



Installing and Connecting the Router

This section describes how to install and connect the Cisco IR8340 router.

- [Installing and Connecting the Router, on page 1](#)
- [Safety Warnings, on page 1](#)
- [Before You Begin, on page 4](#)
- [Unpacking the Router, on page 4](#)
- [Installing the Router in a Rack, on page 5](#)
- [Replacing the SD Flash Memory Card, on page 7](#)
- [Connecting the Console Port, on page 8](#)
- [Connecting WAN and LAN Interfaces, on page 9](#)

Installing and Connecting the Router

This section describes how to install and connect the Cisco IR8340 router.



Caution

For the optimum temperature ranges, do not operate it in an area that less than the minimum of -40°C and exceeds a maximum recommended ambient temperature of 60°C.



Note

To view specifications for the Cisco Catalyst IR8340 Rugged Series Router, see the IR8340 data sheet.

Safety Warnings



Warning

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



Warning This unit might have more than one power supply connection. All connections must be removed to de-energize the unit. Statement 1028



Warning Hazardous network voltages are present in WAN ports regardless of whether power to the unit is OFF or ON. To avoid electric shock, use caution when working near WAN ports. When detaching cables, detach the end away from the unit first. Statement 1026



Warning Do not use this product near water; for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool. Statement 1035



Warning Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning. Statement 1038



Warning This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security. Statement 1017



Warning Stability hazard. The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over. Statement 1048



Warning The chassis should be mounted on a rack that is permanently affixed to the building. Statement 1049



Warning Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place. Statement 1029



Warning A ground wire must always be a single piece of wire. Never splice two wires together for a ground. Corrosion and weathering can lead to a poor connection at the splice, making the ground ineffective and dangerous. Statement 270



Warning To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord. Statement 1023



Warning Use copper conductors only. Statement 1025



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



Warning Invisible laser radiation may be emitted from the end of the unterminated fiber cable or connector. Do not view directly with optical instruments. Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye hazard. Statement 1056



Warning To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of: 60°C (140°F). Statement 1047



Warning Hot surface. Statement 1079



Caution Heat sinks applicable to warning statement 1079, can exceed 90° C in a 60° C ambient. Suitable precautions should be taken to avoid burns.



Warning This equipment needs to be grounded. Use a green and yellow 12 to 14 AWG ground wire to connect the host to earth ground during normal use. Statement 242

Statement 191—Voluntary Control Council for Interference (VCCI) Class A Warning for Japan



Warning This is a Class A product based on the standard of the VCCI Council. If this equipment is used in a domestic environment, radio interference may occur, in which case, you may be required to take corrective actions.

ステートメント 191—日本向け VCCI クラス A に関する警告



警告 この装置は、クラス A 機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A

Statement 1008—Class 1 Laser Product



Warning This product is a Class 1 laser product.

ステートメント 1008—クラス 1 レーザー製品



警告 クラス 1 レーザー製品です。

Before You Begin

Before installing and connecting a Cisco IR8340 router, read the safety warnings and gather the following tools and equipment:

- ESD-preventive cord and wrist strap
- Number 2 Phillips screwdriver
- 0# Phillips screwdriver
- Screws that fit your rack

In addition, depending on the type of modules you plan to use, you might need the following equipment to connect a port to an external network:

- Cables for connection to the WAN and LAN ports (dependent on configuration).
- PC with a network interface card for connection to an Ethernet (LAN) port.

Unpacking the Router

Do not unpack the router until you are ready to install it. If the final installation site will not be ready for some time, keep the chassis in its shipping container to prevent accidental damage. When you are ready to install the router, proceed with unpacking it.

The router, accessory kit, publications, and any optional equipment you ordered may be shipped in more than one container. When you unpack the containers, check the packing list to ensure that you received all of the items on the list.

Installing the Router in a Rack

The Cisco IR8340 router can only be mounted in a rack.

**Caution**

To prevent damage to the chassis, never attempt to lift or tilt the chassis by holding it by the plastic panel on the front. Always hold the chassis by the sides of the metal body.

**Note**

Allow at least one rack unit of vertical space above and below the router.

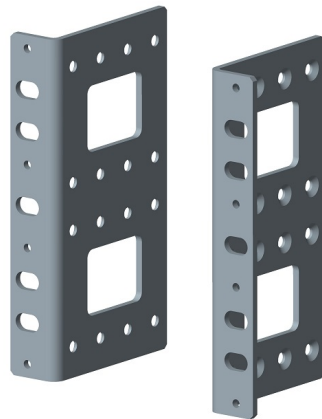
Rack-Mounting the Chassis

The Cisco IR8340 router can be installed in a 19-inch (48.26-cm) standard rack. It is required that at least one rack unit of vertical space is left empty above and below the router.

You can mount the router by attaching the rack-mount brackets at the cable side of the chassis with the cable side facing forward.

The following figure shows the rack-mount brackets used with the Cisco IR8340 router. The brackets extend one rack unit of vertical space that can be either above or below the router.

Figure 1: Rack-Mount Brackets for the Cisco IR8340 Router



Attaching Rack-Mount Brackets to Cisco IR8340 Routers

To attach the long side of each bracket to the Cisco IR8340 router, remove the eight Phillips screws from the side panel and use them to attach the bracket to the router. See the following figures.

Figure 2: Bracket Installation With Vertical Space Below the Router

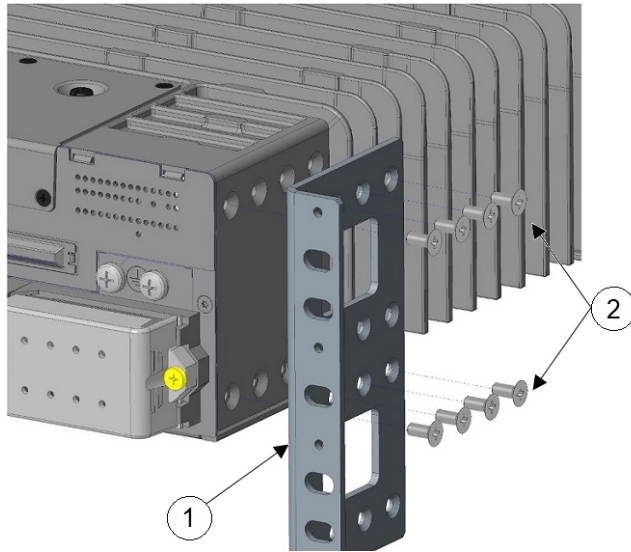
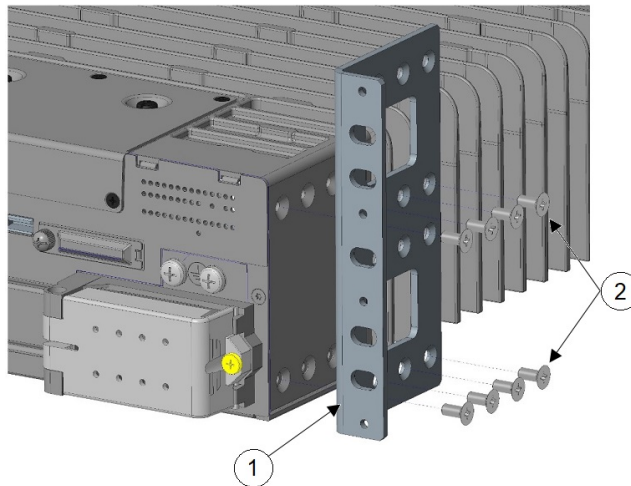


Figure 3: Bracket Installation With Vertical Space Above the Router



1	Rack-mount bracket	2	Number-8 Phillips flat-head screws (8)
---	--------------------	---	--



Caution Do not over-torque the screws. The recommended torque is 16 to 18 in-lbs.

Attach the second bracket to the opposite side of the chassis. Use a number 2 Phillips screwdriver to install the number-8 bracket screws.



Caution Your chassis installation must allow unrestricted airflow for chassis cooling.

Mounting the Router in a Rack

After you attach the rack-mount brackets to the router chassis, use the screws provided with the rack to install the chassis in the rack.



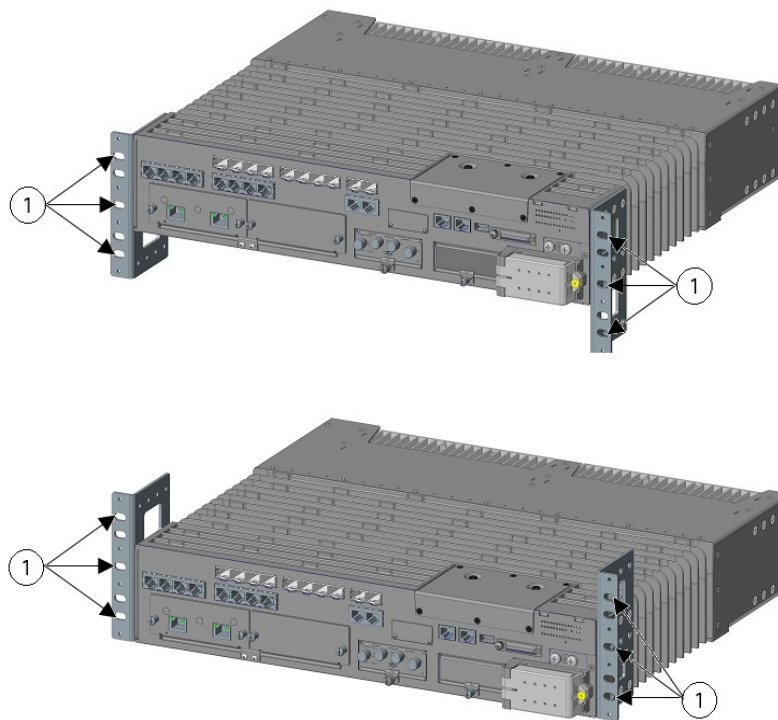
Note The screw slots in the brackets are spaced to line up with every *second* pair of screw holes in the rack. When the correct screw holes are used, the small threaded holes in the brackets line up with unused screw holes in the rack. If the small holes do not line up with the rack holes, you must raise or lower the brackets to the next rack hole.



Caution A space of one rack unit above and below each IR8340 router is required for sufficient air ventilation.

The following figure shows the screw slots in the rack-mount brackets to use when you mount the router in the rack.

Figure 4: Mounting Screw Slots



1	Mounting screw slots (6)
---	--------------------------

Replacing the SD Flash Memory Card

Follow these steps to replace the SD flash memory card:

-
- Step 1** Locate the flash memory card slot on the cable-side of the router.
- Step 2** Loosen the captive thumb screw. (Be careful not to cross-thread or over-tighten the thumb screw.)
- Step 3** Pull the cover open, and pull the cover tab from the hinge.
- Step 4** Gently push the flash memory card to eject it. Place it in an anti-static bag to protect it from static discharge.
- Step 5** Push the replacement card into the slot, and press it firmly in place. The card is keyed so that you cannot insert it the wrong way.
- Step 6** Place the flash card slot cover tabs into the hinge.
- Step 7** Close the cover, and hand-tighten the screw.
-

Connecting the Console Port

To configure the router through the Cisco IOS command-line interface (CLI), you must establish a connection between the router console port and either a terminal or a PC.

Console Port Connection to a PC

To connect a PC terminal to the console port, use the RJ-45-to-RJ-45 rollover cable, and either the RJ-45-to-DB-25 female DTE adapter or the RJ-45-to-DB-9 female DTE adapter (labeled *TERMINAL*).

The default parameters for the console port are:

- 9600 baud
- 8 data bits
- No parity generated or checked
- 1 stop bit
- No Flow Control

Console Port Signaling and Cabling with a DB-9 Adapter

This section describes the console port signaling and cabling with a DB-9 adapter. See the following figures.

Figure 5: RJ-45 Cable to DB-9 Female Adapter

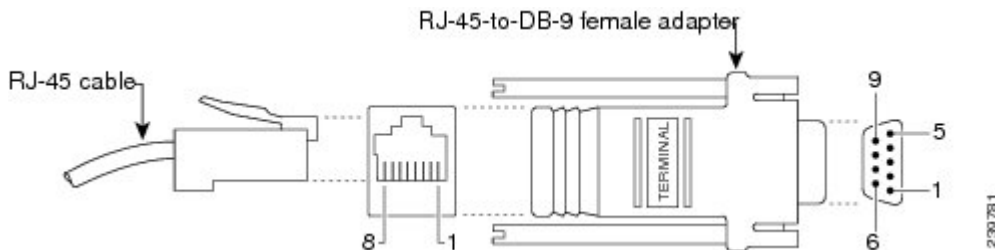
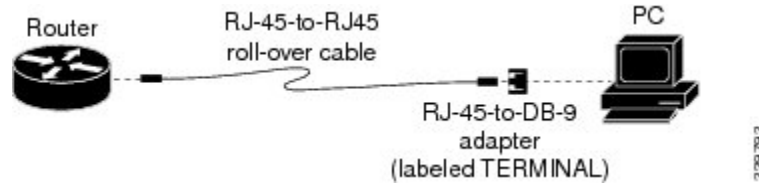


Figure 6: RJ-45 to RJ-45 Rollover Cable



For the pinout descriptions for the DB-9 connections, see [Console Port Adapter Pinouts](#).

Console Port Signaling and Cabling with a DB-25 Adapter

This section describes the console port signaling and cabling with a DB-25 adapter as shown in the following figures.

Figure 7: RJ-45 to DB-25 Adapter (Terminal)

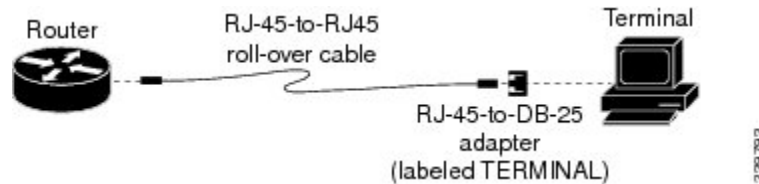
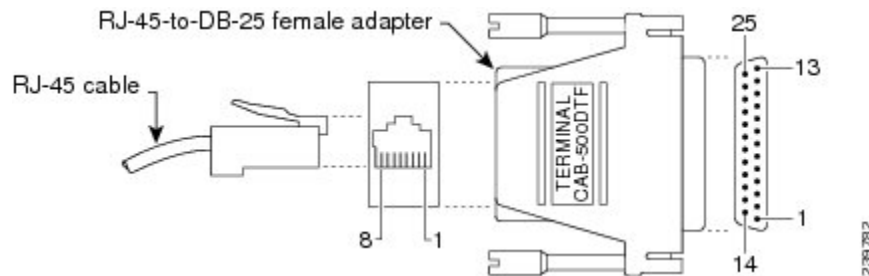


Figure 8: RJ-45 to DB-25 Female Adapter



For the pinout descriptions for the DB-25 connections, see [Console Port Adapter Pinouts](#).

Connecting WAN and LAN Interfaces

This section describes how to connect WAN and LAN interface cables.



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



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. Statement 1021



Warning Hazardous network voltages are present in WAN ports regardless of whether power to the unit is OFF or ON. To avoid electric shock, use caution when working near WAN ports. When detaching cables, detach the end away from the unit first. Statement 1026

Connection Procedures and Precautions

To properly connect cables:

-
- Step 1** Connect each WAN and LAN cable to the appropriate connector on the chassis or on an interface card.
 - Step 2** Position the cables carefully, so that they do not put strain on the connectors.
 - Step 3** Organize cables in bundles so that cables do not intertwine.
 - Step 4** Inspect the cables to make sure that the routing and bend radius is satisfactory. Reposition cables, if necessary.

Note Install cable ties in accordance with site requirements.
