CISCO SYSTEMS

Cisco ME 3400 and Cisco ME 2400 Ethernet Access Switches Getting Started Guide
INCLUDING LICENSE AND WARRANTY

1 About this Guide

This guide provides instructions on how to initially configure your Cisco Metro Ethernet (ME) switch. Also covered are switch management options, basic rack-mounting procedures, port and module connections, power connection procedures, and troubleshooting help.

For additional installation and configuration information, see the Cisco ME switch documentation on Cisco.com. For system requirements, important notes, limitations, open and resolved bugs, and last-minute documentation updates, see the release notes, also on Cisco.com.

When using the online publications, refer to the documents that match the Cisco IOS software version that is running on the switch. Look on the switch rear panel to locate the software version.

You can order printed copies of the manuals from the Cisco.com sites and from the telephone numbers listed in the "Obtaining Documentation" section on page 20.

Before you set up your switch, and to see translations of safety warnings, review the warnings that appear in the *Regulatory Compliance and Safety Information for the Cisco ME 3400 and Cisco ME 2400 Switches* that accompanies this guide.

2 Taking Out What You Need

Follow these steps:

1. Unpack and remove the switch and the accessory kit from the shipping box.
2. Return the packing material to the shipping container, and save it for future use.
3. Verify that you have received the items shown in the "Shipping Box Contents" section on page 3. If any item is missing or damaged, contact your Cisco representative or reseller for instructions. Some switch models might include additional items that are not shown on page 3. Some items are optional and you must order or supply them separately.

## Equipment That You Supply to Set Up Your Switch

You need to supply this equipment to set up your switch:

- PC
- RJ-45-to-DB-9 adapter cable (if you did not order one with your switch)
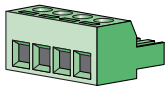- Ethernet (Category 5) straight-through cable (as shown)

Shipping Box Contents

These items ship with your switch, depending on the options that you choose and the type of switch that you order. Some items shown are optional.

Cisco ME switch
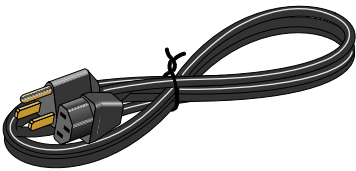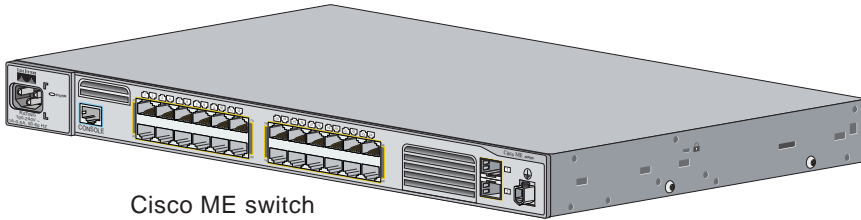
AC power cord

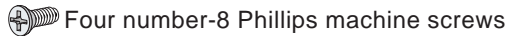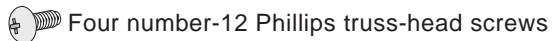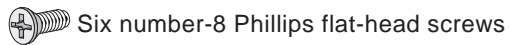Power cord bail

DC terminal block
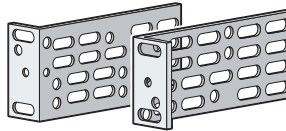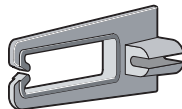
Two 19-inch mounting brackets
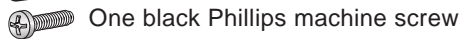
Four number-8 Phillips machine screws

Four number-12 Phillips truss-head screws

Six number-8 Phillips flat-head screws
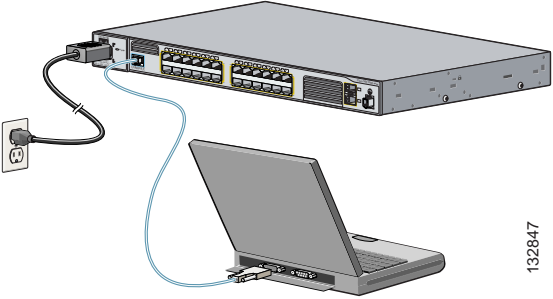
Cable guide

One black Phillips machine screw

Cisco Product Ownership Registration card

Cisco ME Switch Getting Started Guide

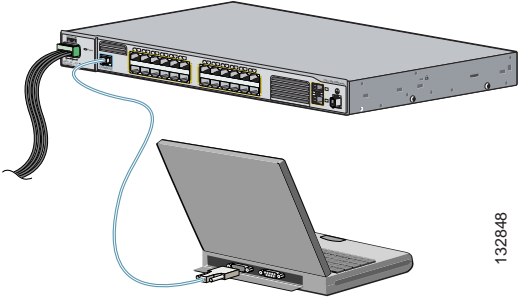Regulatory Compliance and Safety Information for the Cisco ME Switch
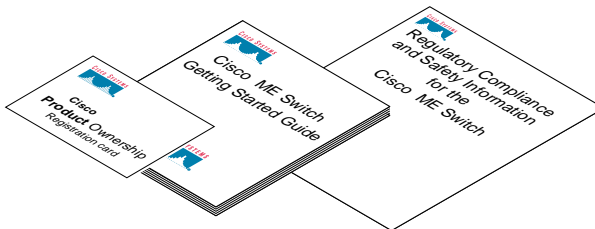
Documentation

3 Initial Setup

To enter the initial IP information when you first set up the switch, you can use the initial configuration dialog (also named the System Configuration Dialog), a command-line interface (CLI)-based application embedded in the flash memory. Initially configuring the switch enables it to connect to local routers and the Internet. You can then access the switch through the IP address for further configuration.

Follow these steps to set up your switch before you run the initial configuration dialog:

Step 1	Obtain and make note of this information from your network administrator before you start the setup program:	• Switch IP address • Subnet mask (IP netmask) • Default gateway (router) • Enable secret password • Enable password • Telnet password
Step 2	Using an RJ-45-to-DB-9 adapter cable (console cable), insert the RJ-45 connector into the console port on the front of the switch. You must supply the console cable if you did not order one with your switch. This illustration shows the Cisco ME AC switch.	
Step 3	Before you power on the switch, start the terminal emulation session so you will be able to see the output display from the power-on self-test (POST). The terminal-emulation software—a PC application such as Hyperterminal or ProcommPlus—makes communication between the switch and your PC or terminal possible.	
Step 4	Configure the baud rate and character format of the PC or terminal to match these console port default characteristics:	• 9600 baud • 8 data bits • 1 stop bit • No parity • None (flow control)

Step 5	Connect the switch to a power source.	
	Typical power consumption = 25 W	
	Maximum power consumption = 40 W	
	This illustration shows the Cisco ME DC switch. Connect one end of the supplied DC power cord to the power connector on a switch front panel. Connect the other end of the power cable to a DC outlet.	✎ **Note** Use only one of the ground connections, either the one on the front panel or the one on the rear panel.
	For detailed instructions to connect to a DC power source, see the "Connecting to DC Power" appendix in the switch hardware installation guide available on cisco.com.	To order spare or replacement DC connectors, use one of these sources:
		• Digi-Key, part number 277-1013-ND, www.digikey.com
		• Phoenix Contact, part number 1757035, www.phoenixcontact.com
Step 6	Power on the switch using either the AC power cord or the DC power connector as appropriate.	
Step 7	Wait for the switch to complete the POST.	It might take several minutes for the switch to complete POST.
Step 8	Verify that POST has completed by confirming that the System LED rapidly blinks green. If the switch fails POST, the System LED turns amber.	POST errors are usually fatal. Call Cisco Systems immediately if your switch fails POST.
Step 9	Wait for the switch to complete flash initialization. When you see the prompt Press Return to Get Started!, press Return or Enter.	`Press RETURN to get started!`
Step 10	Go to the "Completing the Initial Configuration" section on page 6 to continue.	

Completing the Initial Configuration

Follow these steps to complete the setup program and create an initial configuration for the switch.

Step 1	After you press Enter or Return after the prompt to start the initial configuration setup program, enter Yes at these three prompts:

```
Would you like to terminate autoinstall? [yes/no]: yes

Would you like to enter the initial configuration dialog? [yes/no]: yes

At any point you may enter a question mark '?' for help.
Use ctrl-c to abort configuration dialog at any prompt.
Default settings are in square brackets '[]'.

Basic management setup configures only enough connectivity
for management of the system, extended setup will ask you
to configure each interface on the system.

Would you like to enter basic management setup? [yes/no]: yes
```

Step 2	Enter a host name for the switch, and press Return.

The host name is limited to 20 characters. Do not use *-n*, where n is a number, as the last character in a host name for any switch.

```
Enter host name [Switch]: host_name
```

Step 3	Enter an enable secret password, and press Return.

The password can be from 1 to 25 alphanumeric characters, can start with a number, is case sensitive, allows spaces, but ignores leading spaces. The secret password is encrypted and the enable password is in plain text.

```
Enter enable secret: secret_password
```

Step 4	Enter an enable password, and press Return.

```
Enter enable password: enable_password
```

Step 5	Enter a virtual terminal (Telnet) password, and press Return.

The password can be from 1 to 25 alphanumeric characters, is case sensitive, allows spaces, but ignores leading spaces.

```
Enter virtual terminal password: terminal-password
```

Step 6	(Optional) Configure Simple Network Management Protocol (SNMP) by responding to the prompts. You can also configure SNMP later through the command-line interface (CLI). To configure SNMP later, enter no.

```
Configure SNMP Network Management? [no]: no
```

Step 7	Enter the interface name (physical interface or VLAN name) of the interface that connects to the management network, and press Return. For this release, always enter vlan1 for the interface name at this prompt.	
| | ```
Enter interface name used to connect to the
management network from the above interface summary: vlan1
``` | |
| **Step 8** | To configure the interface, enter Yes after the prompt, and then enter the switch IP address and subnet mask. Press Return.<br><br>The IP address and subnet mask shown on the right are examples. | ```
Configuring interface vlan1:
Configure IP on this interface? [yes]: yes

IP address for this interface: 10.4.120.106

Subnet mask for this interface [255.0.0.0]:
255.0.0.0
``` |
| **Step 9** | Enter N when the prompt asks you if you would like to enable the switch as a cluster command switch. This switch will be a standalone switch.<br><br>```
Would you like to enable as a
cluster command switch? [yes/no]:
no
```<br><br>You have now completed the initial configuration of the switch, and the switch displays its initial configuration. An example of the output that appears is shown on the right. | ```
The following configuration command script
was created:
hostname switch1
enable secret 5
$1$Ulq8$DlA/OiaEbl90WcBPd9cOn1
enable password enable_password
line vty 0 15
password terminal-password
no snmp-server
!
no ip routing

!
interface Vlan1
no shutdown
ip address 10.4.120.106 255.0.0.0
!
interface FastEthernet0/1
!
interface FastEthernet0/2

...<output abbreviated>

interface FastEthernet1/0/3
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
end
``` |

Step 10	These choices are displayed:

```
[0] Go to the IOS command prompt without saving this config.

[1] Return back to the setup without saving this config.

[2] Save this configuration to nvram and exit.

If you want to save the configuration and use it the next time the switch
reboots, save it in NVRAM by selecting option 2.

Enter your selection [2]:2
```

Make your selection, and press Return.

Step 11	Disconnect the switch from the PC, and install the switch in your production network. See the "Managing the Switch through the CLI" section on page 8 for information about configuring and managing the switch.
	If you need to rerun the initial configuration dialog, see the "Resetting the Switch" section on page 18.

Refreshing the PC IP Address

For a dynamically assigned IP address, disconnect the PC from the switch, and reconnect it to the network. The network DHCP server will assign a new IP address to the PC.

For a statically assigned IP address, change it to the previously configured IP address.

4 Managing the Switch through the CLI

After initially setting up and installing the switch in your network, you can enter Cisco IOS commands and parameters through the CLI. Access the CLI either by connecting your PC directly to the switch console port or through a Telnet session from a remote PC or workstation.

Other Management Options

You can use SNMP management applications such as CiscoWorks Small Network Management Solution (SNMS) and HP OpenView to configure and manage the switch. You also can manage it from an SNMP-compatible workstation that is running platforms such as HP OpenView or SunNet Manager.

The Cisco IE2100 Series Configuration Registrar is a network management device that works with embedded CNS agents in the switch software. You can use IE2100 to automate initial configurations and configuration updates on the switch.

See the "Accessing Help Online" section on page 18 for a list of supporting documentation.

5   Rack-Mounting and Switch Port Connections

This section covers basic 19-inch rack-mounting and switch port connections. For alternate mounting procedures, such as installing the switch in a 23-inch, 24-inch, or a European Telecommunication Standards Institute (ETSI) rack, installing a switch on a wall, and for additional cabling information, see the *Cisco ME 3400 Ethernet Access Switch Hardware Installation Guide* or the *Cisco ME 2400 Ethernet Access Switch Hardware Installation Guide* on Cisco.com.

Equipment That You Supply

You need to supply a number-2 Phillips screwdriver to rack-mount the switch. Alternative mounting hardware such as ETSI brackets or other hardware that does not ship with the switch must be supplied separately.

Before You Begin

When determining where to install the switch, verify that these guidelines are met:

- Airflow around the switch and through the vents is unrestricted.
- Clearance to the switch front and rear panels meets these conditions:
  - System LED and port LEDs can be easily read.
  - Access to ports is sufficient for unrestricted cabling.
  - For an AC switch, the AC power cord can reach from the AC power outlet to the connector on the switch front panel.
  - For a DC switch, the DC power source feeds are sufficient in length to reach to the DC terminal block on the front panel.
- Cabling is away from sources of electrical noise, such as radios, power lines, and fluorescent lighting fixtures.
- For 10/100 ports, the cable length from a switch to an attached device cannot exceed 328 feet (100 meters).
- For cable lengths for small form-factor pluggable (SFP) modules, see the documentation that shipped with the module.
- Temperature around the switch does not exceed 122˚F (50˚C).
- Humidity around the switch does not exceed 95 percent.
- Altitude at the installation site is not greater than 10,000 feet.

Installation Warning Statements

This section includes the basic installation warning statements. Translations of these warning statements and a complete list of warnings that are applicable to this switch appear in the *Regulatory Compliance and Safety Information for the Cisco ME 3400 and Cisco ME 2400 Ethernet Access Switches* document that shipped with your switch.

⚠️

Warning **To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of:**
122 F (50 C) Statement 1047

⚠️

Warning **Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.** Statement 43

Warning   **Do not stack the chassis on any other equipment. If the chassis falls, it can cause severe bodily injury and equipment damage.** Statement 48

Warning   **Before performing any of the following procedures, ensure that power is removed from the DC circuit.** Statement 1003

Warning   **To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:**

- **This unit should be mounted at the bottom of the rack if it is the only unit in the rack.**
- **When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.**
- **If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.** Statement 1006

Warning   **Class 1 laser product.** Statement 1008

Warning   **A readily accessible two-poled disconnect device must be incorporated in the fixed wiring.** Statement 1022

Warning   **This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.** Statement 1024

Warning   **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.** Statement 1030

Warning   **For connections outside the building where the equipment is installed, the following ports must be connected through an approved network termination unit with integral circuit protection: 10/100/1000 Ethernet.** Statement 1044

Warning   **This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations.** Statement 1045

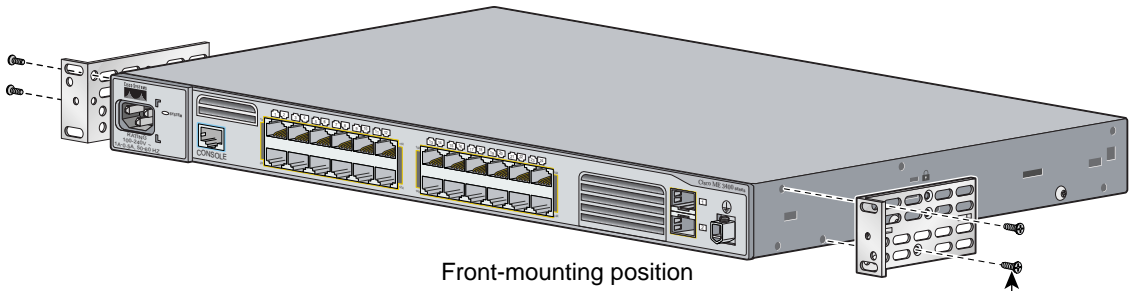**Warning**   **No user-serviceable parts inside. Do not open.** Statement 1073
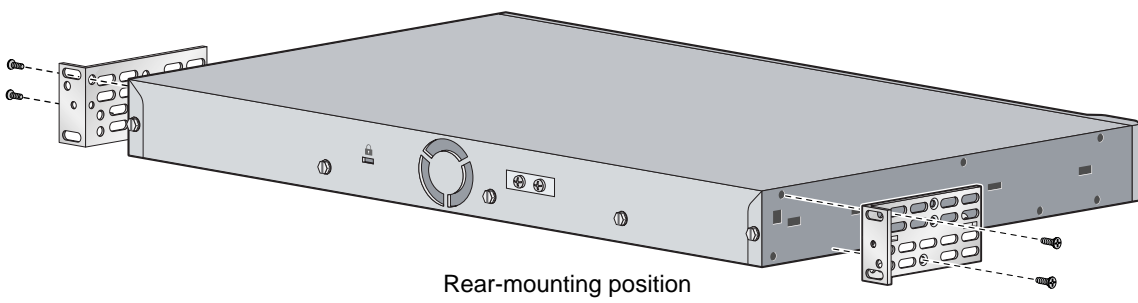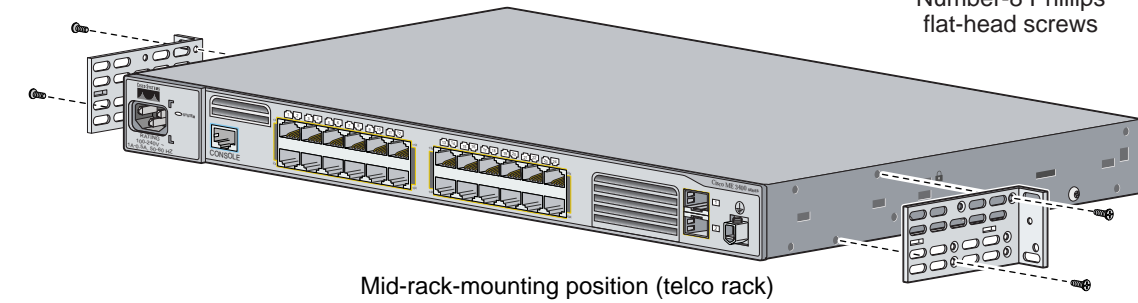
Warning   **Installation of the equipment must comply with local and national electrical codes.** Statement 1074

Attaching the Brackets

Use four Phillips flat-head screws to attach the long side of the brackets to the switches in one of three mounting positions.
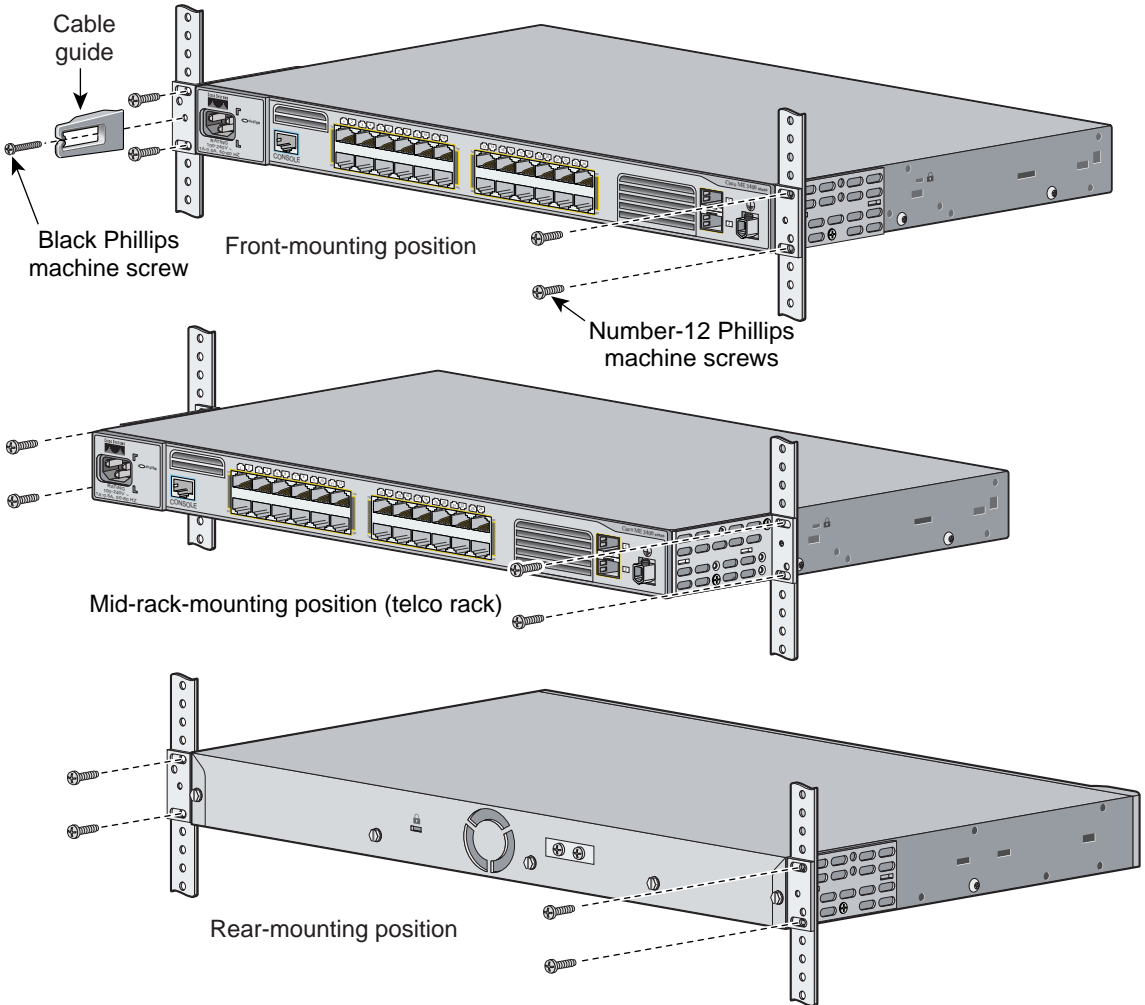
Front-mounting position

Number-8 Phillips flat-head screws

Mid-rack-mounting position (telco rack)

Rear-mounting position

Rack-Mount the Switch

Use the black Phillips machine screw to attach the cable guide to the left or right bracket. Use the four number-12 Phillips machine screws to attach the brackets to the rack.
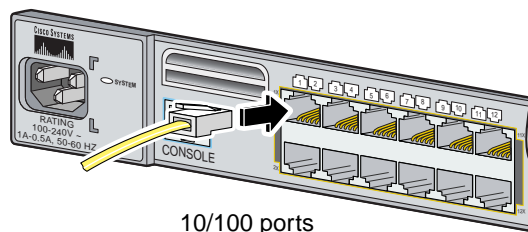
Cable guide

Black Phillips machine screw

Front-mounting position

Number-12 Phillips machine screws

Mid-rack-mounting position (telco rack)

Rear-mounting position

Connect to the Switch Ports

This section describes how to connect to the fixed switch ports and to the SFP module ports.

Connect to 10/100 Ports

Follow these steps:

Step 1	When you connect to servers, workstations, IP phones, wireless access points, and routers, insert a straight-through, twisted four-pair, Category 5 cable in a switch 10/100 port. Use a crossover, twisted four-pair, Category 5 cable when you connect to other switches, hubs, or repeaters.

10/100 ports

Step 2	Insert the other cable end into an RJ-45 connector on the other device.

✎

Note   The automatic medium-dependent interface crossover (auto-MDIX) feature is enabled by default on switches running Cisco IOS Release 12.2(18)SE or later. When the auto-MDIX feature is enabled, the switch detects the required cable type for copper Ethernet connections and configures the interfaces accordingly. Therefore, you can use either a crossover or a straight-through cable for connections to a copper 10/100 or 1000BASE-T SFP module port on the switch, regardless of the type of device on the other end of the connection.
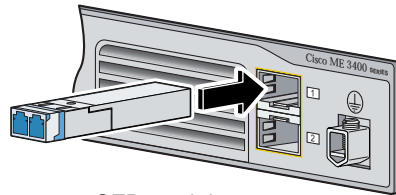
Install the SFP Modules and Connect to the Ports

✎

Note   If you install the SFP module into slot 1, the label on that module faces up. If you install the SFP module into slot 2, the label on that module faces down.
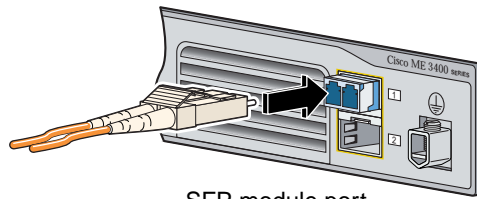
Follow these steps:

Step 1   Grasp the module on the sides, and insert it into the switch slot until you feel the connector snap into place.

SFP module

Step 2   Insert an appropriate cable into the module port. Insert the other cable end into the other device.

SFP module port

For a list of supported modules, see the release notes on Cisco.com. For detailed instructions on installing, removing, and connecting to SFP modules, see the documentation that came with the SFP module.

⚠

Caution   Removing and installing an SFP module can shorten its useful life. Do not remove and insert SFP modules more often than is absolutely necessary.

For instructions on using the SFP patch cable, see the "Switch Installation" chapter of the hardware installation guide.

Verify Port Connectivity

After you connect to the switch port, the port LED turns amber while the switch establishes a link. This process takes about 30 seconds, and then the port LED turns green when the switch and the target device have an established link. If the LED is off, the target device might not be turned on, there might be a cable problem, or there might be a problem with the adapter installed in the target device. See the "In Case of Difficulty" section on page 17 for information about online assistance.

6   In Case of Difficulty

If you experience difficulty, help is available here and on Cisco.com. This section includes initial setup troubleshooting, how to reset the switch, how to access help online, and where to find more information.

Troubleshooting Initial Configuration Setup

If you have problems running the initial configuration dialog:

- Did you verify that POST successfully ran before running the initial configuration dialog?

  If not, make sure that only the System LED is green before pressing the Break key or entering a break character.

- Did you press the Break key while the switch was still running POST?

  If yes, wait until POST completes. Power cycle the switch. Wait until POST completes. Confirm that the System LED is green. Enter Reload to reinstall the flash.

- Did you wait 30 seconds after connecting the switch and the PC before entering the IP address in your browser?

  If not, wait 30 seconds, re-enter 10.0.0.1 in the browser, and press Enter.

- Did you lock yourself out and forget your password?

  See the "Recovering from a Lost or Forgotten Password" section in the Troubleshooting appendix of the software configuration guide if you lock yourself out and forget your password.

To order spare or replacement DC connectors, use one of these sources:
- Digi-Key, part number 277-1013-ND, www.digikey.com
- Phoenix Contact, part number 1757035, www.phoenixcontact.com

Resetting the Switch

This section describes how to reset the switch by rerunning the initial configuration dialog (System Configuration Dialog). These are reasons why you might want to reset the switch:

- You installed the switch in your network and cannot connect to it because you assigned the wrong IP address.
- You want to clear all configuration from the switch and assign a new IP address.

⚠️

Caution   Resetting the switch deletes the configuration and reboots the switch.

To reset the switch:

- At the switch prompt, enter enable and press Return or Enter.
- At the Privileged EXEC prompt, switch#, enter setup and press Return or Enter.

The switch displays the prompt to run the initial configuration dialog. See the "Initial Setup" section on page 4 to re-enter the configuration information and setup your switch.

Accessing Help Online

First look for a solution to your problem in the troubleshooting sections of the hardware installation guide or the software configuration guide for your switch on Cisco.com. You can also access the Cisco Technical Support and Documentation website for a list of known hardware problems and extensive troubleshooting documentation, including:

- Factory defaults and password recovery
- Recovery from corrupted or missing software
- Switch port problems
- Network interface cards
- Troubleshooting tools
- Field notices and security advisories

Follow these steps:

1. Open your browser, and go to http://www.cisco.com/.
2. Click Technical Support and Documentation.

3. Click Product Support > Switches > LAN Switches > Cisco ME 3400 Ethernet Access Switches > Troubleshooting
   or
   Product Support > Switches > LAN Switches > Cisco ME 2400 Ethernet Access Switches > Troubleshooting

4. Click the subject that addresses the problem that you are experiencing.

For More Information

For more information about the switch, see these documents on Cisco.com:

- *Cisco ME 3400 Ethernet Access Switch Hardware Installation Guide* (not orderable, but available on Cisco.com). This guide provides complete hardware descriptions and detailed installation procedures.

- *Cisco ME 2400 Ethernet Access Switch Hardware Installation Guide* (not orderable, but available on Cisco.com). This guide provides complete hardware descriptions and detailed installation procedures.

- *Regulatory Compliance and Safety Information for the Cisco ME 3400 and Cisco ME 2400 Ethernet Access Switches* (order number DOC-78-17051=). This guide contains agency approvals, compliance information, and translated warning statements.

- *Release Notes for the Cisco ME 3400 Ethernet Access Switch* (not orderable but available on Cisco.com)

- *Cisco ME 3400 Ethernet Access Switch Software Configuration Guide* (order number DOC-78-17058=). This guide provides a product overview and detailed descriptions and procedures of the switch software features.

- *Cisco ME 3400 Ethernet Access Switch Command Reference* (order number DOC-78-17060=). This reference provides detailed descriptions of the Cisco IOS commands specifically created or modified for the switch.

- *Cisco ME 3400 Ethernet Access Switch System Message Guide* (order number DOC-78-17062=). This guide provides descriptions of the system messages specifically created or modified for the switch.

- *Release Notes for the Cisco ME 2400 Ethernet Access Switch* (not orderable but available on Cisco.com)

- *Cisco ME 2400 Ethernet Access Switch Software Configuration Guide* (order number DOC-78-17059=). This guide provides a product overview and detailed descriptions and procedures of the switch software features.

- *Cisco ME 2400 Ethernet Access Switch Command Reference* (order number DOC-78-78-17061=). This reference provides detailed descriptions of the Cisco IOS commands specifically created or modified for the switch.

- *Cisco ME 2400 Ethernet Access Switch System Message Guide* (order number DOC-78-17063-=). This guide provides descriptions of the system messages specifically created or modified for the switch.

- *Cisco Gigabit Ethernet Transceiver Modules Compatibility Matrix* (not orderable but available on Cisco.com)

- *Cisco 100-Megabit Ethernet SFP Modules Compatibility Matrix* (not orderable but available on Cisco.com)

- *Cisco CWDM SFP Transceiver Compatibility Matrix* (not orderable but available on Cisco.com)

- *Cisco Small Form-Factor Pluggable Modules Installation Notes* (order number DOC-7815160=)

- *Cisco CWDM GBIC and CWDM SFP Installation Notes* (not orderable but available on Cisco.com)

- *Cisco Small Form-Factor Pluggable Modules Compatibility Matrix* (not orderable but available on Cisco.com)

- *Compatibility Matrix for 1000BASE-T Small Form-Factor Pluggable Modules* (not orderable but available on Cisco.com)

7   Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

http://www.cisco.com/techsupport

You can access the Cisco website at this URL:

http://www.cisco.com

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Product Documentation DVD

Cisco documentation and additional literature are available in the Product Documentation DVD package, which may have shipped with your product. The Product Documentation DVD is updated regularly and may be more current than printed documentation.

The Product Documentation DVD is a comprehensive library of technical product documentation on portable media. The DVD enables you to access multiple versions of hardware and software installation, configuration, and command guides for Cisco products and to view technical documentation in HTML. With the DVD, you have access to the same documentation that is found on the Cisco website without being connected to the Internet. Certain products also have .pdf versions of the documentation available.

The Product Documentation DVD is available as a single unit or as a subscription. Registered Cisco.com users (Cisco direct customers) can order a Product Documentation DVD (product number DOC-DOCDVD=) from Cisco Marketplace at this URL:

http://www.cisco.com/go/marketplace/

Ordering Documentation

Beginning June 30, 2005, registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

http://www.cisco.com/go/marketplace/

Nonregistered Cisco.com users can order technical documentation from 8:00 a.m. to 5:00 p.m. (0800 to 1700) PDT by calling 1 866 463-3487 in the United States and Canada, or elsewhere by calling 011 408 519-5055. You can also order documentation by e-mail at tech-doc-store-mkpl@external.cisco.com or by fax at 1 408 519-5001 in the United States and Canada, or elsewhere at 011 408 519-5001.

8 Documentation Feedback

You can rate and provide feedback about Cisco technical documents by completing the online feedback form that appears with the technical documents on Cisco.com.

You can send comments about Cisco documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

9 Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

http://www.cisco.com/go/psirt

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies — security-alert@cisco.com

  An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- Nonemergencies — psirt@cisco.com

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

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Tip   We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.*x* through 8.*x*.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

The link on this page has the current PGP key ID in use.

10 Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, at this URL:

http://www.cisco.com/techsupport

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

http://tools.cisco.com/RPF/register/register.do

Note   Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the Tools & Resources link under Documentation & Tools. Choose Cisco Product Identification Tool from the Alphabetical Index drop-down list, or click the Cisco Product Identification Tool link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting show command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

http://www.cisco.com/techsupport/servicerequest

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)
EMEA: +32 2 704 55 55
USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

http://www.cisco.com/techsupport/contacts

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is "down," or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

11 Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

  http://www.cisco.com/go/marketplace/

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

  http://www.ciscopress.com

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

  http://www.cisco.com/packet

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

  http://www.cisco.com/go/iqmagazine

  or view the digital edition at this URL:

  http://ciscoiq.texterity.com/ciscoiq/sample/

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

  http://www.cisco.com/ipj

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

  http://www.cisco.com/en/US/products/index.html

- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

  http://www.cisco.com/discuss/networking

- World-class networking training is available from Cisco. You can view current offerings at this URL:

http://www.cisco.com/en/US/learning/index.html

12 Cisco 90-Day Lifetime Hardware Warranty Terms

There are special terms applicable to your hardware warranty and various services that you can use during the warranty period. Your formal Warranty Statement, including the warranties and license agreements applicable to Cisco software, is available on Cisco.com. Follow these steps to access and download the *Cisco Information Packet* and your warranty and license agreements from Cisco.com.

1. Launch your browser, and go to this URL:

   http://www.cisco.com/univercd/cc/td/doc/es_inpck/cetrans.htm

   The Warranties and License Agreements page appears.

2. To read the *Cisco Information Packet*, follow these steps:

   a. Click the Information Packet Number field, and make sure that the part number 78-5235-03A0 is highlighted.

   b. Select the language in which you would like to read the document.

   c. Click Go.

   d. The Cisco Limited Warranty and Software License page from the Information Packet appears.

   e. Read the document online, or click the PDF icon to download and print the document in Adobe Portable Document Format (PDF).

   > ✎
   >
   > **Note**   You must have Adobe Acrobat Reader to view and print PDF files. You can download the reader from Adobe's website: http://www.adobe.com

3. To read translated and localized warranty information about your product, follow these steps:

   a. Enter this part number in the Warranty Document Number field:

   78-5236-01C0

   b. Select the language in which you would like to read the document.

   c. Click Go.

   The Cisco warranty page appears.

   d. Review the document online, or click the PDF icon to download and print the document in Adobe Portable Document Format (PDF).

You can also contact the Cisco service and support website for assistance:

http://www.cisco.com/public/Support_root.shtml.

Duration of Hardware Warranty

Ninety (90) days.

Replacement, Repair, or Refund Policy for Hardware

Cisco or its service center will use commercially reasonable efforts to ship a replacement part within ten (10) working days after receipt of a Return Materials Authorization (RMA) request. Actual delivery times can vary, depending on the customer location.

Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

To Receive a Return Materials Authorization (RMA) Number

Contact the company from whom you purchased the product. If you purchased the product directly from Cisco, contact your Cisco Sales and Service Representative.

Complete the information below, and keep it for reference:

Company product purchased from	
Company telephone number	
Product model number	
Product serial number	
Maintenance contract number	

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