Installation

This chapter provides the installation procedures for the router in the following sections:

- Before Installing the Router
- Connecting the Router to Your Local Network
- Installing WICs and VICs
- Connecting Power to the Router
- Verifying Your Installation
- Optional Installation Steps

Before Installing the Router

The router is shipped ready for desktop mounting. Before making the power and network connections, simply set the router on a desktop, shelf, or other flat surface.

Note   For instructions on wall-mounting the router, refer to the "Wall-Mounting" section later in this chapter.

Be sure to read the safety information in the *Regulatory Compliance and Safety Information for the Cisco 1600 and Cisco 1700 Routers* document that came with your router.

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

Warning   This equipment needs to be grounded. Use a green and yellow 14 AWG ground wire to connect the host to earth ground during normal use.

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

Caution   Do not place anything on top of the router that weighs more than 10 pounds (4.5 kg). Excessive weight on top of the router could damage the chassis.

Connecting the Router to Your Local Network

The router is connected to your local Ethernet network through the yellow 10/100 Ethernet port. You must provide the following items for this connection:

- A straight-through, RJ-45-to-RJ-45 Ethernet cable

- A 10/100-Mbps Ethernet hub or switch

Warning   The ports labeled *10/100-Mbps Ethernet port* and *Console port* are safety extra-low voltage (SELV) circuits. SELV circuits should only be connected to other SELV circuits. Because BRI circuits are treated like telephone-network voltage, avoid connecting the SELV circuits to the telephone network voltage (TNV) circuits. (To see translated versions of this warning, refer to the *Regulatory Compliance and Safety Information for the Cisco 1600 and Cisco 1700 Routers* document that came with the router.)

Caution   Always connect the Ethernet cable to the yellow ports on the router. Do not connect the cable to an ISDN S/T or U port on a WIC or to an NT1 that is connected to a WIC. Accidently connecting the cable to the wrong port can damage your router.

Follow these steps to connect the router to your local network:

Step 1   Connect one end of the cable to the yellow Ethernet port (labeled *10/100-Mbps Ethernet port*).

Step 2   Connect the other end of the cable to a network port on the hub or switch.

Figure 2-1   Connecting the Router to the Local Network

10/100
Ethernet port

Ethernet hub or switch
(10, 100, or 10/100 Mbps)

Straight-through
Ethernet cable
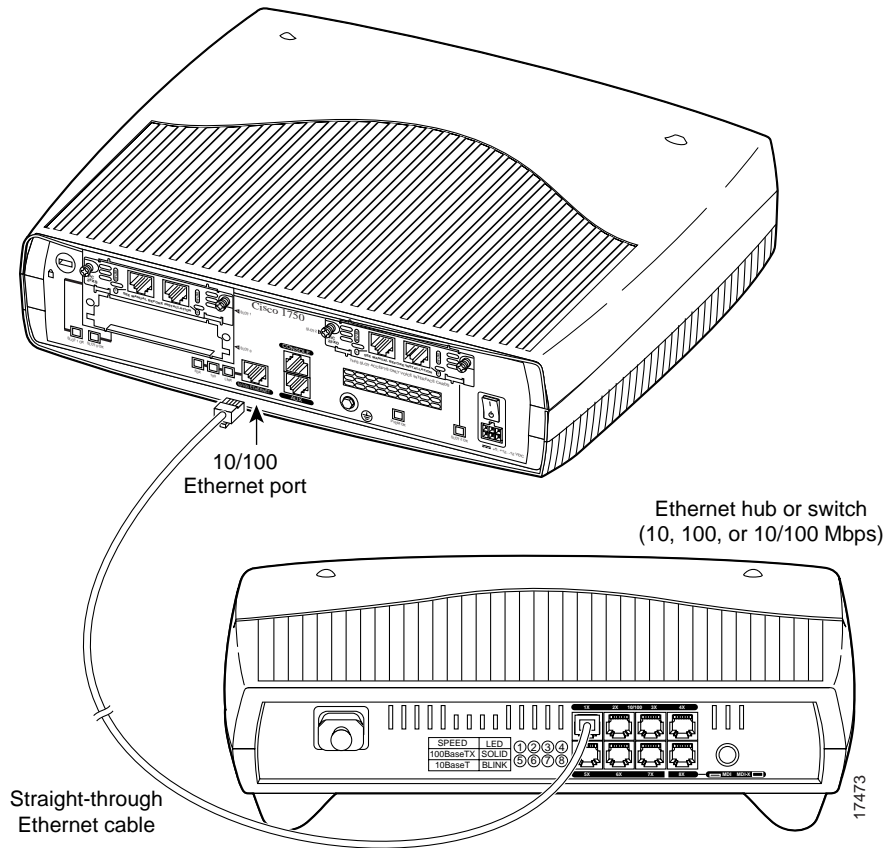
Installing WICs and VICs

The router supports one to two Cisco WICs and one to three Cisco VICs. Each WIC has one or two WAN ports and each VIC has one or two voice ports. This section describes the procedure for installing a WIC or a VIC in the router.

Note   For details on specific WICs and VICs, how to connect a WIC to the WAN line or VIC to the telephone and fax line, and how to configure the interface with Cisco IOS software, refer to the *Cisco WAN Interface Cards Hardware Installation Guide* that came with the card(s).

Safety Information

This section lists safety warnings that you should be aware of before installing WICs or VICs in the router. To see translated versions of these warnings, refer to the *Regulatory Compliance and Safety Information for the Cisco 1600 and Cisco 1700 Routers* document that came with the router.

Warning   Before working on a system that has an on/off switch, turn off the power and unplug the power cord.

Warning   Only trained and qualified personnel should be allowed to install or replace this equipment.

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.

Warning   Before opening the chassis, disconnect the telephone-network cables (from the card) to avoid contact with the telephone-network voltages.

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

Caution   Do not connect a WAN, telephone or fax cable to the card until you have completed the installation procedure.

Follow these steps to remove and insert a card in the router:

Step 1   Make sure the router is turned off and is disconnected from the power supply.

Step 2   Loosen the thumbscrews on the WIC or VIC slot cover on the rear panel, as shown in Figure 2-2.

You should be able to loosen the screws using your fingers; however, if the screws are very tight, you might need to use a Phillips screwdriver.

Figure 2-2   Removing a WIC or VIC Slot Cover

Interface card slot cover
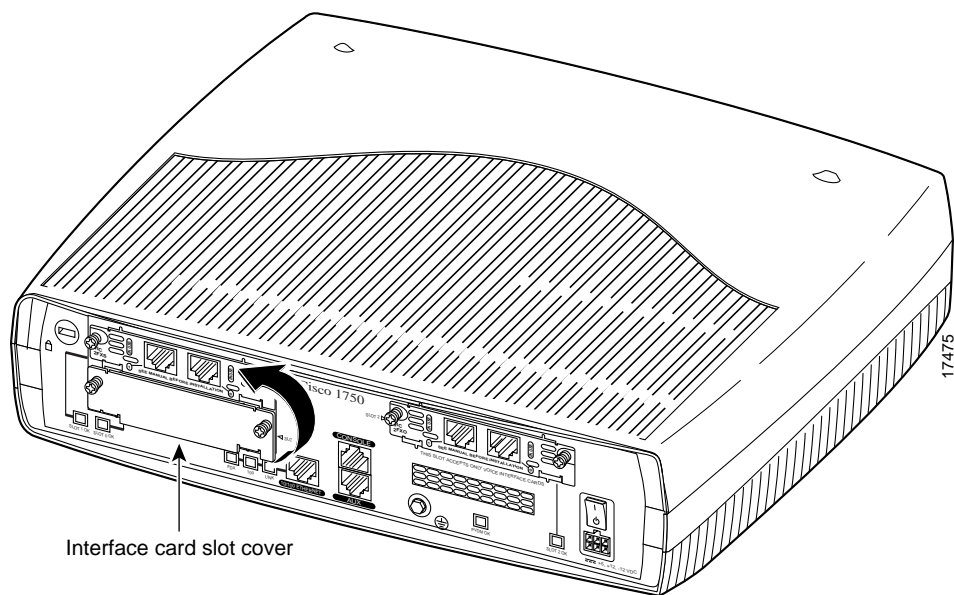
**Step 3**   Remove the metal plate that covers the card slot.

Step 4   Hold the card by the edges on either side of the card front panel, and line up the card edges with the guides inside the card slot, as shown in Figure 2-3.

Step 5 Insert the card in the slot and gently push it into the router until the front panel of the card is flush with the rear panel of the router.

Step 6 Tighten the screws.

Figure 2-3 Inserting a WIC or VIC in the Router
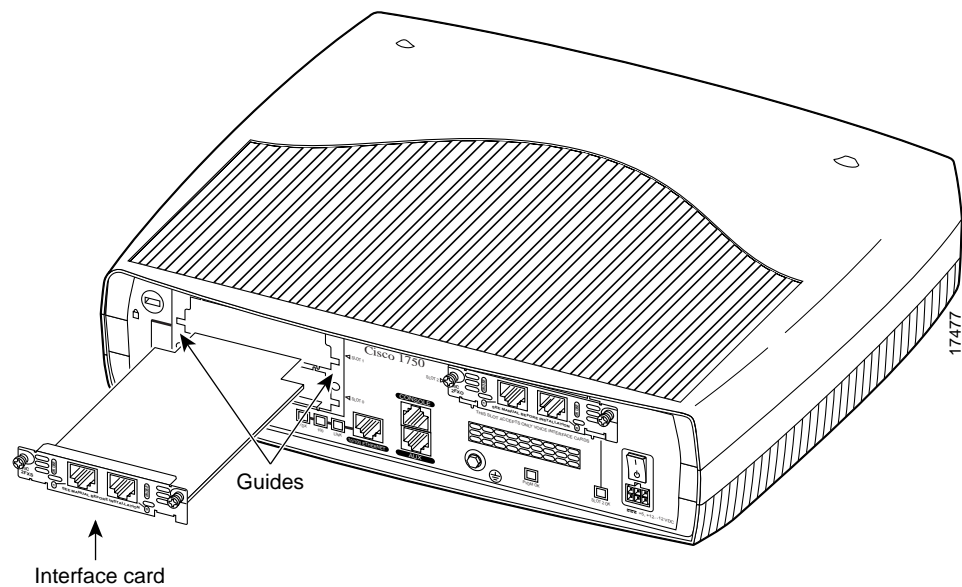
Connecting Power to the Router

Read the following warnings before connecting the power to the router.

Warning The power supply is designed to work with TN power systems.

Warning This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120VAC, 15AU.S. (240VAC, 16A international) is used on the phase conductors (all current-carrying conductors).

⚠️ **Warning** This equipment needs to be grounded. Use a green and yellow 14 AWG ground wire to connect the host to earth ground during normal use.

Follow these steps to connect power to the router and to turn the router on:

Step 1   Connect the attached power-supply cord to the power socket (labeled +5, +12, –12 VDC) on the router rear panel.

Step 2   Connect one end of the separate power cord to the socket on the power supply.

Step 3   Connect the other end of the separate power cord to a power outlet.

Step 4   Press the router power switch to on (|).

Step 5   Confirm that the router has power by checking that the PWR LED on the front panel is on.

Figure 2-4   Connecting the Power Supply
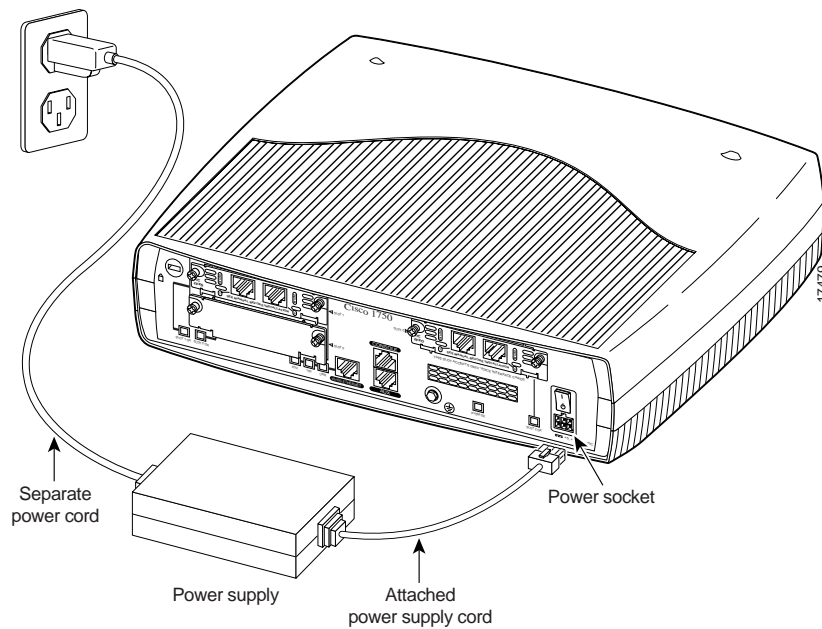
Verifying Your Installation

You can verify that you have correctly installed the router by checking the following LEDs:

- PWR (front panel)—On when power is being supplied to the router.

- OK (front panel)—On when the router software is loaded and functional. Blinking means that the router is performing a power-on self-test (POST).

- ETH ACT (front panel)—Blinking when there is network traffic on the local Ethernet LAN.

- SLOTØ, SLOT1, and SLOT2 (front panel)—Activity on PORTØ and PORT1 of each of these slots varies, depending on the type of WIC or VIC installed. Refer to Table 1-4 in the "Cisco 1750 Router Overview" chapter for detailed information on activity at different ports.

- SLOT 0 and SLOT 1 OK (rear panel)—On when a WIC or VIC is correctly installed in the slot.

- SLOT 2 OK (rear panel)—On when a VIC is correctly installed in the slot.

- LINK (rear panel)—On when the router is correctly connected to the local Ethernet LAN through the 10/100-Mbps Ethernet port.

Optional Installation Steps

This section describes the following installation steps that you might or might not use, depending on your site and how you are configuring the router:

- Connecting a PC

- Connecting a Modem

- Wall-Mounting

Connecting a PC

If you want to configure the router through the Cisco IOS command-line interface (CLI), you must connect the router console port to a terminal or PC. The cable and adapter required for this connection are included with the router.

To configure the router with a PC, the PC must have some type of terminal emulation software installed. The software should be configured with the following parameters: 9600 baud, 8 data bits, no parity, 1 stop bit, no flow control. Refer to the *Cisco 1700 Router Software Configuration Guide* for detailed information about configuring the router using Cisco IOS software.

Follow these steps to connect the router to a terminal or PC:

Step 1   Connect the light blue console cable to the blue *Console port* on the router, as shown in Figure 2-5.

Step 2   Use the console adapter to connect the other end of the cable to the terminal or PC. If your terminal or PC has a console port that does not fit the adapter included with the router, you must provide the correct adapter for that port.

Figure 2-5 **Connecting the Console Cable to the Router**

Light blue
console cable

Console port

To PC or terminal
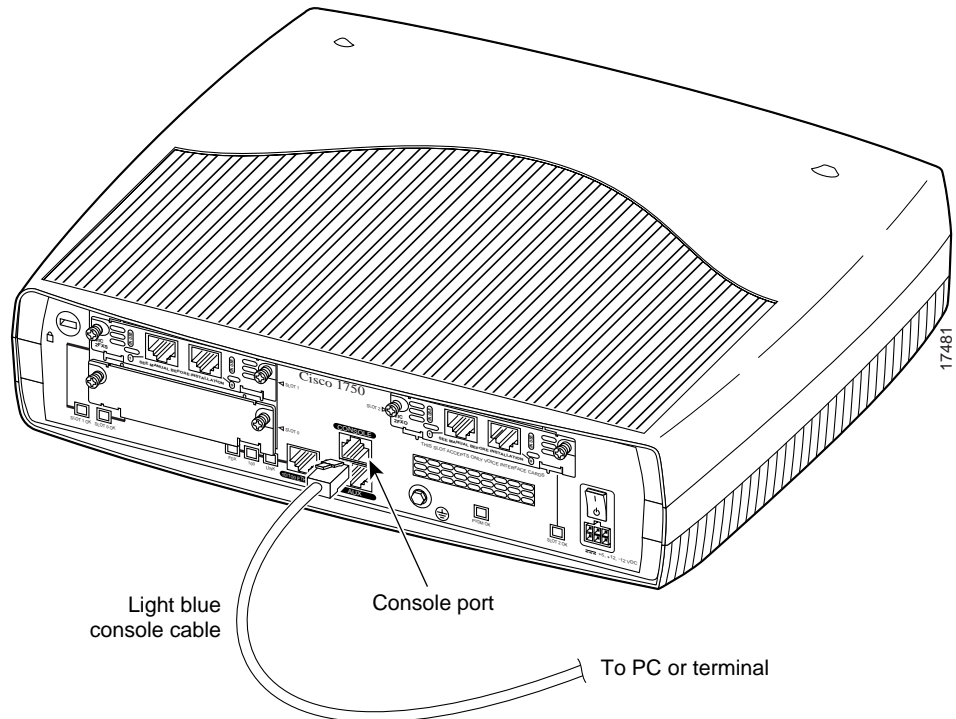
Connecting a Modem

When a modem is connected to the auxiliary port, a remote user can dial into the router and configure it. You can use the light blue console cable that came in the accessory kit. If you are using the light blue cable with the console port, you can use any crossover RJ-45-to-RJ-45 cable.
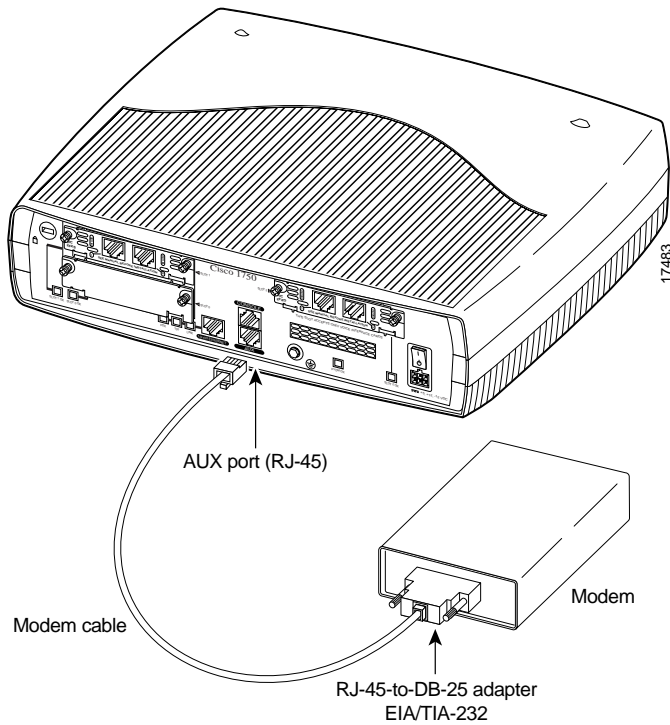
Follow these steps to connect a modem to the router:

Step 1   Connect one end of the cable to the black AUX port on the router rear panel.

Step 2   Connect the adapter labeled *Modem* to the other end of the cable.

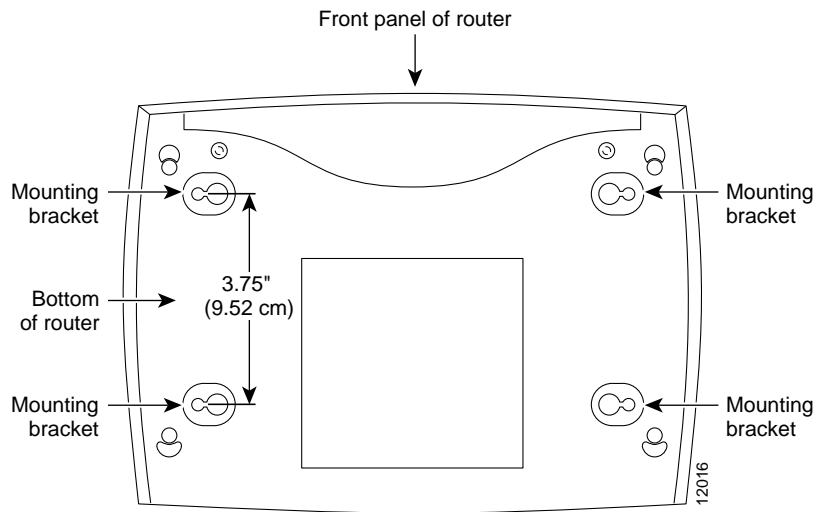**Step 3**   Connect the DB-25 end of the adapter to the modem.

Figure 2-6   **Connecting a Modem to the Router**

Wall-Mounting

The router can be wall-mounted using two number 6, 3/4-inch screws and the molded mounting brackets on the bottom of the hub. You must provide the screws. We recommend using pan-head or round-head screws.

Figure 2-7   Wall-Mount Brackets—Bottom of Router

Follow these steps to mount the router on a wall or other surface:

Step 1   Install the two screws 3.75 inches (9.52 centimeters) horizontally apart on a wall or other vertical surface.

The screws should protrude 0.25 inches (0.64 centimeters) from the surface of the wall.

Step 2   Hang the router on the screws with either the left side or right side mounting brackets so that

- The LEDs are visible to the user. The LEDs indicate the router operating status, so the LEDs should be easily visible.

- The power supply does not hang from its cable. If the power supply is not supported, it might disconnect from the cable that connects it to the router.

⚠️ **Caution**   If you install the screws in drywall, use hollow wall anchors (1/8 inch by 5/16 inch) to secure the screws. If the screws are not properly anchored, the strain of the cables connected to the router rear-panel connectors could pull the router from the wall.

Optional Installation Steps