



# Installing the Virtual Private Network Module

---

This chapter describes how to install the Virtual Private Network (VPN) module in your Cisco 1751 router.

## Before You Begin

This section describes important safety information and the tools required to install the VPN module. Read this section before installing the VPN module in a Cisco 1751 router.

## Tools and Equipment Required

The following items are required to install the VPN module:

- Number 1 Phillips screwdriver
- VPN module and associated parts

## VPN Module Parts

Included with the VPN module are the following parts required for installation:

- Two metal standoffs
- Four screws

## Safety Warnings



**Warning**

---

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

---



**Warning**

---

**Before opening the chassis, disconnect the telephone-network cables to avoid contact with telephone-network voltages.**

---



---

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

---



**Warning**

---

**Do not touch the power supply when the power cord is connected. For systems with a power switch, line voltages are present within the power supply even when the power switch is off and the power cord is connected. For systems without a power switch, line voltages are present within the power supply when the power cord is connected.**

---



**Warning**

---

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

---



**Warning**

---

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

---

**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**

---

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

---

**Warning**

---

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

---

## Preventing Electrostatic Discharge Damage

Before installing a VPN module, read the electrostatic discharge (ESD) instructions in this section. ESD is a discharge of stored static electricity that can damage equipment and impair electrical circuitry. It occurs when electronic components are improperly handled and can result in complete or intermittent failures.

Following are guidelines for preventing ESD damage:

- Before opening the chassis, turn the router power switch to off ( O ).
- Disconnect the power cable to the router.
- Always use an ESD-preventive wrist or ankle strap and ensure that it makes good skin contact.
- Avoid contact between equipment and clothing. The wrist or ankle strap protects the equipment only from ESD voltages on the body; ESD voltages on clothing can still cause damage.
- Handle printed circuit cards by the edges only; avoid touching the components, traces, or any connector pins.

- Place a removed card component on an antistatic surface or in a static shielding bag.
- Do not remove the wrist or ankle strap until the installation is complete.

**Caution**

---

To avoid damaging the equipment, periodically check the resistance value of the antistatic strap. The measurement should be between 1 and 10 megohms (Mohms).

---

**Warning**

---

**During this procedure, wear grounding wrist straps to avoid ESD damage to the router. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself.**

---

## Installing the VPN Module in a Cisco 1751 Router

This section describes how to install the VPN module in a Cisco 1751 router. It contains the following sections:

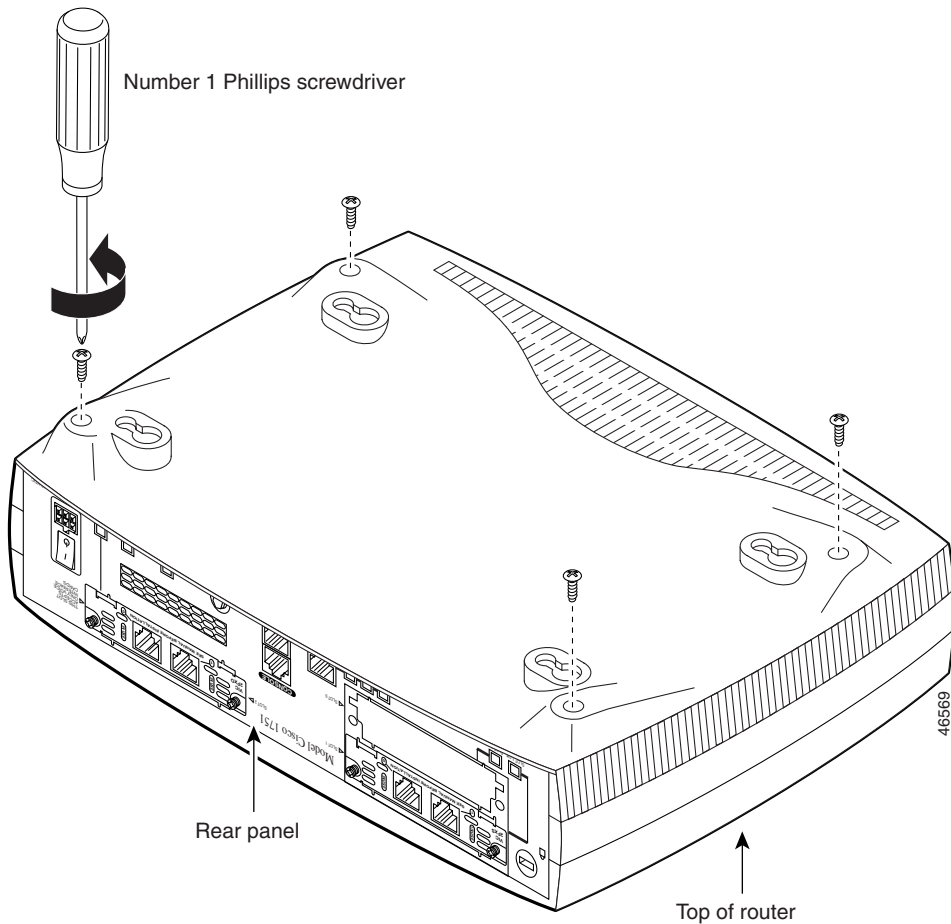
- [Opening the Cisco 1751 Chassis](#)
- [Installing the VPN Module](#)
- [Closing the Cisco 1751 Chassis](#)

### Opening the Cisco 1751 Chassis

To install the VPN module, you must open the chassis. Opening the chassis requires a number one Phillips screwdriver.

Follow these steps to open the chassis:

- 
- Step 1** Make sure the router is turned off and is disconnected from the power supply.
- Step 2** Turn the router upside down, and rest the top of the router on a flat surface.
- Step 3** Use the Phillips screwdriver to remove the four screws that hold the top and bottom of the chassis together, as shown in [Figure D-1](#).

**Figure D-1** Removing the Cisco 1751 Chassis Screws

- Step 4** Turn the router back to its original position (top up).
- Step 5** Gently pull the top of the router (facing toward you) up and away from the bottom of the router.

At this point, disconnect the fan, which is inside the top of the router chassis, from the motherboard. Do this by disconnecting the fan cable from the connector (labeled FAN) on the motherboard.

- Step 6** Place the router bottom on an antistatic mat and begin installing the VPN module.
- 

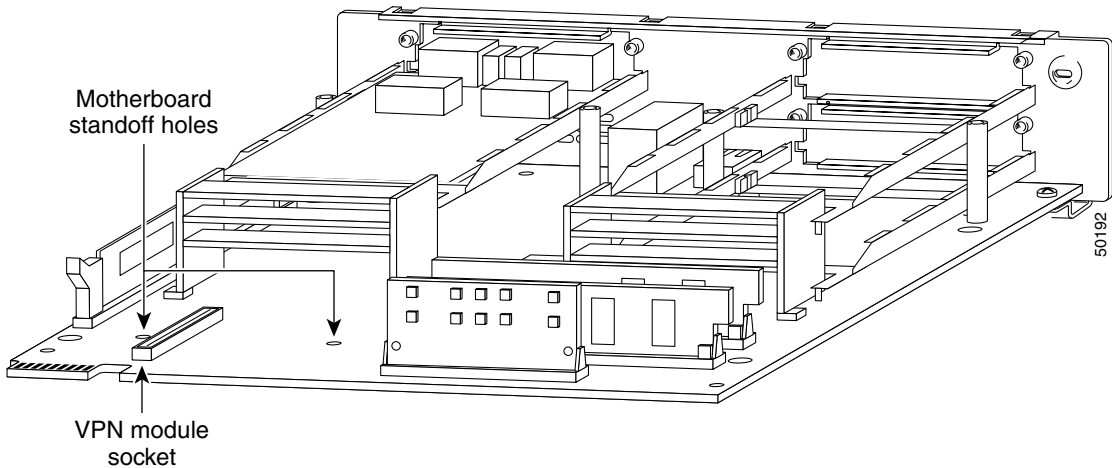
## Installing the VPN Module

Follow the steps in this section to install the VPN module.

---

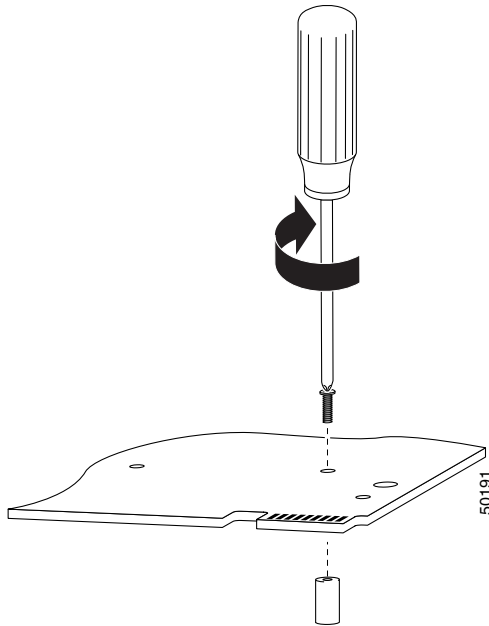
- Step 1** The VPN module plugs into a socket, as shown in [Figure D-2](#).
- Step 2** Using two of the screws provided, attach the standoffs to the 1751 motherboard.
- Locate the holes in the motherboard.

**Figure D-2** Cisco 1751 Standoff Location

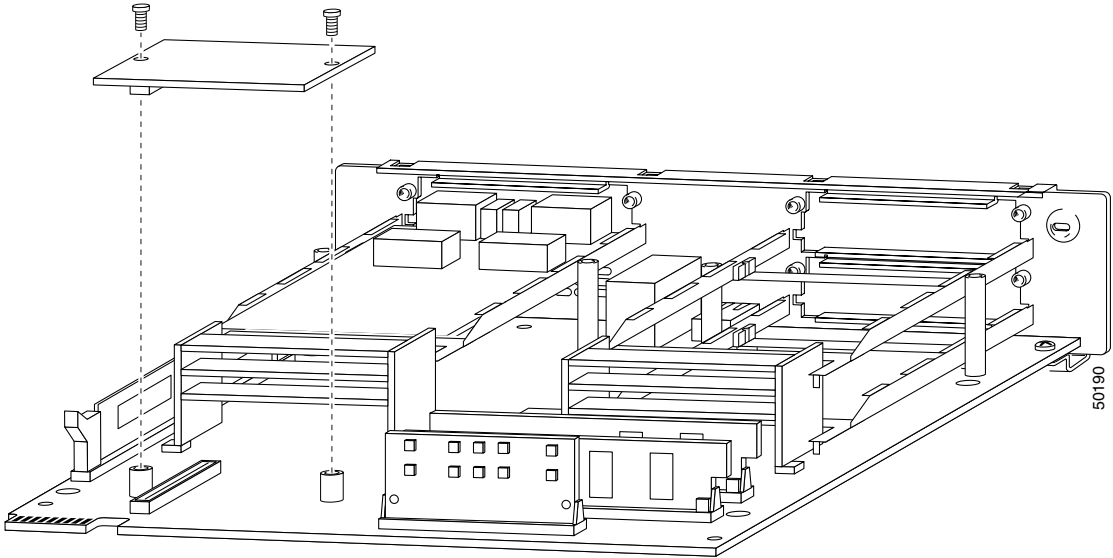


- Turn the motherboard over and attach the standoffs to it using two of the screws provided as shown in [Figure D-3](#).

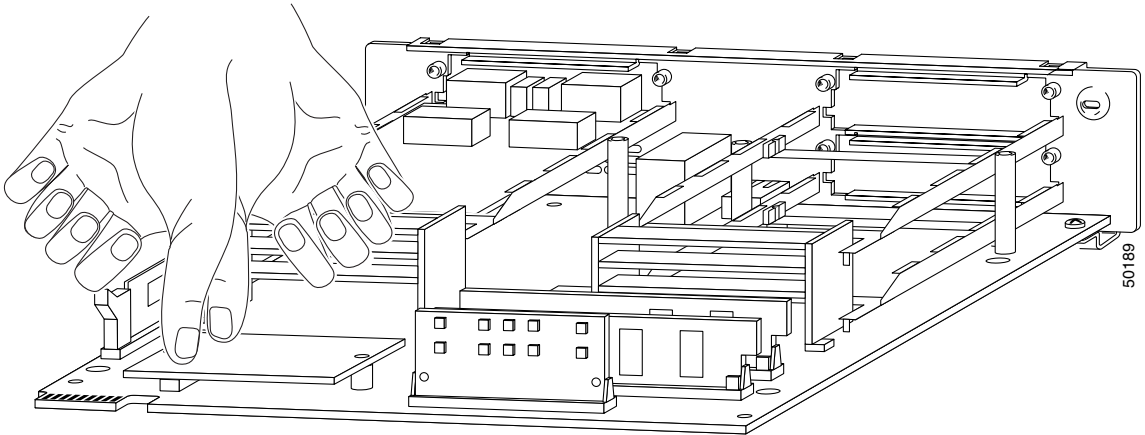
**Figure D-3** *Securing the Standoff to the 1751 Motherboard*



- Step 3** Locate the VPN module socket and insert the VPN module, as shown in [Figure D-4](#).

**Figure D-4** Cisco 1751 Motherboard—VPN Module Location

- Step 4** Pushing down with both thumbs as shown in [Figure D-5](#), plug the VPN module into the socket.

**Figure D-5 Seating the VPN Module**

- Step 5** Using the two remaining screws, secure the standoffs to the VPN module.
- 

## Closing the Cisco 1751 Chassis

After installing the VPN module on the motherboard, close the chassis by following these steps:

- 
- Step 1** If you disconnected the fan from the motherboard as described in the “Opening the Cisco 1751 Chassis” section, reconnect the fan cable to the connector labeled FAN on the motherboard.
- Step 2** Locate the posts that protrude from the inside of the chassis cover and the corresponding openings on the chassis bottom.
- Step 3** Line up the posts with the corresponding openings, as shown in [Figure D-6](#), and carefully slide the posts into the openings. Be careful not to damage the router motherboard with the posts.
- Step 4** Replace the screws that you removed when opening the chassis. (See [Figure D-1](#).)

Figure D-6 Closing the Cisco 1751 Chassis

