



Preface	vii
Audience	vii
Purpose	vii
Conventions	vii
Obtaining Documentation, Obtaining Support, and Security Guidelines	viii

CHAPTER 1

Product Overview	1-1
Switch Models	1-2
Front Panel	1-2
10/100BASE-T Ports	1-8
Power over Ethernet Ports	1-8
10/100/1000BASE-T Ports	1-8
100/1000 Mb/s SFP Module Slots	1-8
Dual-Purpose Fast Ethernet Ports	1-8
Dual-Purpose Gigabit Ethernet Ports	1-9
Power Connectors	1-11
PoE Power Connector	1-11
Alarm Connector	1-11
Management Ports	1-12
LEDs	1-14
Express Setup LED	1-14
System LED	1-15
USB-Mini Console LED	1-15
Alarm LEDs	1-16
Power Status LEDs	1-16
Port Status LEDs	1-17
Dual-Purpose Port LEDs	1-18
PoE Status LED	1-18
Flash Memory Card	1-20
Rear Panel	1-21
Management Options	1-21
Network Configurations	1-22

CHAPTER 2

Switch Installation 2-1

- Preparing for Installation 2-1
 - Warnings 2-1
 - Additional Information for Installation in a Hazardous Environment 2-3
 - Hazardous Area Installation Warnings 2-3
 - North American Hazardous Location Approval 2-5
 - EMC Environmental Conditions for Products Installed in the European Union 2-5
 - Installation Guidelines 2-5
 - Environment and Enclosure Guidelines 2-5
 - General Guidelines 2-6
- Installing or Removing the Flash Memory Card (Optional) 2-7
- Verifying Switch Operation 2-9
- Installing the Switch 2-9
 - Installing the Switch on a DIN Rail 2-9
 - Removing the Switch from a DIN Rail 2-10
- Connecting the Protective Ground and DC Power 2-12
 - Grounding the Switch 2-12
 - Selecting a DC Power Source 2-15
 - Site Source DC 2-15
 - DC Power Supply Module 2-16
 - Installing the DC Power Supply Module (Optional) 2-16
 - Installing the DC Power Supply Module on a DIN Rail 2-16
 - Connecting the AC Power Cord to the DC Power Supply Module 2-17
- Wiring the DC Power Source 2-19
- Attaching the Power Connectors to the Switch 2-24
- Connecting Power to the Switch PoE DC-Input (Optional) 2-27
- Running Boot Fast 2-31
 - Powering On the Switch 2-31
 - Verifying Boot Fast 2-32
 - Disconnecting Power 2-32
- Connecting Alarm Circuits 2-32
 - Wiring the External Alarms 2-32
 - Attaching the Alarm Connector to the Switch 2-36
- Connecting Destination Ports 2-38
 - Connecting to 10/100 and 10/100/1000 Ports 2-38
 - Installing and Removing SFP Modules 2-39
 - Installing SFP Modules into SFP Module Slots 2-40
 - Removing SFP Modules from SFP Module Slots 2-41
 - Connecting to SFP Modules 2-42

Connecting to a Dual-Purpose Port	2-44
Where to Go Next	2-46

CHAPTER 3**Troubleshooting 3-1**

Diagnosing Problems	3-1
Switch Boot Fast	3-1
Switch LEDs	3-2
Switch Connections	3-2
Bad or Damaged Cable	3-2
Ethernet and Fiber-Optic Cables	3-2
Link Status	3-2
10/100 and 10/100/1000 Port Connections	3-3
SFP Module	3-3
Interface Settings	3-3
Ping End Device	3-3
Spanning Tree Loops	3-3
Switch Performance	3-4
Speed, Duplex, and Autonegotiation	3-4
Autonegotiation and Network Interface Cards	3-4
Cabling Distance	3-4
Resetting the Switch	3-5
How to Recover Passwords	3-5
Finding the Switch Serial Number	3-6

APPENDIX A**Technical Specifications A-1**

Operating Temperature Specifications	A-1
Technical Specifications	A-2
Alarm Ratings	A-4
Hazardous Locations Standards	A-4

APPENDIX B**Cable and Connectors B-1**

Connector Specifications	B-1
10/100 Ports	B-1
SFP Module Connectors	B-2
Dual-Purpose Ports	B-2
Console Port	B-2
Alarm Port	B-3
Cables and Adapters	B-4

SFP Module Cables **B-4**
Cable Pinouts **B-6**
Console Port Adapter Pinouts **B-8**

APPENDIX C

Configuring the Switch with the CLI-Based Setup Program C-1

Accessing the CLI Through the Console Port **C-1**
 Removing the USB Mini-Type B Console Port Cover **C-1**
 RJ-45 Console Port **C-2**
 USB Mini-Type B Console Port **C-4**
 Installing the Cisco Microsoft Windows USB Device Driver **C-5**
 Uninstalling the Cisco Microsoft Windows USB Driver **C-5**
 Uninstalling the Cisco Microsoft Windows USB Driver Using the Add or Remove Programs
 Utility **C-6**
 Uninstalling the Cisco Microsoft Windows USB Driver Using the Setup.exe Program **C-6**
Entering the Initial Configuration Information **C-7**
 IP Settings **C-7**
 Completing the Setup Program **C-7**