



CHAPTER 6

Cable Connection Procedures for Cisco 1800 Series Routers (Modular)

This chapter describes how to connect your Cisco 1800 series integrated services router (modular) to a power source and to networks and external devices. It includes the following sections:

- [Power Connections, page 6-1](#)
- [Connecting WAN and LAN Cables, page 6-2](#)
- [Connecting to a Console Terminal or Modem, page 6-3](#)

For cable information and specifications, see the *“Cable Information and Specifications for Cisco 1800 Series Routers (Modular)”* document.



Note

To see translations of the warnings that appear in this publication, see the *Regulatory Compliance and Safety Information for Cisco 1840 Routers*.

Power Connections



Warning

Read the installation instructions before connecting the system to the power source. Statement 1004.



Note

The installation must comply with all required electrical codes applicable at the installation site.

Connect your router to a 15 A, 120 VAC (10 A, 240 VAC) circuit with overcurrent protection.



Note

The input voltage tolerance limits for AC power are 85 and 264 VAC.



Warning

This product relies on the building’s installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 15A, 120VAC (10A, 240VAC). Statement 1005

Connecting WAN and LAN Cables

This section describes how to connect the WAN and LAN interface cables. It includes the following:

- [Ports and Cabling, page 6-2](#)
- [Connection Procedures and Precautions, page 6-3](#)



Note

One or two Ethernet cables are typically provided with the router. You can order additional network connection cables and transceivers from Cisco. For ordering information, contact Cisco customer service. For cable pinouts, see [Cisco Modular Access Router Cable Specifications](#).



Warning

Do not work on the system, or connect or disconnect cables during periods of lightning activity.
Statement 1001

Ports and Cabling

[Table 6-1](#) summarizes some typical WAN and LAN connections for Cisco 1800 series routers.

The connections summarized in [Table 6-1](#) are also described in detail in the following documents:

- [Cisco Modular Access Router Cable Specifications](#)
- [Cisco Interface Cards Installation Guide](#)

Table 6-1 WAN and LAN Connections

Port or Connection	Port Type, Color ¹	Connected to:	Cable
Fast Ethernet (FE)	RJ-45, yellow	Ethernet hub	Crossover to connect to a router Straight-through to connect to a switch
T1/E1 WAN	RJ-48C	T1 or E1 network or CSU/DSU	RJ-48 T1/E1 straight-through (Crossover to connect to a PBX or any other equipment)
Cisco serial (1T)	60-pin D-sub, blue	CSU/DSU and serial network or equipment	Cisco serial transition cable that matches the signaling protocol (EIA/TIA-232, EIA/TIA-449, V.35, X.21, or EIA/TIA-530) and the serial port operating mode (DTE or DCE) See Cisco Modular Access Router Cable Specifications for information about selecting these cables.
Cisco Smart serial (2T)	Cisco Smart compact connector, blue	CSU/DSU and serial network or equipment For WIC-2T and WIC-2A/S only	

Table 6-1 WAN and LAN Connections (continued)

Port or Connection	Port Type, Color ¹	Connected to:	Cable
DSL	RJ-11C/RJ-14C	Network demarcation device for service provider's DSL interface	RJ-11 straight-through for 2-wire RJ-14 straight-through for 4-wire
BRI S/T WAN (external NT1 ²)	RJ-45, orange	NT1 device or PINX ³	RJ-45 straight-through
BRI U WAN (built-in NT1)	RJ-49C/CA-A11, orange	ISDN network	RJ-49 straight-through
Analog modem	RJ-11	PSTN	RJ-11 straight-through
56/64-kbps CSU/DSU	8-pin modular	RJ-48S interface	RJ-48 straight-through

1. The color codes are specific to cables shipped by Cisco.
2. NT1 = Network Termination 1.
3. PINX = Private integrated network exchange.

Connection Procedures and Precautions

Connect each WAN and LAN cable to the appropriate connector on the chassis or interface card.

- Position the cables carefully, so that they do not put strain on the connectors.
- Organize the cables in bundles so that cables do not intertwine.
- Inspect the cables to make sure that the routing and bend radiuses are satisfactory. Reposition the cables, if necessary.
- Install cable ties in accordance with your site requirements.

For cable pinouts, see [Cisco Modular Access Router Cable Specifications](#).

Connecting to a Console Terminal or Modem

Your router has asynchronous serial console and auxiliary ports. These ports provide administrative access to your router either locally (with a console terminal or PC) or remotely (with a modem).

Cisco provides the following cables and adapters for connecting your router to a console terminal, PC, or modem:

- One console cable (RJ-45-to-DB-9, blue)
- One modem adapter (DB-9-to-DB-25)

This section describes how to connect a console terminal or PC to the console port and how to connect a modem to the auxiliary port.

For information about cable pinouts, see [Cisco Modular Access Router Cable Specifications](#).

Connecting to the Console Port

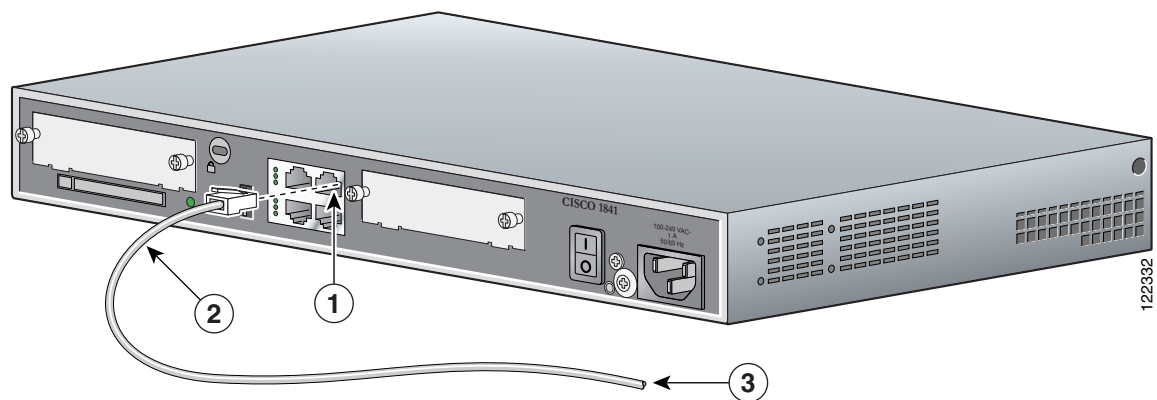
To configure the router through the Cisco IOS CLI, you must connect the router console port to a terminal or PC. The cable required for this connection is included with the router.

The PC must have HyperTerminal or similar terminal emulation software installed. The software should be configured with the following parameters: 9600 baud, 8 data bits, no parity, 1 stop bit, and no mode control. See Cisco 1800 series router software configuration documents on Cisco.com for detailed information about using Cisco IOS software for configuring the router.

To connect the router to a terminal or PC, follow these steps:

- Step 1** Connect the end of the light blue console cable with the RJ-45 connector to the light blue console port on the router, as shown in [Figure 6-1](#).

Figure 6-1 Connecting the Console Cable to the Router



1	Light blue console port	3	To PC or terminal
2	Light blue console cable		

- Step 2** Connect the end of the cable with the DB-9 connector to the terminal or PC. If your terminal or PC has a console port that does not accommodate a DB-9 connector, you must provide an appropriate adapter for that port. (A DB-9-to-DB-25 adapter is provided with your router.)



Note

Because mode control is not possible on the console port, we do not recommend connecting modems to the console port. Modems should always be connected to the auxiliary port.

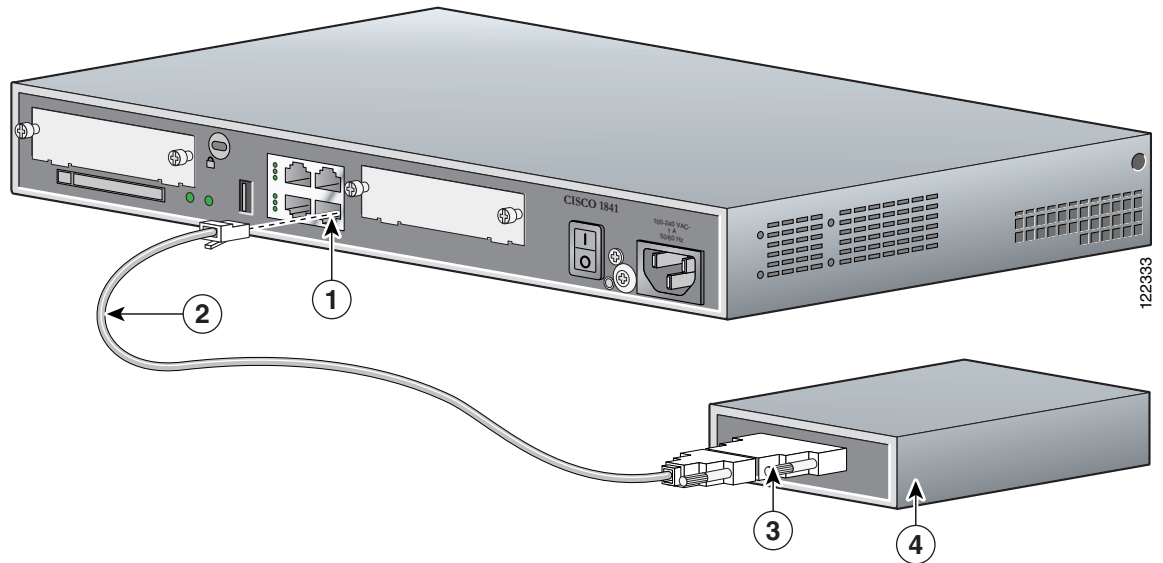
Connecting to the Auxiliary Port

When a modem is connected to the auxiliary port, a remote user can dial in to the router and configure it. Use the light blue console cable and the DB-9-to-DB-25 connector adapter that came in the router accessory kit.

To connect a modem to the router, follow these steps:

- Step 1** Connect the RJ-45 end of the adapter cable to the black AUX port on the router. (See Figure 6-2.)

Figure 6-2 Connecting a Modem to the Router



1	Aux port (RJ-45)	3	DB-9-to-DB-25 modem adapter
2	Light blue console cable	4	Modem

- Step 2** Connect the DB-9 end of the console cable to the DB-9 end of the modem adapter.
- Step 3** Connect the DB-25 end of the modem adapter to the modem.
- Step 4** Make sure that your modem and the router auxiliary port are configured for the same transmission speed (up to 115200 bps is supported) and for mode control with data carrier detect (DCD) and data terminal ready (DTR) operations.

Connecting Power to the Cisco 1861 Integrated Services Router

To connect the power supply to the Cisco 1861 Integrated Services Router, perform the following steps:

- Step 1** Connect the AC power cord to the the power supply.
- Step 2** Connect the power interface cable to the power connector port on the back of the Cisco 1861 Integrated Services Router.

