

# Installation

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This chapter provides information on the following topics:

- Safety
- Unpacking the box that contains your switch
- What you must do before installing your switch
- Installing your switch

## Safety

To ensure personal safety and to protect the switch, use the following guidelines:

- Keep the chassis area clear and dust-free during and after installation.
- Keep tools and chassis components away from walk areas.
- Do not wear loose clothing that could get caught in the chassis. Fasten your tie or scarf and roll up your sleeves.
- Wear safety glasses when working under conditions that might be hazardous to your eyes.
- Do not perform any action that creates a hazard to people or makes the equipment unsafe.



**Caution** Do not place anything on top of the switch that could block the air flow from the vents on top of the switch. Products designed specifically to interoperate with the switch and stacked on top of the switch with the included stacking clip will not block the air flow from the vents.



**Warning** Read the installation instructions before you connect the system to its power source.



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



**Warning** Unplug the power cord before you work on a system that does not have an on/off switch.



**Warning** Ultimate disposal of this product should be handled according to all national laws and regulations.



**Warning** The device is designed to work with TN power systems.



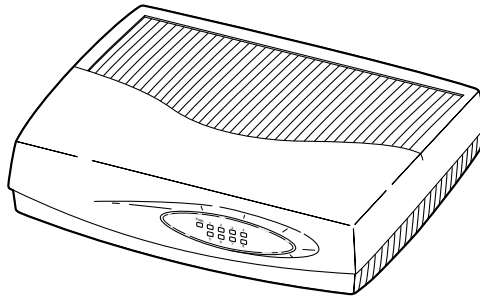
**Warning** Do not work on the system or connect or disconnect cables during periods of lightening activity.



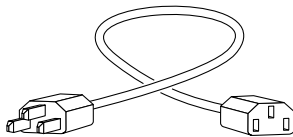
**Warning** The ports labeled “10BaseT,” 100BaseTX,” and “10/100” are safety extra-low voltage (SELV) circuits. SELV circuits should only be connected to other SELV circuits. Avoid connecting these circuits to telephone network voltage (TNV) circuits.

## Unpacking Your Switch

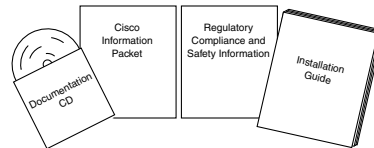
The box that contains your switch should contain the following items. If any of the items are missing or damaged, contact your Cisco reseller.



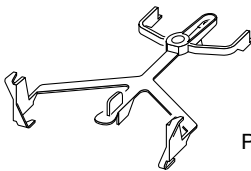
Cisco 1548 Micro Switch 10/100



Power cord



Product documentation



Stacking clip



Plastic fastener



Rubber plug  
(Only for  
stacking  
a router)



Standard slot  
metal screw  
(Only for  
stacking  
a router)

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# Preinstallation

Before you begin installing the switch, you must follow these steps:

- Assemble network devices to be connected to the switch. These devices can include a compatible hub, switch, router, server, PC, or workstation.

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**Note** To be considered compatible, a hub, switch, router, server, PC, or workstation must support either 10BaseT or 100BaseTX.

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- Select your cabling:
  - If you plan to connect a compatible router, server, PC, or workstation, provide one straight-through Ethernet cable for each network device that you plan to connect. Table 2-1 lists the types of straight-through Ethernet cable you can use and their specifications.
  - If you plan to connect a compatible hub without an MDI/MDI-X button, provide one 100BaseTX crossover Ethernet cable for each hub you plan to connect. If you plan to connect a compatible hub that has an MDI/MDI-X button such as a Cisco 1528 Micro Hub 10/100, you can use a 100BaseTX straight-through Ethernet cable. Table 2-1 lists the cables you can use and their specifications.
  - If you plan to connect a compatible switch such as a Cisco 1548 Micro Switch 10/100, provide one 100BaseTX crossover Ethernet cable for each switch you plan to connect. Table 2-1 lists the cables you can use and their specifications.
- If you plan to connect a PC or workstation that runs at 100 Mbps, make sure it has a 100 Mbps-capable network interface card (NIC) installed.

**Table 2-1** Straight-Through and Crossover Ethernet Cable Specifications

Type	Category	Shielding	Maximum Length
10BaseT	Category 3 or 5	Shielded twisted-pair (STP) or unshielded twisted-pair (UTP)	328 ft (100 meters)
100BaseTX	Category 5 only	STP or UTP	328 ft (100 meters)

For more information on straight-through and crossover Ethernet cables, refer to the “Ethernet Cable Specifications” section in Appendix B, “Specifications and Cables.”

## Installing Your Switch

To install your switch, follow these steps:

- 1 Stack the switch (if you are using more than switch or other Cisco products designed to be stacked with the switch).
- 2 Connect the power cord.
- 3 Connect other network devices.

## Stacking the Switch



**Timesaver** If you are using only one switch and no other Cisco products designed to be stacked with the switch, skip this section, and go to the “Connecting Power Cord” section.

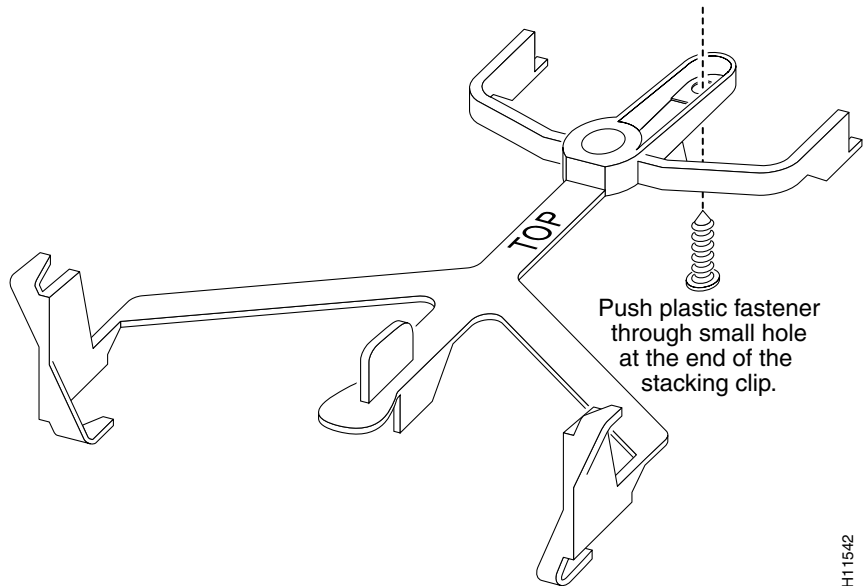
You can stack up to four switches or other Cisco products designed to be stacked with the switch. You can stack each of the devices directly on top of one another.

This section provides information on stacking all Cisco products designed to be stacked with the switch except the Cisco 1600 series router. For information on stacking the Cisco 1600 series router, refer to the “Including Cisco 1600 Series Router In Stack” section.

## Installing Your Switch

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Each switch comes with a stacking clip and a fastener that are used to keep multiple devices together in a stack. Before using the clip, you must assemble the clip and the fastener, as shown.



After pushing the fastener into the stacking clip, use the clip as shown.

**Note** Although the following figure shows how to stack switches, these instructions also apply to other Cisco products designed to be stacked with the switch, except for the Cisco 1600 series router.

### Step 1

Place the clip on top of the lower switch. Slide the clip forward so that the front tabs slide into the vent slots.

### Step 2

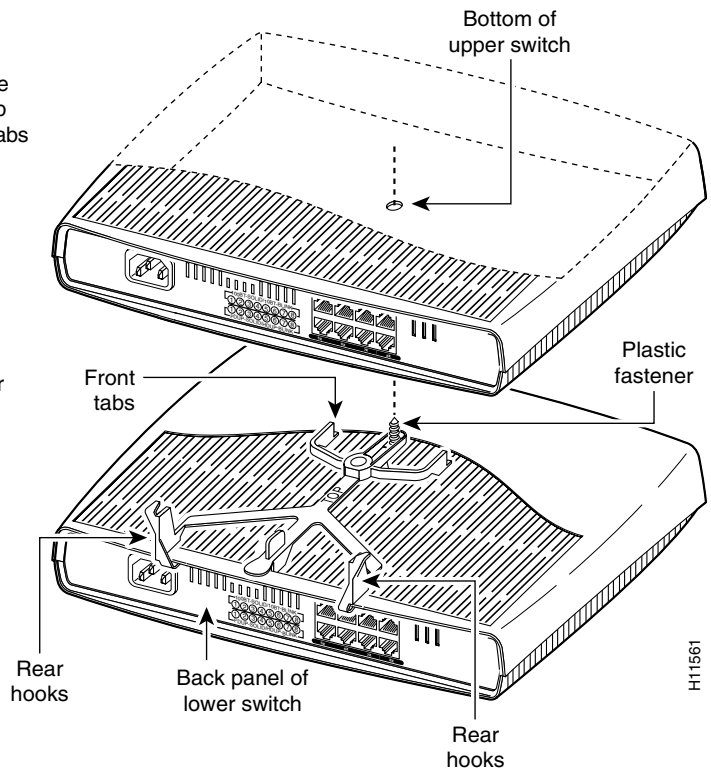
Make sure the rear hooks fit over the edge of the lower switch.

### Step 3

Position the upper switch on the clip so that the rear hooks fit over the edge of the upper switch.

### Step 4

Press down to snap the upper switch on the clip. Make sure the plastic fastener fits into the bottom of the upper switch.



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### Including Cisco 1600 Series Router In Stack

If you plan to include a Cisco 1600 router in the stack, you must place the router on top of the stack. Use the stacking clip as shown in the figure to stack a Cisco 1600 series router onto a switch or other Cisco products designed to be stacked with the switch.

### Step 1.

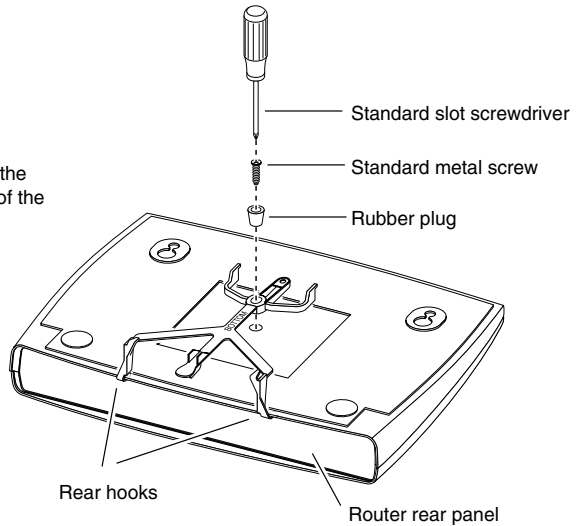
Turn the router upside down, and slide the stacking clip rear hooks over the edge of the router rear panel.

### Step 2.

Insert the rubber plug through the clip and into the hole on the bottom of the router.

### Step 3.

Use a screwdriver to screw the metal screw through the rubber plug into the bottom of the router.

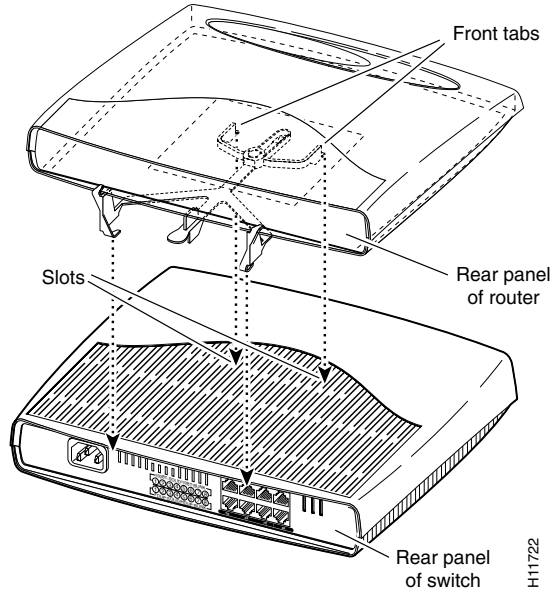


### Step 4.

Place the router on the switch so that the clip front tabs line up with the switch vent slots.

### Step 5.

Slide the router forward so that the rear hooks fit over the edge of the switch rear panel and the front tabs fit into the switch vent slots.



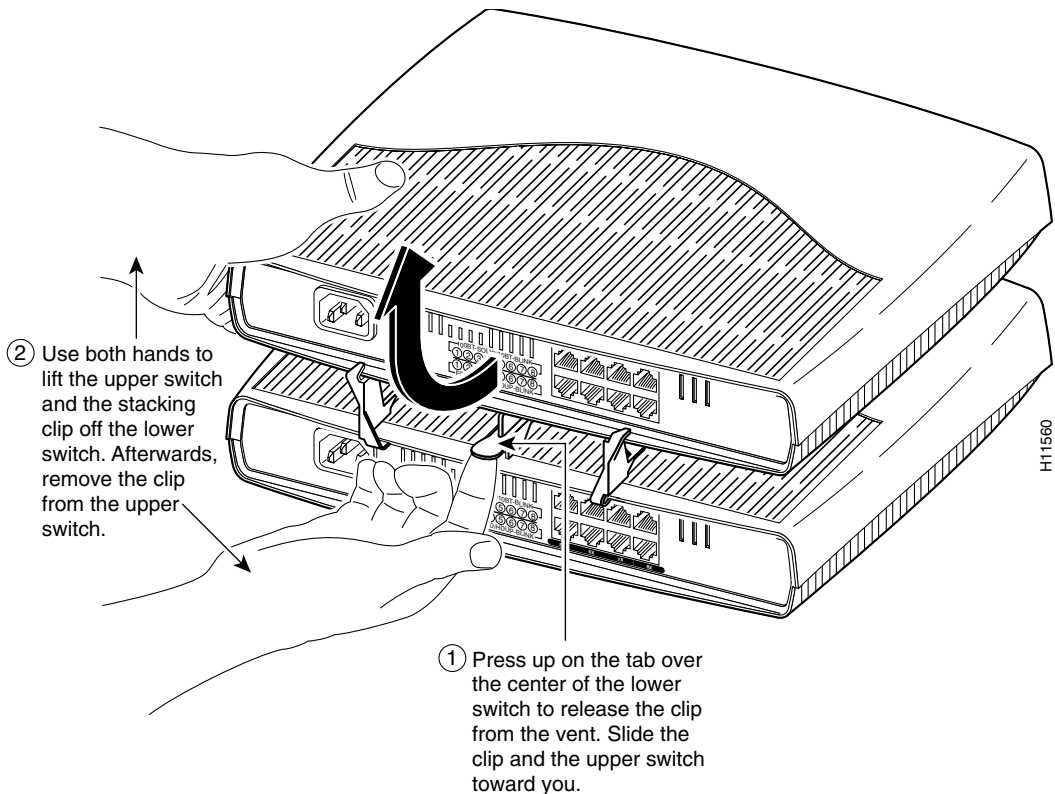
### Unstacking the Switch

To unstack the switches or other Cisco products designed to be stacked with the switch, follow these steps.

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**Note** Although this figure shows how to unstack switches stacked on top of one another, the information also applies to other Cisco products designed to be stacked with the switch.

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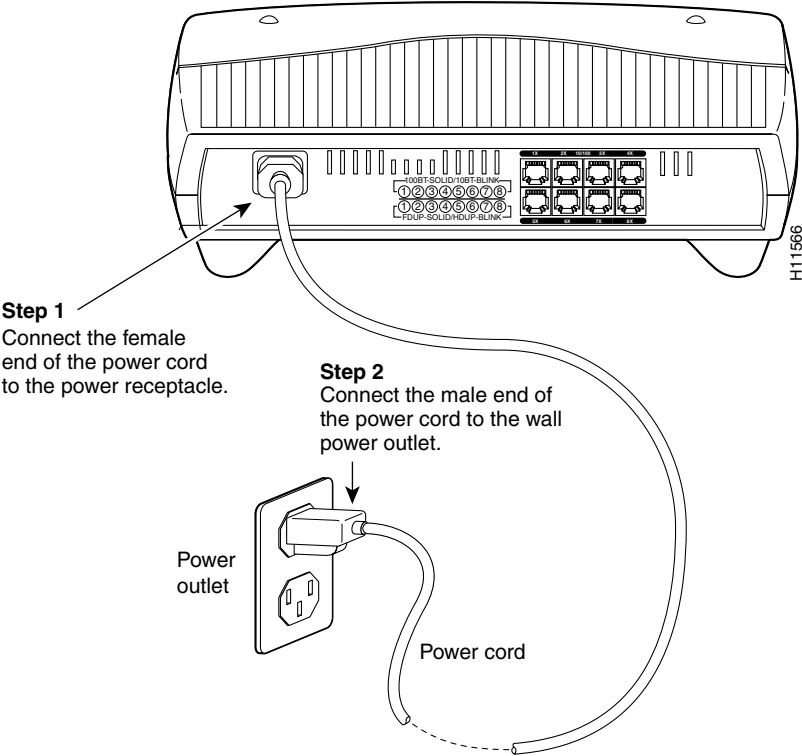


# Connecting Power Cord



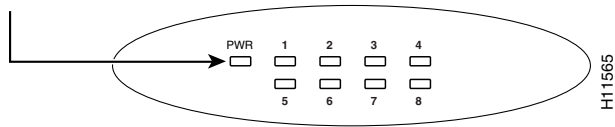
**Warning** This product relies on the building’s installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 10A international) is used on the phase conductors (all current-carrying conductors).

Connect the power cord.



Check the front panel to make sure that the PWR LED is on.

Solid green – Cisco 1548 Micro Switch 10/100 has power.



## Connecting Network Devices to Switch

The following sections describe how to connect the following devices to the switch ports:

- A compatible PC, workstation, router, or server.
- A compatible hub without an MDI/MDI-X button or with an MDI/MDI-X button such as the Cisco 1528 Micro Hub 10/100.
- A compatible switch such as the Cisco 1548 Micro Switch 10/100.

A compatible network device is one that supports either 10BaseT or 100BaseTX. You can connect any combination of 10BaseT and 100BaseTX devices to the switch.

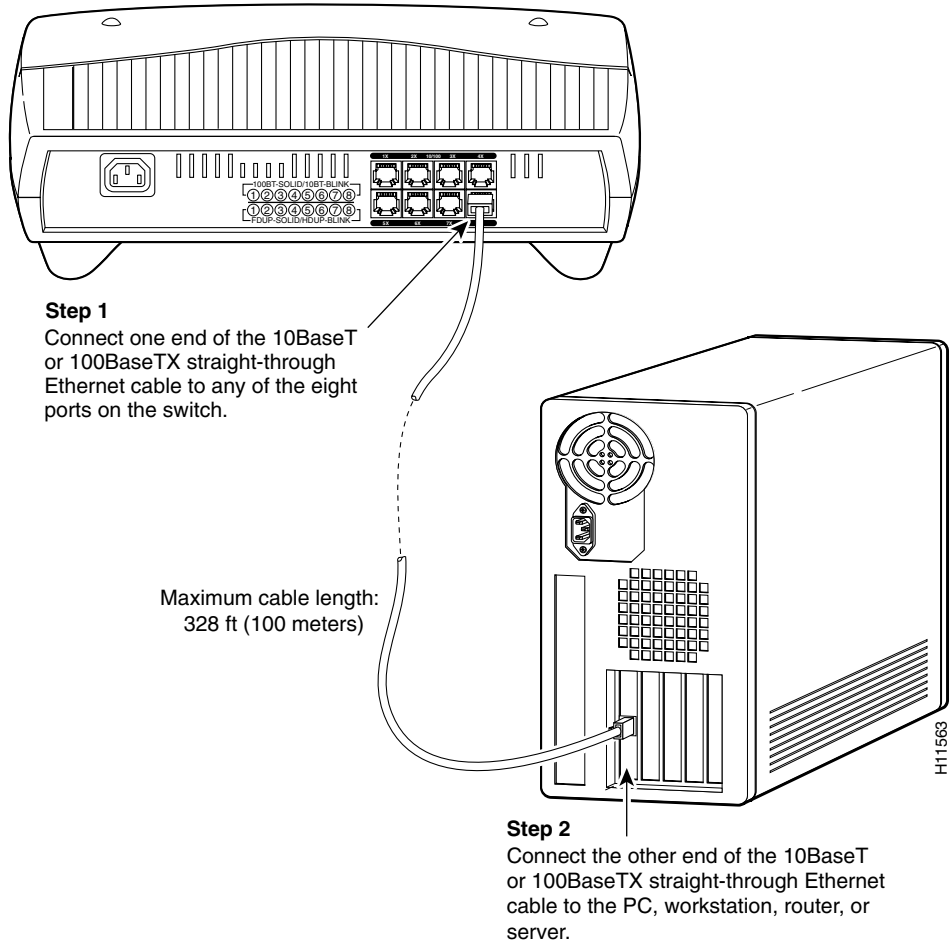
Table 2-2 lists the network devices that you can connect to the switch and summarizes how to connect each device.

**Table 2-2 Connecting Network Devices To Switch**

<b>Network Device</b>	<b>Switch Ports Through Which You Can Make Connection</b>	<b>Ethernet Cable Type</b>
Compatible PC, workstation, router, or server	1 through 8	Straight-through (either 10Base T or 100BaseTX)
Compatible hub without an MDI/MDI-X button	Ports 1 through 8	100BaseTX crossover
Compatible hub with an MDI/MDI-X button such as Cisco 1528 Micro Hub 10/100	Ports 1 through 8 on switch Port associated with MDI/MDI-X button on hub	100BaseTX straight-through
Compatible switch such as Cisco 1548 Micro Switch 10/100	Ports 1 through 8	100BaseTX crossover

### Connecting PCs, Workstations, Routers, or Servers

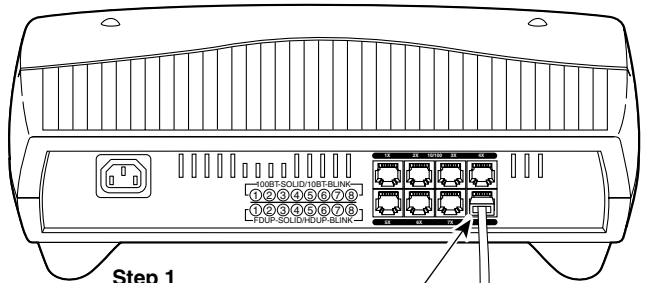
Connect PCs, workstations, routers, or servers to the ports on the switch as shown in the following illustration.



## Connecting a Hub

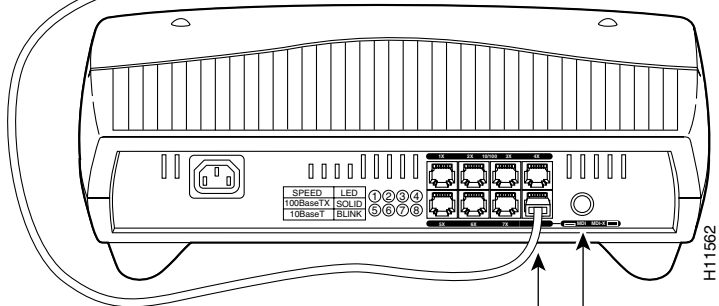
Connect a compatible hub to the ports as shown in the following illustration. If connecting a hub without an MDI/MDI-X button, use a 100BaseTX crossover Ethernet cable. If connecting a hub with an MDI/MDI-X button, such as an Cisco 1528 Micro Hub 10/100, use a 100BaseTX straight-through Ethernet cable.

## Installing Your Switch



**Step 1**  
Connect one end of a 100BaseTX straight-through or crossover Ethernet cable to any of the eight ports on the switch.

Maximum cable length:  
328 ft (100 meters)



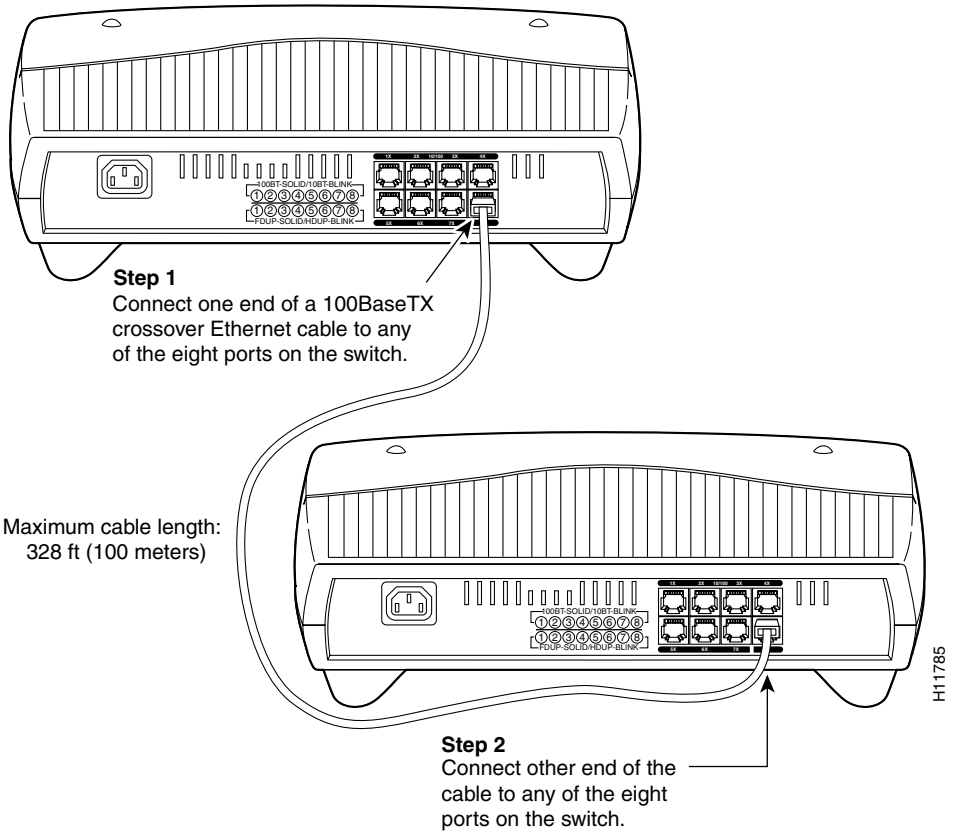
**Step 2**  
If connecting a hub without an MDI/MDI-X button, connect the other end of the cable to any hub port. If connecting a hub with an MDI/MDI-X button, connect the other end of the cable to the hub port associated with the MDI/MDI-X button (port 8 on the Cisco 1528 Micro Hub 10/100).

**Step 3**  
If connecting a hub with an MDI/MDI-X button, make sure the button is set correctly (IN for Cisco 1528 Micro Hub 10/100).

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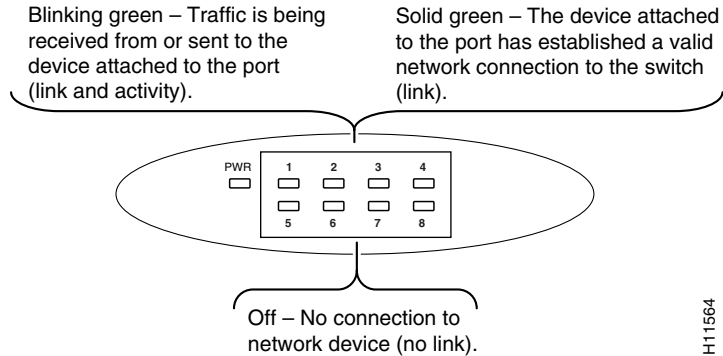
## Connecting a Switch

Connect a compatible switch, such as a Cisco 1548 Micro Switch 10/100, to the ports as shown in the following illustration.



## Verifying That Network Devices Are Connected

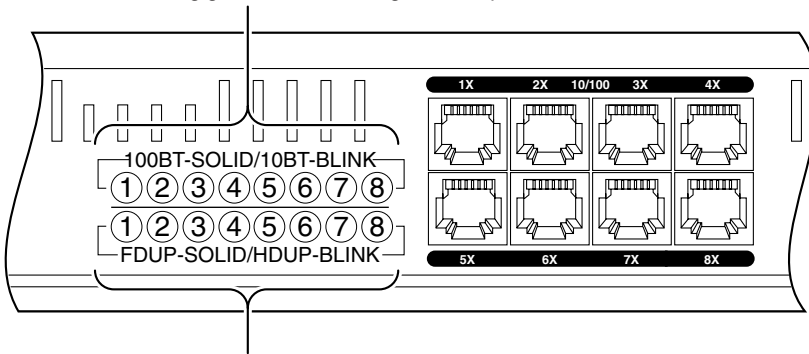
After connecting network devices to the switch ports, check the corresponding port LEDs (labeled 1 through 8) on the front and back panels. The color and blinking pattern of the LEDs indicate the activity for the corresponding switch port.



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### Speed

Solid green – Port running at 100 Mbps.  
 Blinking green – Port running at 10 Mbps.



### Duplex mode

Solid green – Port operating in full-duplex mode.  
 Blinking green – Port operating in half-duplex mode.

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