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☐ Network management   ☐ Other: _____

5 I use these types of documentation: ☐ H/W installation   ☐ H/W configuration   ☐ S/W configuration
☐ Command reference   ☐ Quick reference   ☐ Release notes   ☐ Online help
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____ % Printed docs   ____ % Other: _____

7 I prefer this access method: _____

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Document Information

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On a scale of 1–5 (5 being the best), please let us know how we rate in the following areas:

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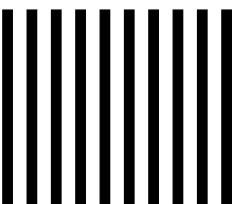Fax (   )   E-mail

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CISCO SYSTEMS

Cisco 806 Router and SOHO 71 Router Hardware Installation Guide

Cisco 806 Router and SOHO 71 Router Hardware Installation Guide

CONTENTS

Preface

This preface discusses the audience, organization, and conventions used in this guide. It also discusses related documentation and how to access electronic documentation.

Audience

This guide is intended for service technicians who have no experience installing routers and whose goal is to connect the router to the network as quickly as possible.

Organization

This guide contains the following information:

- Product Overview—Describes the routers and their features.

- Installation—Provides information on pre installation procedures, mounting and connecting the routers, and verifying the router connections.

- Troubleshooting—Describes problems that might develop and how to identify and solve them.

- Specifications and Cables—Provides port connector pinouts and specifications for cables that you might need to provide.

Conventions

This section describes the conventions used in this guide.

Note Means *reader take note*. Notes contain helpful suggestions or references to additional information and material.

Caution This symbol means *reader be careful*. In this situation, you might do something that could 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 the standard practices for preventing accidents.**

Waarschuwing **Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van standaard maatregelen om ongelukken te voorkomen.**

Varoitus **Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista.**

Attention **Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant causer des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents.**

Warnung	**Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewußt.**
Avvertenza	**Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti.**
Advarsel	**Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du vare oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker.**
Aviso	**Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos físicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes.**
¡Atención!	**Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes.**
Varning!	**Denna varningssymbol signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanligt förfarande för att förebygga skador.**

Related Documentation

In addition to this *Cisco 806 Router and SOHO 71 Router Hardware Installation Guide*, the Cisco 806 documentation set includes the following:

- *Cisco 806 Router and SOHO 71 Router Cabling and Setup Quick Start Guide*

- *Cisco 806 Router Software Configuration Guide*
- *Regulatory Compliance and Safety Information for the Cisco 806 Router and SOHO 71 Router*
- *Configuration Note for the Cisco SOHO 71 Router*
- The latest version of the *Cisco IOS Release Notes*

You might also need to refer to the following documents:

- *Cisco IOS Release 12.0 Quality of Service Solutions Configuration Guide*
- *Cisco IOS Security Configuration Guide, Release 12.0*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

Product Overview

The Cisco 806 router and Cisco SOHO 71 router can connect a corporate telecommuter or small office to an Internet service provider (ISP) over a broadband or Ethernet connection to the following sites:

- Corporate LANs
- The Internet

The router is capable of bridging and multiprotocol routing between LAN and WAN ports.

Features

Table 1-1 summarizes the features of these routers.

Table 1-1   Cisco 806 Router and SOHO 71 Router Feature Summary

Feature	Routers	Description
10BASE-T Ethernet ports	Both	Provides connection to 10BASE-T (10-Mbps) Ethernet networks. Compatible with 10/100-Mbps devices.
Flash memory	Both	8 MB of Flash memory.
Webflash	Both	2 MB of Flash memory reserved for use by the Cisco Router Web Setup software.

Table 1-1   Cisco 806 Router and SOHO 71 Router Feature Summary (continued)

Feature	Routers	Description
Dynamic RAM (DRAM)	Cisco 806	32 MB of DRAM built in.
	SOHO 71	16 MB of DRAM built in.
Ease of installation	Both	Color-coded ports and cables reduce the chance of installation error.
Cisco IOS software	Both	Support Cisco IOS software.
Cisco Router Web Setup application	Both	Provide a web-based software tool for basic configurations and selected applications.
Console port	Both	Provide connection to terminal or PC for software configuration using command-line interface and for troubleshooting.
Cable lock	Both	Provide complementary feature for physically securing router.
Locking power connector	Both	Lock power connector in place.
Wall-mount feature	Both	Brackets on router bottom provide a means for mounting router on a wall or vertical surface.

Table 1-2 describes the ports on the Cisco 806 router and the SOHO 71 router.

Table 1-2   Cisco 806 and SOHO 71 Router Ports

Router	LAN Ethernet Ports	WAN Ethernet Port	Console Port
Cisco 806	Four 10BASE-T RJ-45	One 10BASE-T RJ-45	RJ-45
SOHO 71	Four 10BASE-T RJ-45	One 10BASE-T RJ-45	RJ-45

Router Overview

This section shows the front and back panels of the routers.

Front Panel

Figure 1-1 shows the front panel of the Cisco 806 router.

Figure 1-1   Cisco 806 Front Panel
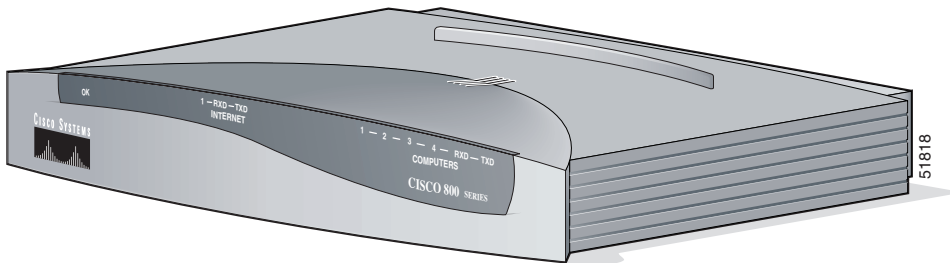
Figure 1-2 shows the front panel of the SOHO 71 router.

Figure 1-2   SOHO 71 Front Panel
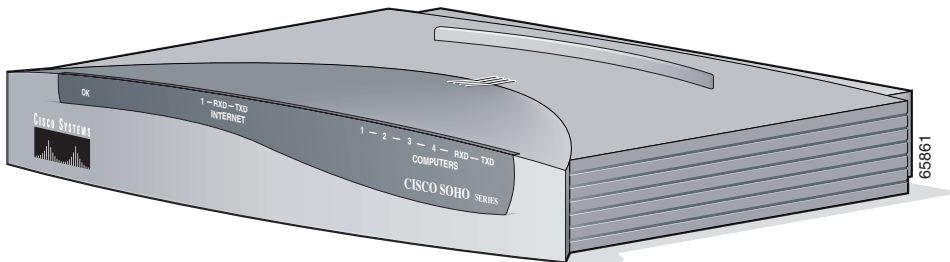
Back Panel

Figure 1-3 shows the back panel of the Cisco 806 router.

Figure 1-3   Cisco 806 Back Panel

Cable lock
Physically
secures
router

Ethernet ports
Connect to
Ethernet network
devices

Ethernet port
Connects to
broadband
modem or
Ethernet switch

**TO HUB/TO PC
button**
Determines
the Ethernet
device and cable
type used for
Ethernet port 4

Console port
Connects to PC
or terminal

**Locking power
connector**
Connects to
power supply

51814
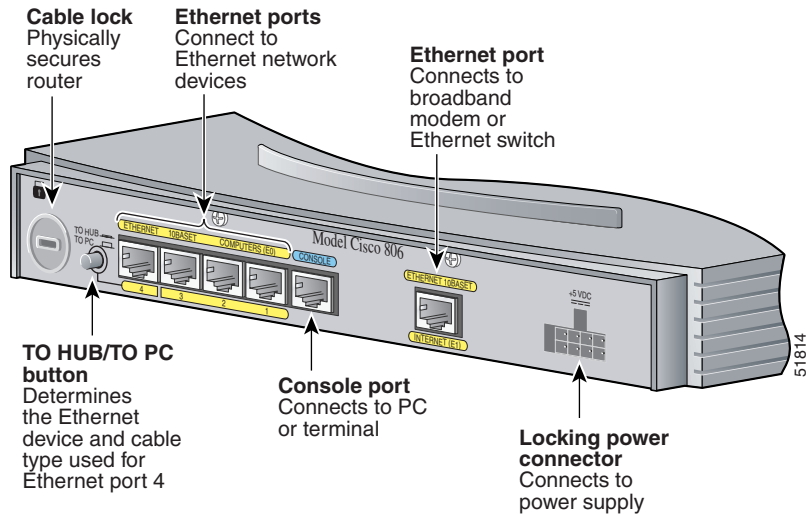
Figure 1-4 shows the back panel of the SOHO 71 router.

Figure 1-4   SOHO 71 Back Panel

Cable lock
Physically
secures
router

Ethernet ports
Connect to
Ethernet network
devices

Ethernet port
Connects to
broadband
modem or
Ethernet switch

**TO HUB/TO PC
button**
Determines
the Ethernet
device and cable
type used for
Ethernet port 4

Console port
Connects to PC
or terminal

**Locking power
connector**
Connects to
power supply

65862
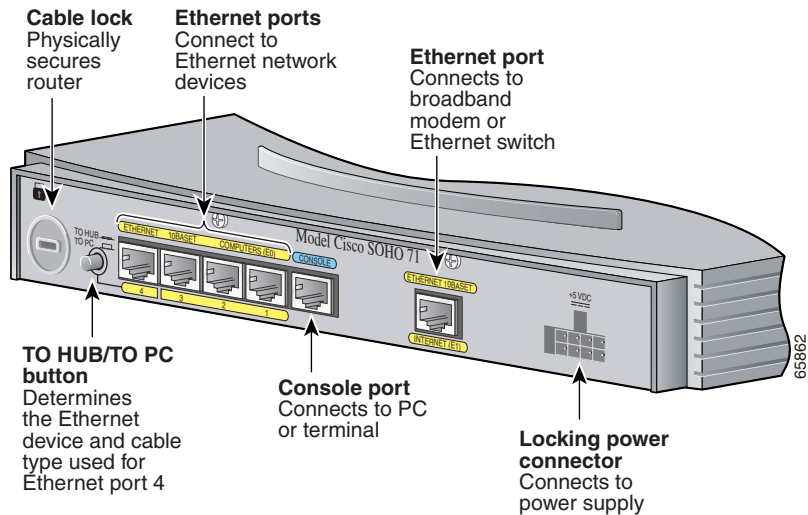
LEDs

Table 1-3 summarizes the functions of the LEDs on the routers.

Table 1-3   LED Functions

LED	Color	Function
OK LED	Green	On when power is supplied to the router and when the router completes the self-test procedure and begins operating.
COMPUTERS 1-4	Green	On when an Ethernet device is connected. Blinks when the connection has a problem. See the "Troubleshooting" chapter for more information.
ETHERNET RXD	Green	Blinks when an ETHERNET port receives a packet.
ETHERNET TXD	Green	Blinks when an ETHERNET port sends a packet.
INTERNET 1	Green	On when the INTERNET ETHERNET port is connected to a broadband modem or to an Ethernet switch.
INTERNET RXD	Green	Blinks when the INTERNET ETHERNET port receives a packet.
INTERNET TXD	Green	Blinks when the INTERNET ETHERNET port sends a packet.

Installation

This chapter provides information on the following topics:

- Preparing for Installation
- Preventing Router Damage
- Installing Your Router
- Verifying Router Operation
- Mounting Your Router
- Connecting to a Website
- What to Do If You Cannot Connect to a Website

Preparing for Installation

This section provides information on safety, mounting of the router, and unpacking the router box.

Safety

This section provides the safety warnings and electrostatic and router damage information applicable to the router.

Warnings

Before installing the router, read the following warnings:

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

Warning   **No operator serviceable parts inside. Refer servicing to qualified personnel.**

Warning   **Before working on a chassis or working near power supplies, unplug the power cord on AC units; disconnect the power at the circuit breaker on DC units.**

Warning   **This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.**

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).**

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   **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.**

Warning   **To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.**

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

Preventing Electrostatic Discharge Damage

Electrostatic discharge (ESD) is a transfer of electrostatic charge between bodies of different electrostatic potentials, such as an operator and a piece of electrical equipment. It occurs when electronic components are improperly handled, and it can damage equipment and impair electrical circuitry. Electrostatic discharge is more likely to occur in the presence of synthetic fibers and dry atmosphere.

Always use the following ESD-prevention procedures when removing and replacing components:

Step 1   Wear an ESD-preventive wrist strap that you provide, ensuring that it makes good skin contact.

Caution   To properly guard against ESD damage and shocks, the wrist strap and cord must operate effectively. Always follow the guidelines in the preceding section, "Warnings."

Step 2   Do not touch any exposed contact pins or connector shells of interface ports that do not have a cable attached.

If cables are connected at one end only, do not touch the exposed pins at the unconnected end of the cable.

This device is intended for use in residential and commercial environments only.

⚠️

Caution   Periodically check the resistance value of the antistatic strap, which should be between 1 and 10 megohms (Mohms).

Unpacking the Box

Table 2-1 lists the items that come with your router. All these items are in the accessory kit that is inside the box that your router came in. If any of the items is missing or damaged, contact your customer service representative.

Table 2-1   Router Box Contents

• Power cord (black)
• Desktop power supply
• Console cable, RJ-45-to-DB-9
• Two Ethernet cables (yellow)
• Product documentation

To prepare for installation, follow these steps:

Step 1   Obtain a broadband or Ethernet connection from your service provider.

Step 2   Remove the yellow Ethernet cables, light blue console cable, and product documentation from the Open Me First bag. Remove the desktop power supply and the black power cord from the accessory kit. Gather the Ethernet devices to be connected to the router: hub, servers, workstations, or PCs.

Step 3   If you plan to configure the software using IOS commands via the console port, provide a terminal or PC to connect to the console port.

Step 4   If you plan to use the cable-lock feature, provide a Kensington or equivalent locking cable.

Preventing Router Damage

Follow these guidelines when connecting devices to your router:

- Connect the color-coded cables supplied by Cisco Systems to the color-coded ports on the back panel.

- If you must supply your own cable, see Appendix A for cabling specifications. If this appendix does not provide specifications for a particular cable, we strongly recommend ordering the cable from Cisco Systems.

Installing Your Router

To install the router, you need to perform these tasks in the following order:

- Connect the Ethernet devices to the router.

- Connect the router to a broadband modem or Ethernet switch.

- Connect a terminal or PC to the router (for software configuration using the command-line interface [CLI] or troubleshooting).

- Connect the router to the power source.

- Verify the router installation.

- Mount the router.

Connecting Ethernet Devices

Table 2-2 lists the Ethernet devices you can connect to the router, the connections for each device, and the settings of the router TO HUB/TO PC button (the default setting is IN).

Table 2-2   Connecting Ethernet Devices

Network Device Connected to Router	Network Device Button Setting[1]	Router Port	Ethernet Cable Type[2]	Router HUB/NO HUB Button Setting
Hub with equivalent to router TO HUB/TO PC button	MDI (IN)	ETHERNET port 4	Straight-through	IN
Hub with equivalent to router TO HUB/TO PC button	MDI-X (OUT)	ETHERNET port 4	Straight-through	OUT
Hub without equivalent to router TO HUB/TO PC button	MDI-X (OUT)	ETHERNET port 4	Straight-through	OUT
Server, PC, or workstation	–	ETHERNET port 4	Straight-through	OUT

1. Hub vendors use different names for the button controlling the cable selections. This table uses the Cisco 1528 Micro Hub 10/100 with an MDI/MDI-X button as an example. Determine the button name and setting for your particular hub. Refer to your hub documentation for details.

2. Cisco provides a yellow straight-through cable. You must provide additional straight-through cables. For details on cables, see Appendix A.

Connecting a Hub

Before connecting a hub to the router, see Table 2-2 for information on setting the TO HUB/TO PC button. To connect a hub, follow the steps in Figure 2-1. (Figure 2-1 shows a Cisco 806 router, but the process is the same for a SOHO 71 router.)

Figure 2-1   Connecting a Hub
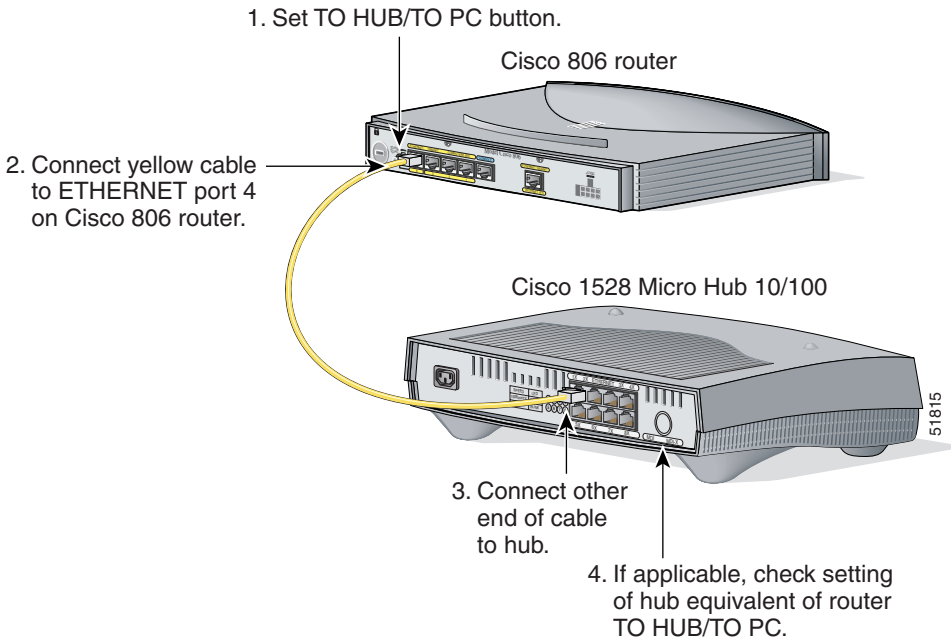
To verify your hub connection, ensure that the COMPUTERS 4 LED on the front panel is on after you have connected all cables and turned the router on. If the LED does not turn on, see Table 3-2 in Chapter 3 for troubleshooting information.

Note   Leave PCs attached to the hub turned off until you have completed router installation.

Connecting a Server, PC, or Workstation

Before connecting the server, PC, or workstation, see Table 2-2 to determine how to set the router TO HUB/TO PC button.

To connect one of these devices to ETHERNET port number 4, follow the steps in Figure 2-2. (Figure 2-2 shows a Cisco 806 router, but the process is the same for a SOHO 71 router.)

Figure 2-2   Connecting a Server, PC, or Workstation

1. Set TO HUB/TO PC button.

Cisco 806 router

2. Connect yellow cable to ETHERNET port 4 on Cisco 806 router.

PC

3. Connect other end of cable to server, PC, or workstation.
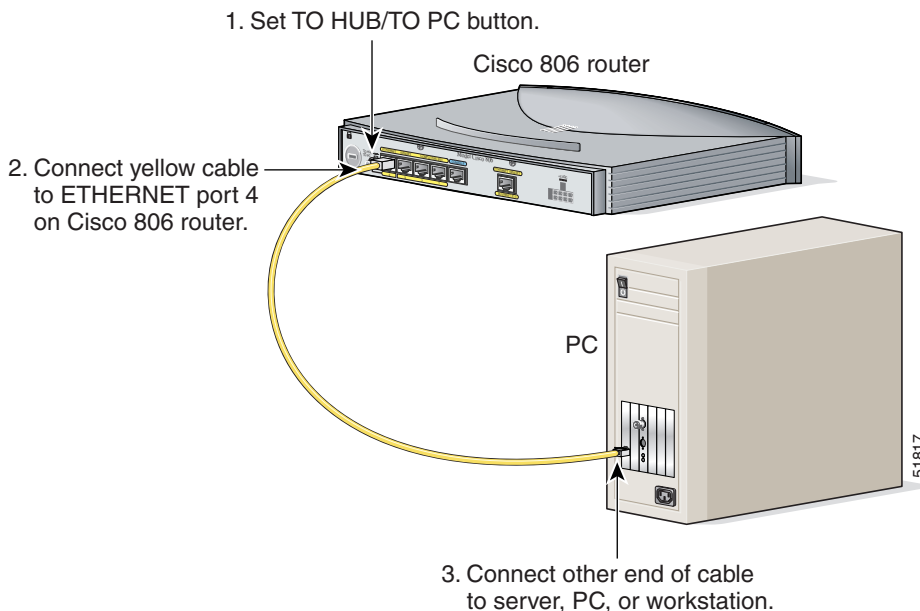
Note   Leave the PCs you connect to the router turned off until you have completed router installation.

You can connect additional servers, PCs, or workstations to ETHERNET ports 1, 2, and 3.

Connecting to the Internet

You can use an installed broadband modem or Ethernet switch to connect to the Internet.

Connecting a Broadband Modem

To connect to an installed DSL, cable, or long-reach Ethernet modem, follow the steps in Figure 2-3. (Figure 2-3 shows a Cisco 806 router, but the process is the same for a SOHO 71 router.)

Figure 2-3   Connecting to a Broadband Modem

1. Connect yellow cable to ETHERNET INTERNET port.

2. Connect other end to modem.
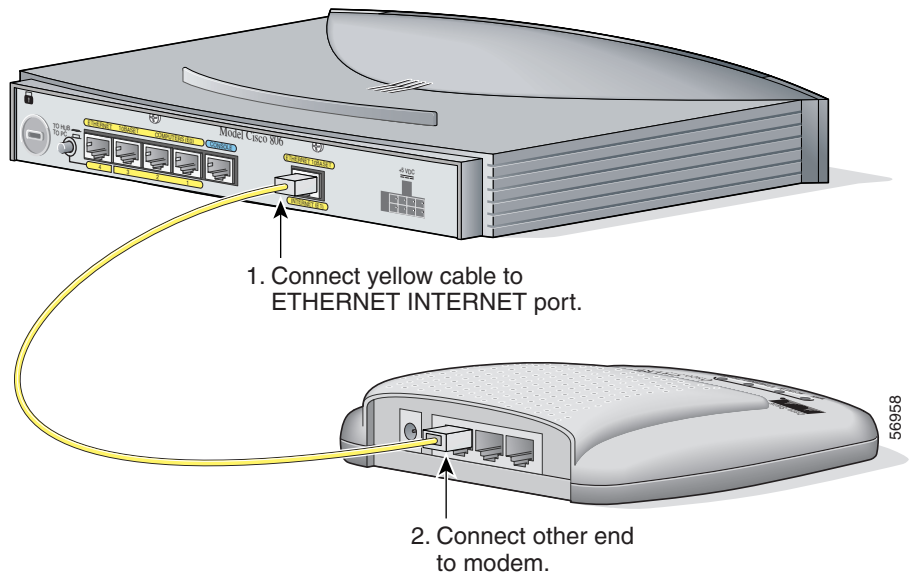
Follow the instructions provided with your broadband modem to determine which port on the modem to connect to. Turn on the broadband modem if it is not already turned on.

Connecting an Ethernet Switch

To connect an installed Ethernet switch to the router, follow the steps in Figure 2-4. (Figure 2-4 shows a Cisco 806 router, but the process is the same for a SOHO 71 router.)

Figure 2-4   Connecting to an Ethernet Switch

1. Connect yellow cable to ETHERNET INTERNET port.

2. Connect other end of cable to available port on Ethernet switch.
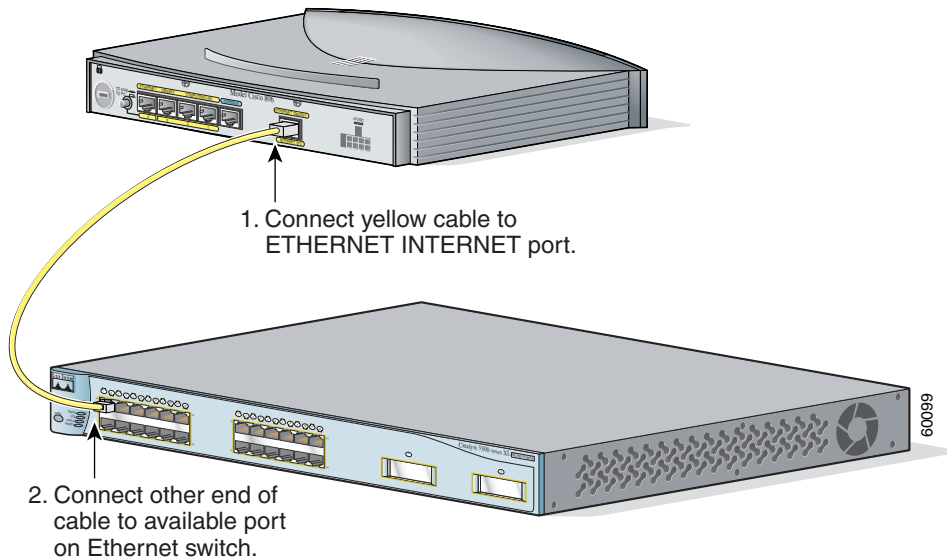
Turn on the Ethernet switch if it is not already turned on.

Connecting a Terminal or PC to the Console Port

The CONSOLE port is a service port to which you can connect a terminal or PC in order to configure the software via the command-line interface (CLI) or to troubleshoot problems with the router. To connect a terminal or PC to the CONSOLE port, follow the steps in Figure 2-5. (Figure 2-5 shows a Cisco 806 router, but the process is the same for a SOHO 71 router.)

Figure 2-5   Connecting a Terminal or PC

1. Connect RJ-45 connector on light blue cable to CONSOLE port.

2. Connect DB-9 connector to terminal or PC.

51821
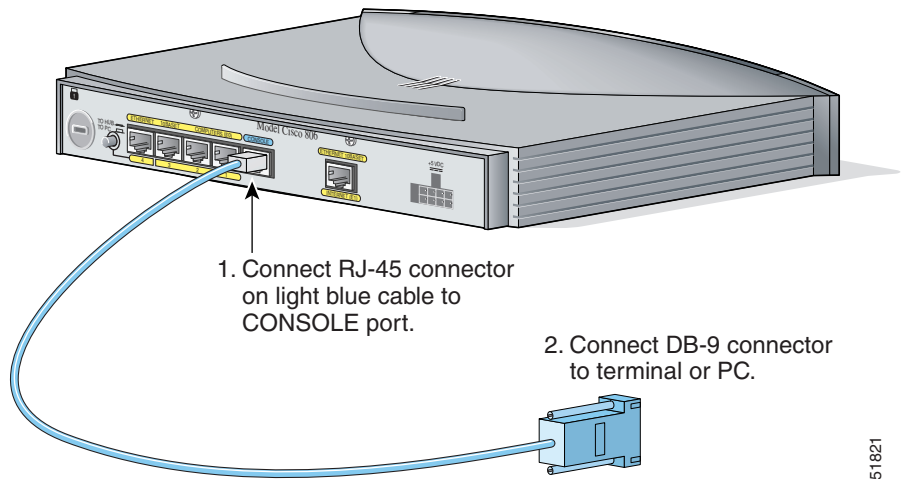
Note   If the factory default configuration does not allow you to connect to the Internet, it is recommended that you configure your router using the Cisco Router Web Setup (CRWS) software. The CRWS software is installed on your router at the factory. See the "What to Do If You Cannot Connect to a Website" section on page 2-17 for instructions on starting the CRWS software.

Connecting the AC Adapter

To connect the AC adapter, follow the steps in Figure 2-6. (Figure 2-6 shows a Cisco 806 router, but the process is the same for a SOHO 71 router.)

Warning   **The device 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 120 VAC, 15A U.S. (240 VAC, 16A international) is used on the phase conductors (all current-carrying conductors).**

> **Warning** **This equipment is designed to be grounded. Ensure that the host is connected to earth ground during normal use.**

Figure 2-6   Connecting the AC adapter

Cisco 806 router

Model Cisco 806

Desktop power supply

3. Connect power cord to electrical outlet.

2. Connect power cord to power supply.

1. Connect power supply cable.
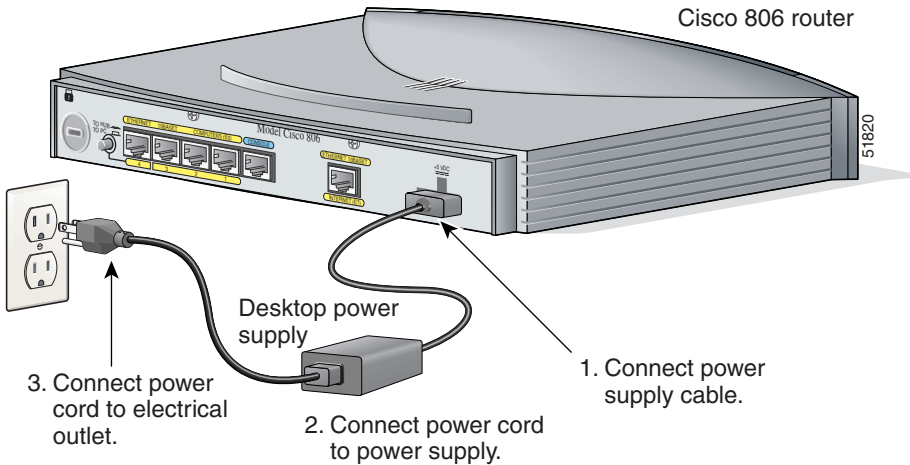
Verifying Router Operation

To verify that all PCs are properly connected to the router and that the router is properly connected to the broadband modem or Ethernet switch, turn on all connected devices and then use Table 2-3 to help you check the appropriate LEDs.

Table 2-3   Verifying Operation

Power/Link	LEDs to Check	Normal Patterns
Power	OK	On
To hub, server, PC, or workstation connected to ETHERNET port 4	COMPUTERS 4, COMPUTERS RXD, and COMPUTERS TXD	• COMPUTERS 4 is on when the Ethernet port is physically connected to a hub, PC, or workstation. • COMPUTERS RXD blinks when an Ethernet port receives an Ethernet packet. • COMPUTERS TXD blinks when an Ethernet port sends an Ethernet packet.
To servers, PCs, or workstations connected to ETHERNET port 1, 2, or 3	COMPUTERS 1, 2, or 3, COMPUTERS RXD, and COMPUTERS TXD	• COMPUTERS 1, 2, or 3 is on when the Ethernet port is physically connected to a server, PC, or workstation. • COMPUTERS RXD blinks when an Ethernet port receives an Ethernet packet. • COMPUTERS TXD blinks when an Ethernet port sends an Ethernet packet.
To broadband modem or Ethernet switch	INTERNET 1, INTERNET RXD, AND INTERNET TXD	• INTERNET 1 is on when the INTERNET ETHERNET port is physically connected to a broadband modem or Ethernet switch. • INTERNET RXD blinks when the INTERNET ETHERNET port receives an Ethernet packet. • INTERNET TXD blinks when the INTERNET ETHERNET port sends an Ethernet packet.

Mounting Your Router

You can mount your router on one of the following surfaces:

• Table or other horizontal surface

• Wall or other vertical surface

Mounting on Table

Do not cover or obstruct the router vents, which are located on the router sides.

Mounting on Wall

You can mount your router on a wall or other vertical surface by using the molded mounting brackets on the bottom of the router and two number-six, 3/4-in. (M3.5 x 20 mm) screws. You must provide the screws. Figure 2-7 shows the mounting brackets.

⚠️
Caution   If you are mounting the router on drywall, use three hollow-wall anchors to secure the three 1/8-in. (M3) screws. If the screws are not properly anchored, the strain of the network cable connections could pull the router from the wall. Use the drill bit size that is specified by the hollow-wall anchor manufacturer.

Figure 2-7   Wall-Mounting Brackets (Bottom of Router)
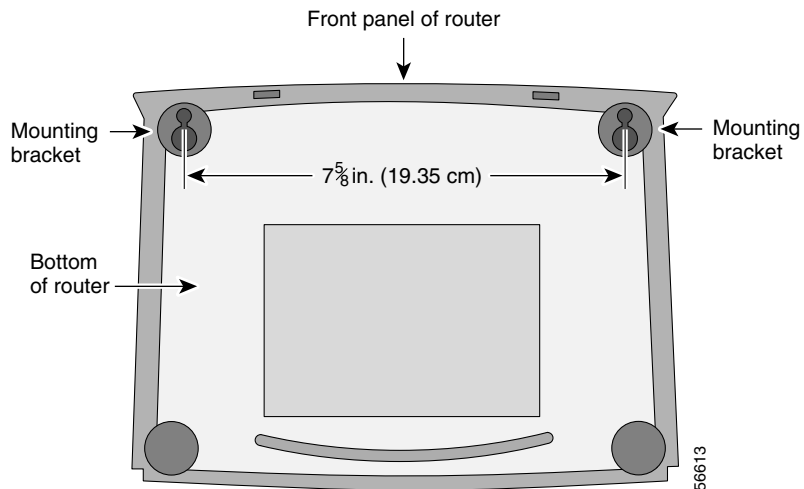
The following conditions must be met when you mount the router:

- Because you will use the LEDs as status and problem indicators, the front panel must face upward and be easily visible.

- The router must be mounted low enough for you to see the LEDs in case you need to troubleshoot a problem.

- The power supply must rest on a horizontal surface such as the floor or a table. If the power supply is not supported, it might place strain on the power supply cable and cause it to disconnect from the connector on the router back panel.

To mount the router, follow the steps in Figure 2-8. The last page of this manual provides a template for measuring the distance between the screws.

Figure 2-8   Mounting Router on Wall

1. Secure two screws 7-5/8 in.
   (19.35 cm) apart into a wall and
   1/8 in. (0.32 cm) from the wall.

7-5/8 in.
(19.35 cm)

Wall-mount
screw

Wall

Screw

1/8 in.
(0.32 cm)

2. Hang router
   on screws.

Mounting
brackets

Maximum distance
6 ft (2 m)

3. Place power supply
   on horizontal surface.

51819
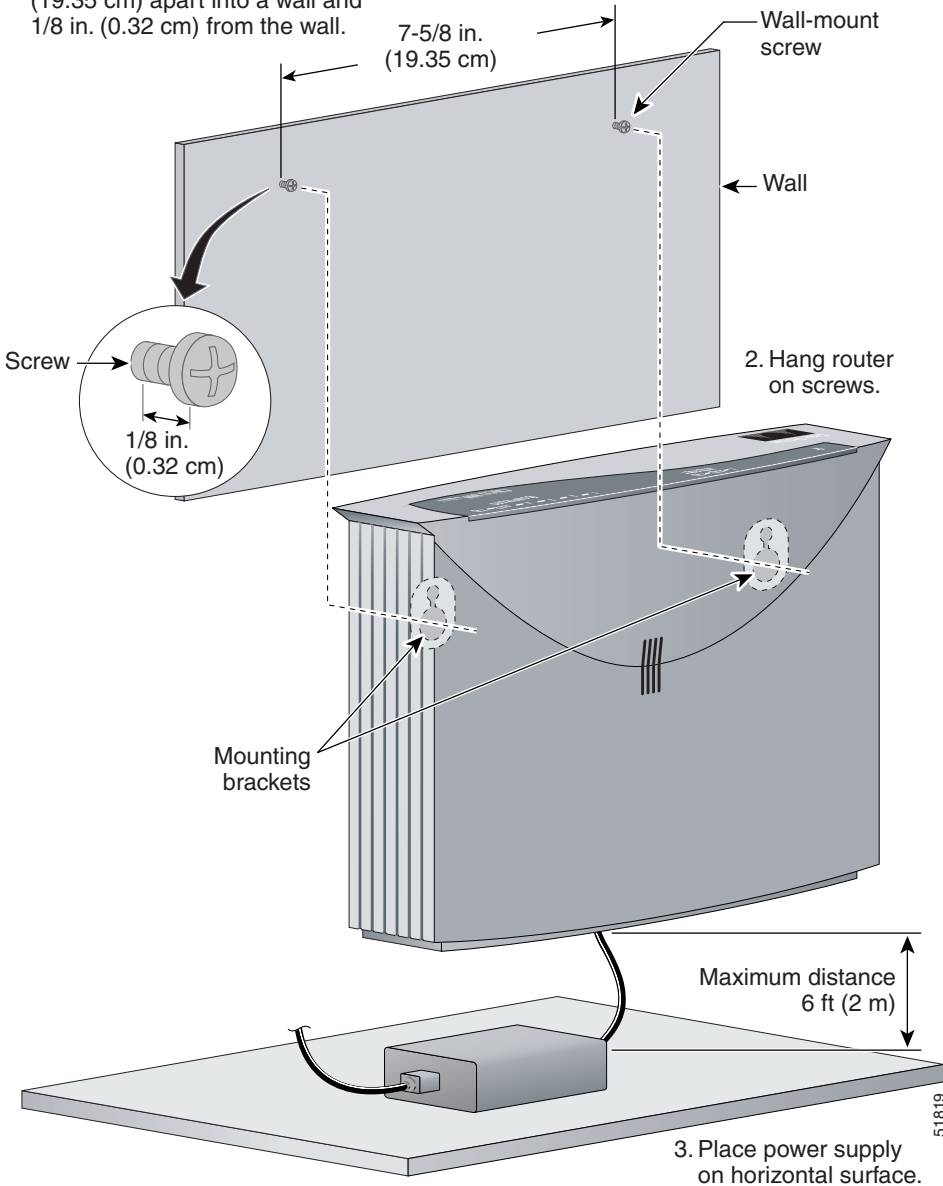
Connecting to a Website

The router has been configured to work for the most common type of installation. Log onto a PC connected to the router, open a web browser, and connect to a website. If you connected to a website, you have completed setup and can continue to use the router.

If you cannot display a website, make sure that the broadband modem or Ethernet switch that the router is connected to is operating, and try again. If you still cannot connect to a website, you must follow the steps in "What to Do If You Cannot Connect to a Website."

What to Do If You Cannot Connect to a Website

If you cannot connect to the Internet using the factory configuration, or if you have loaded new Cisco IOS software on the router since you installed it, you can configure the router, using the Cisco Router Web Setup (CRWS) software. The CRWS software is already loaded on the router, and is run from a PC connected to the router.

Starting the CRWS Software

Follow these steps to start the CRWS software:

Step 1 Start, or restart, a PC connected to one of the router's Ethernet ports (1, 2, 3, or 4).

Step 2 Open a web browser. Make sure that the browser is set to work in online mode.

- In Internet Explorer, click the File menu, and verify that the "work offline" option is unchecked.

- In Netscape, the default selection in the File menu is set to work online.

Step 3 Type in the following universal resource locator (URL):

http://10.10.10.1

Tip   If the CRWS home page does not appear when you enter the URL
http://10.10.10.1, test the connection between the PC and the router by doing
the following:

1. Check that the OK LED on the router is on, and check the cable connection
   between the router and the PC. Be sure that the TO HUB/TO PC button is in
   the TO PC position.

2. If the CRWS home page still does not appear, verify that the web browser's
   "work offline" option is disabled.

3. If the web page still does not appear, verify that the PC is automatically
   configured to receive an IP address. Follow the instructions in the
   Cisco Router Web Setup User Guide, which is available on the Cisco 800 and
   SOHO Series Product Documentation CD.

Step 4   Click the **Router Setup** link in the Cisco Router Web Setup home page, and
follow the instructions that appear in the page that is displayed.

Step 5   When you complete setup using CRWS, connect to another website, using the
connected PC. If you successfully connect to the website, then setup is complete,
and you can continue using the router.

Troubleshooting

This chapter describes problems that could occur with the router hardware, possible causes of the problems, and steps for solving the problems. The problems are grouped into the following areas:

- Problems During Initial Startup
- Problems After Router Is Running

For more information on problems that could occur with the software, refer to the *Cisco 806 Router Software Configuration Guide.*

Before You Call Your Cisco Reseller

Some of the solutions in this chapter instruct you to contact your Cisco reseller. Before you contact your reseller, have the following information ready:

- Router model and serial number (on the back panel)
- Maintenance agreement or warranty information
- Date you received your router
- Brief description of the problem
- Brief description of the steps you have taken to solve the problem

Problems During Initial Startup

Table 3-1 lists problems that a user might encounter when the router is initially booted.

Table 3-1   Problems During Initial Startup

Symptom	Problem	Solutions
All LEDs, including OK LED, are off.	No power to router.	Perform the following tasks in order: 1. Make sure that the power switch is set to ON. 2. Make sure that all connections to and from the power supply are secure. 3. Make sure that the power outlet has power. 4. If the problem continues, the power supply could be faulty. Contact your Cisco reseller.
No connection to modem or Ethernet switch. (Internet LED is off.)	A cable-related problem: • Improperly connected cable. • Damaged cable.	Perform the following tasks in order: 1. To make sure that you have cabled the device correctly, see Figure 2-3 or Figure 2-4 in Chapter 2, "Installation." 2. Make sure that the connectors at both ends of the cable are securely seated. 3. Make sure the cable is not physically damaged. If it is, order another cable from Cisco, or replace it with a similar cable.
No connection to Ethernet devices. (COMPUTER LEDs 1 through 4 are off.)	A cable-related problem: • Improperly connected cable. • Damaged cable.	Perform the following tasks in order: 1. To make sure that you have cabled the device correctly, see Figure 2-1 or Figure 2-2 in Chapter 2, "Installation." 2. Make sure that the connectors at both ends of the cable are securely seated. 3. Make sure the cable is not physically damaged. If it is, order another cable from Cisco Systems, or replace it with a similar cable

Table 3-1   Problems During Initial Startup (continued)

Symptom	Problem	Solutions
	Improper setting of TO HUB/TO PC button on router or hub.	To make sure that the button is set correctly, see Table 2-2 in Chapter 2, "Installation."
Cannot connect to the Internet	• Broadband modem or Ethernet switch is not connected or turned on. • A problem with the broadband or WAN service. • Router is improperly configured	• Reconnect the broadband modem or Ethernet switch, and ensure that it is receiving power. • Check with the Internet service provider or corporate network administrator to determine if there is a problem. • Use the Cisco Router Web Setup software to configure the router by following the procedure in What to Do If You Cannot Connect to a Website, page 2-17 (recommended), or configure the router using a PC connected to the console port.

Problems After Router Is Running

Table 3-2 lists problems that could occur after the router has been up and running.

Table 3-2   Problems After Router is Running

Symptom	Problem	Solutions
Problems with Ethernet connection. (COMPUTER LEDs 1 through 4 are off.)	A cable-related problem: • Disconnected cable. • Damaged cable.	Perform the following tasks in order: 1. Make sure that the connectors at both ends of the cable are secure. 2. Make sure that the cable is not physically damaged. If it is damaged, order another cable from Cisco Systems, or replace it with a similar cable.
	Improper setting of TO HUB/TO PC button on router or hub.	To make sure that the button is set correctly, see Table 2-2 in Chapter 2, "Installation."

Table 3-2   Problems After Router is Running (continued)

Symptom	Problem	Solutions
Connection to the broadband or Ethernet line is intermittent or lost. (The INTERNET 1 LED on the front panel is off.)	A cable-related problem: • Disconnected cable. • Damaged cable.	Perform the following tasks in order: 1. Make sure that the connectors at both ends of the cable are secure. 2. Make sure that the cable is not physically damaged. If it is damaged, order another cable from Cisco Systems, or replace it with a similar cable.
	Problem with broadband line or WAN service.	Contact your broadband line or WAN service provider to determine whether there is a problem.

Specifications and Cables

This appendix provides system, port, and cabling specifications for the router.

System Specifications

Table 0-1 outlines the system specifications for the router.

Table 0-1   System Specifications

Description	Design Specification
Physical Dimensions	
Dimensions (H x W x D)	2.0 x 9.7 x 8.5 in. (5.1 x 24.6 x 21.6 cm)
Weight (does not include desktop power supply)	Cisco 806 router: 1.5 lb (0.68 kg)
Environmental Operating Ranges	
Nonoperating temperature	–4 to 149°F (–20 to 65°C)
Nonoperating humidity	5 to 95% relative humidity
Nonoperating altitude	0 to 15,000 ft (4570 m)
Operating temperature	32 to 104°F (0 to 40°C)
Operating humidity	10 to 85% relative humidity
Operating altitude	0 to 10,000 ft (3000 m)

Table 0-1   System Specifications (continued)

Description	Design Specification
Router Power	
AC input voltage	100 to 240 VAC
Frequency	50 to 60 Hz
Power consumption	15W
Voltage	5V

For information on regulatory compliance, refer to the *Regulatory Compliance and Safety Information for Cisco 806 Router and SOHO 71 Router* document that was shipped with your router.

⚠

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

Port Connector Pinouts

This section provides pinouts for the following connectors:

- Ethernet—See Table 0-2, Table 0-5, and Table 0-6.

- Console (for connecting a terminal or PC)—See Table 0-3.

- Power—See Table 0-4.

Table 0-2   Cisco 806 Router Ethernet Connector Pinouts (RJ-45)

Pin	Function (TO HUB/TO PC Button – IN Position)	Function (TO HUB/TO PC Button – OUT Position)
1	TX+	RX+
2	TX–	RX–
3	RX+	TX+
4	Unused	Unused
5	Unused	Unused
6	RX–	TX–
7	Unused	Unused
8	Unused	Unused

Table 0-3   Console Connector Pinouts (RJ-45)

Pin	Function
1	RTS
2	DTR
3	TXD
4	GND
5	GND
6	RXD
7	DSR
8	CTS

The Console port is configured as a data communications equipment (DCE) device. The default parameters for the console port are as follows:

- 9600 baud
- 8 data bits
- No parity
- One stop bit

Table 0-4   Power Connector Pinouts

Pin	Function
1	ROF
2	RTN
3	N.C.
4	N.C.
5	+5
6	RTN
7	N.C.
8	N.C.

Cabling Specifications

This section provides specifications for the following Ethernet cables, which you might need to provide:

- Straight-through
- Crossover

It also provides information on Ethernet cable distance limitations.

Ethernet Cable Specifications

Table 0-5 provides the specifications for straight-through and crossover Ethernet cables.

Table 0-5   Ethernet Cable Specifications

Type	Category	Shielding
10BASE-T	Category 3 or 5	Unshielded twisted-pair (UTP)

Maximum Cable Distance

Table 0-6 provides the maximum distance of Ethernet cables that you can use between Ethernet devices.

Table 0-6   Maximum Cable Distance

Cable	Maximum Distance
Ethernet cables	328 ft (100 m)

■ **Cabling Specifications**

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Router Wall-Mount Template

7⅝ inches (19.35 cm)

To check scale

1 inch
(2.54 cm)