptions use the following 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 are separated by a vertical bar (|).

Samples use the following conventions:

- Terminal sessions are printed in `screen` font.

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

- Nonprinting characters are shown in angle brackets ($< >$).

- Information the system displays is in `screen` font, with default responses in square brackets

Notes, timsavers, 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 actions save time*. You can save time by performing the action described in the paragraph.

Caution This caution symbol means *reader be careful*. You are capable of doing something that might 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. The warning symbol also means that you can see the warning in multiple languages in "Translated Safety Warnings."

The following provides definitions of the abbreviations used in this publication:

Abbreviation	Definition
AAL5	ATM adaptation layer 5
AIS	Alarm indication signal
AM	Address modifier
ATM	Asynchronous transfer mode
ATOMSW	ATM output-buffer modular switch
BCONV	Bus converter
B-ISDN	Broadband-integrated services digital network
BOM	Beginning of message
BP	Back pressure
BPB	Back pressure best effort
BPBM	Back pressure best effort multicast
BPG	Back pressure guaranteed
BPGM	Back pressure guaranteed multicast
CBR	Constant bit rate
CES	Cell synchronizer
CLKGEN	Clock generator
CLP	Cell loss priority
COM	Continuation of message
COOP	Cell overflow option peak
CPU	Central processor unit
CTL	Control
DG	Diagnosis
DGCNT	Diagnosis controller
DIP	Dual inline package
DMUX	Demultiplexer

Abbreviation	Definition
DRAM	Dynamic random-access memory
DRP	Dropper
DSU	Digital service unit
E/O	Electrical to optical
EPROM	Erasable programmable ROM
FDDI	Fiber Distributed Digital Interface
Flash EPROM	Flash erasable programmable read-only memory
GEN	Generator
GFC	Generic flow control
GI	Graded index
GWPAD	Gateway packet assembler/disassembler
HEC	Header error check
HT	Header translator
HTT	Header translator table
IC	Integrated circuit
IBB	Input buffer best effort
IBBM	Input buffer best effort multicast
IBG	Input buffer guaranteed
IBGM	Input buffer guaranteed multicast
INS	Inserter
I/O	Input/output
IP	Internet Protocol
ITU	International Telecommunication Union
LEC	LAN Emulation Client
LECS	LAN Emulation Configuration Server
LES	LAN Emulation Server
LED	Light emitting diode

Abbreviation	Definition
LINF	Line interface
LSB	Least significant bit
LSI	Large scale integration
MAT	Maintenance and administration terminal
MIB	Management information base
MIC	Media interface controller
MSB	Most significant bit
MSR	Module status register
MTBF	Mean time between failure
MUX	Multiplexer
NMS	Network management system
NNI	Network node interface
NSAP	Network service access point
O&M	Operation and maintenance
OC3	Optical carrier level 3
O/E	Optical to electrical
OPE	Operation
PA	Physical address
PC	Personal computer
PMD	Physical media dependent
POH	Path overhead
PROC	Processor
PT	Payload type
PVC	Permanent virtual circuit
RAM	Random-access memory
RIRO	Random-in, random-out
RISC	Reduced instruction set computing

Abbreviation	Definition
RNR	Receive not ready
ROM	Read-only memory
SAAL	Signaling ATM adaptation layer
SC	Subscriber optical loop connector
SDH	Synchronous digital hierarchy
SFIT	SDH frame interface termination
SNMP	Simple Network Management Protocol
SOH	Section overhead
SONET	Synchronous optical network
SRAM	Static random-access memory
SSCOP	Service-Specific Connection-Oriented Protocol
SSM	Single segment message
SSO	Switch-specific overhead
STM1	Synchronous transport module 1
STS1	Synchronous transport signal level 1
STS-3C	Synchronous transfer system level 3
SVC	Switched virtual circuit
TAC	TAXI to ATM conversion
TAXI	Transparent asynchronous transmitter/receiver interface
UCFAD	Universal cell frame assembly/disassembly
UDP	User Datagram Protocol
UNI	User to network interface
UPC	Usage parameter control
UPS	Uninterruptable power supply
UPVP	Usage parameter value peak
VBR	Variable bit rate
VCI	Virtual channel identifier

Document Conventions

Abbreviation	Definition
VME	Versa Module Eurocard
VPI	Virtual path identifier
WAN	Wide-area network
XATOMSW	Expandable ATM output-buffer modular switch