



## Cisco 1811 and 1812 Integrated Services Router Cabling and Installation

### INCLUDES LICENSE AND WARRANTY INFORMATION

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**Note:** For localized versions of these instructions, please see the following URL:

[http://www.cisco.com/en/US/partner/products/ps5853/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/partner/products/ps5853/prod_installation_guides_list.html)



# 1 Cisco One-Year Limited Hardware Warranty Terms

There are special terms applicable to your hardware warranty and various services that you can use during the warranty period. Your formal Warranty Statement, including the warranty applicable to Cisco software, is included on the CD that accompanies your Cisco product. Follow these steps to access and download the *Cisco Information Packet* and your warranty document from the CD or from Cisco.com.

1. Launch your browser, and go to this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/cetrans.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/cetrans.htm)

The Warranties and License Agreements page appears.

2. To read the *Cisco Information Packet*, follow these steps:
  - a. Click on the Cisco Limited Warranty, Disclaimer of Warranty, End User License Agreement, and US FCC Notice link.
  - b. Read the document online, or click the PDF icon to download and print the document in Adobe Portable Document Format (PDF).

You must have Adobe Acrobat Reader to view and print PDF files. You can download the reader from Adobe's website:

<http://www.adobe.com>

You can also contact the Cisco service and support website for assistance:

<http://www.cisco.com/en/US/support/>.

## Duration of Hardware Warranty

One (1) Year

## Replacement, Repair, or Refund Policy for Hardware

Cisco or its service center will use commercially reasonable efforts to ship a replacement part within ten (10) working days after receipt of a Return Materials Authorization (RMA) request. Actual delivery times can vary, depending on the customer location. Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

## To Receive a Return Materials Authorization (RMA) Number

Contact the company from whom you purchased the product. If you purchased the product directly from Cisco, contact your Cisco Sales and Service Representative.

Complete the information below, and keep it for reference.

Company product purchased from	
Company telephone number	
Product model number	
Product serial number	
Maintenance contract number	

# 2 Overview

This document describes the steps for installing the Cisco 1811 and the Cisco 1812 integrated services routers. The Cisco 1811 and Cisco 1812 routers are fixed-configuration routers. They each include an integrated 8-port 10/100-Mbps Ethernet switch, two onboard Fast Ethernet WAN ports, two dual USB 2.0 ports, and optional 802.11a/b/g wireless LAN support. The switch ports and the onboard 10/100-Mbps Ethernet ports support 802.1Q virtual LAN (VLAN) encapsulation and enable you to configure demilitarized zones (DMZs), using VLANs and Cisco IOS firewall features. The switch ports are also optionally upgradable to include inline power support for IP phones.

The Cisco 1811 and Cisco 1812 integrated services routers provide secure Internet connectivity and dial backup if your primary connection fails. The Cisco 1811 router provides dial backup through a V.92 analog modem port. The Cisco 1812 router provides dial backup through an ISDN S/T port.

Additional documentation can be found on Cisco.com.


# Product Serial Number Location

The serial number label for the Cisco 1811 and Cisco 1812 routers is located on the back of the chassis, above and to the right of the power switch. You need this serial number when calling Cisco for support. To see specifically where the serial label is on your router, go to the following link:

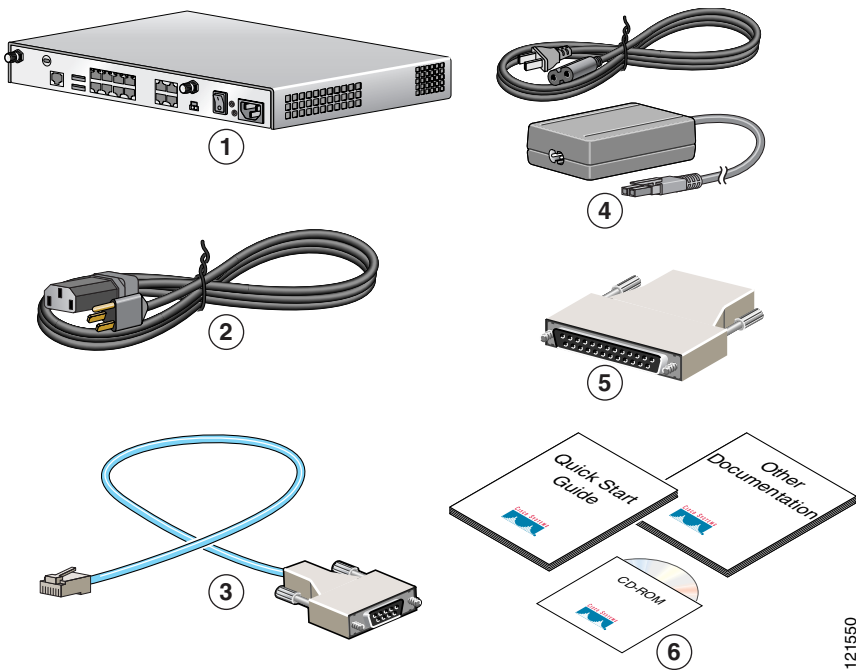
<http://tools.cisco.com/Support/CPI/index.do>

## 3 Unpacking the Box

When you unpack the box containing your Cisco 1811 or Cisco 1812 router, you should find the items shown in Figure 1.

 **Note** The Cisco 1811 and Cisco 1812 routers have a wireless upgradable option. If this option is chosen, an antenna kit should have been shipped with your router in addition to the items listed in Figure 1.

**Figure 1** Items Included with the Cisco 1811 and Cisco 1812 Integrated Services Router



1	Cisco 1811 or Cisco 1812 router	4	PoE power supply and cable (optional)
2	Power cable	5	DB-9 to DB-25 adapter
3	Console cable (light blue, RJ-45 to DB-9)	6	Product documentation

The shipment should include the following items:

- One Cisco 1811 router or one Cisco 1812 router
- One blue RJ-45-to-DB-9 console cable
- One DB-9-to-DB-25 adapter
- One black power supply cord
- One Power over Ethernet (PoE) power supply, if the router was purchased with the PoE option
- Product documentation

- One CD-ROM containing Cisco Router and Security Device Manager (SDM)
- One antenna kit (optional)

## Items You Need to Provide

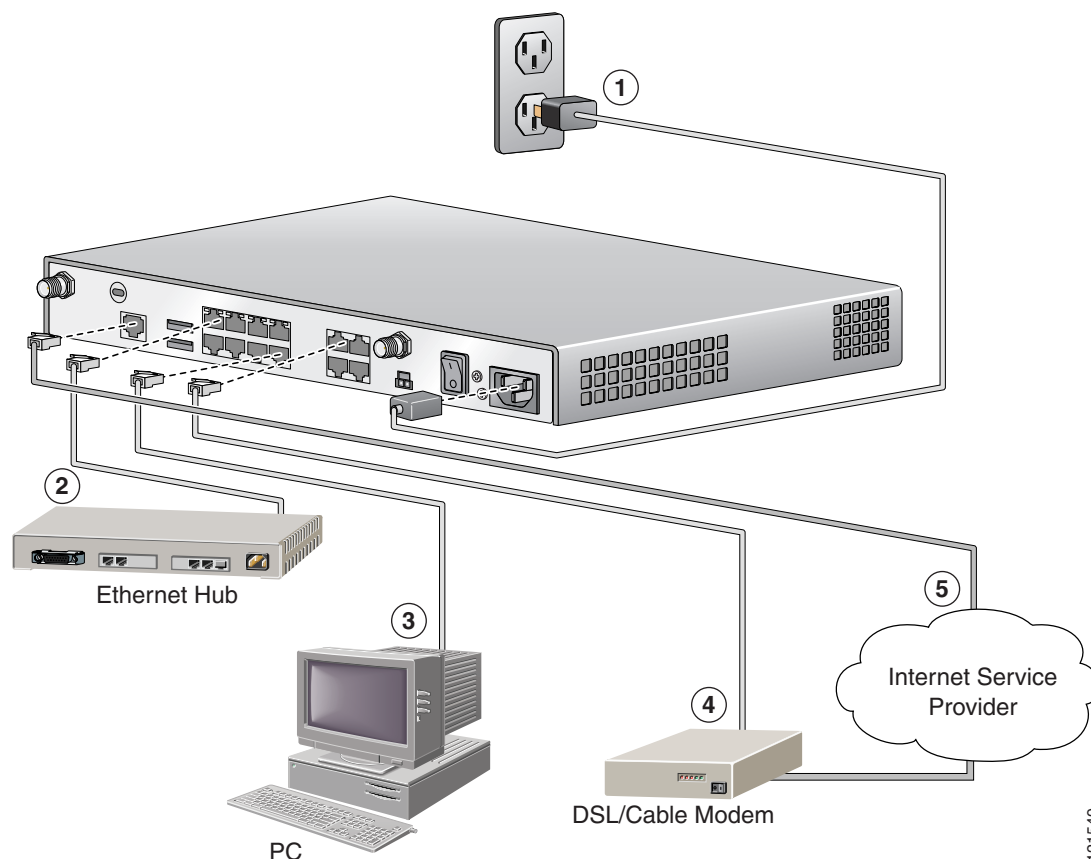
Depending on your network environment, you may need to provide some of the following items so that you can install the router:

- Straight-through Ethernet cables (RJ-45-to-RJ-45) to connect the router to a broadband (xDSL or cable) modem and to a hub or switch
- Ethernet hub or switch to connect the router to the local network, or an xDSL or cable modem to connect the router to the service provider
- Server or other computer with a network interface card (NIC) or other networked device (such as a hub or a switch) to connect to the integrated 8-port 10/100-Mbps Ethernet switch

## 4 Connecting the Router

Figure 2 shows a typical installation of a Cisco 1811 or Cisco 1812 router.

**Figure 2** Typical Installation of a Cisco 1811 or Cisco 1812 Router



Follow these steps to connect the router to the power supply, your local network, and your service provider network:

### Step 1 Connect power to the router as shown in Figure 2:

- Connect the separate power cord to the power socket on the back panel of the router.

- b. Connect the other end of the separate power cord to a power outlet.



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**Note** If you have a router with the PoE option, you must connect the PoE power supply to the PoE socket on the back of the router, connect the female end of the PoE power cable to the PoE power supply, and connect the male end of the PoE power cable to a power outlet.

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- c. Turn on the router by pressing the power switch to the on ( | ) position.  
d. Confirm that the router has power by checking that the SYS OK LED on the front panel is on.

**Step 2** To connect the router to your network, connect one end of an Ethernet cable (RJ-45) to an Ethernet switch port (FE 2–FE 9), and connect the other end of the cable to a port on a hub or switch, as shown in Figure 2.



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**Note** The example in Figure 2 shows connectivity to a hub. The router Ethernet switch ports can be connected to another networked device, such as a switch or computer with a network interface card (NIC). If you are connecting a computer to the switch port on the router, it will take about 30 seconds for connectivity to be established.

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**Step 3** To use Cisco Router and Security Device Manager (SDM) to configure your router, you must connect a PC to the first Ethernet switch port. Connect one end of an Ethernet cable to one of the Ethernet switch ports (FE 2–FE 9), and connect the other end to the Ethernet port on your PC.



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**Caution** Always connect the Ethernet cable to an Ethernet port on the router. Accidentally connecting the cable to the wrong port can damage your router.

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**Step 4** To connect the router to your service provider network, connect one end of an Ethernet cable to a 10/100 Fast Ethernet port (these ports are labeled FE 0 and FE 1); connect the other end of the cable to a network port on your service provider's broadband (xDSL or cable) modem equipment, as shown in Figure 2.



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**Caution** Always connect the Ethernet cable to an Ethernet port on the router. Accidentally connecting the cable to the wrong port can damage your router.

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**Step 5** (Optional) The Cisco 1811 router supports a 230-kbps dialup connection to your service provider network through its V.92 modem port. The Cisco 1812 router supports a 144-kbps dialup connection to your service provider network through its ISDN S/T port. These connections can serve as a backup to your service provider if your primary connection goes down. To make a backup connection to your service provider network, connect one end of a straight-through RJ-11 cable to the V.92 modem port (for the Cisco 1811) or a straight-through RJ45 cable to the ISDN S/T port (for the Cisco 1812) on the router, as shown in Figure 2, and connect the other end of the cable to your telephone wall jack.




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**Note** To configure your router for a backup dialup connection, you must use the Cisco IOS command-line interface (CLI). For more information, see the *Cisco 1800 Series Integrated Services Routers (Fixed) Software Configuration Guide*.

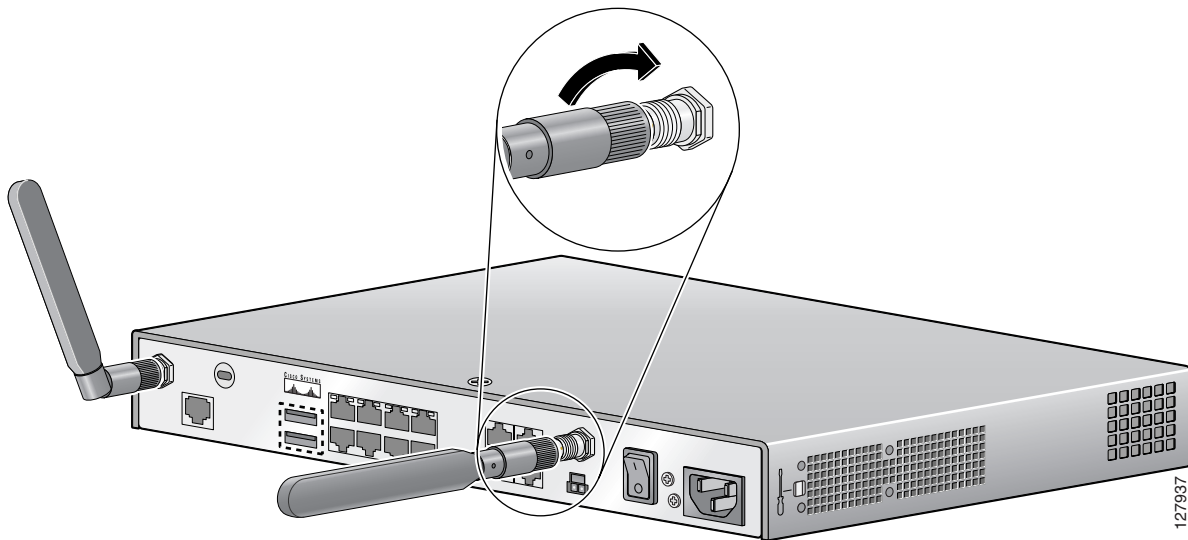
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## 5 Connecting Antennas to the Router RP-TNC Connectors

If your router has the wireless LAN option, connect the antennas by screwing the antenna connectors in a clockwise direction onto the reverse-polarity threaded Neill-Concelman (RP-TNC) connectors on the back panel of the router. Figure 3 shows an example of how to connect the swivel-mount dipole antennas to the router.

 **Note** The location and position of your router antennas are crucial to effective wireless connectivity. For more information about the antennas compatible with the Cisco 1801, Cisco 1802, and Cisco 1803 routers, see the online documents located at the following URL:  
[http://www.cisco.com/en/US/products/ps5853/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps5853/prod_installation_guides_list.html)

**Figure 3** Connecting Antennas to the Router



For information about configuring the wireless LAN functionality of your router, see the *Cisco Access Router Wireless Configuration Guide* at the following URL:

<http://www.cisco.com/en/US/docs/routers/access/1800/wireless/configuration/guide/awg.html>

## 6 Configuring the Router Using Cisco Router and Security Device Manager

Cisco Router and Security Device Manager (SDM) is a web-based configuration tool that allows you to configure LAN and WAN interfaces, routing, Network Address Translation (NAT), firewalls, VPNs, and other features on your router. If SDM is installed on your router, configure the router by following the instructions in the *Cisco Router and Security Device Manager (SDM) Quick Start Guide*. If this document was not shipped with your router, you can obtain the SDM software and instructions for installing it on your router from the following location:

<http://www.cisco.com/cgi-bin/tablebuild.pl/sdm>

To obtain the SDM release notes and other SDM documentation, go to the following URL and click the **Technical Documentation** link.

<http://www.cisco.com/go/sdm>

## 7 Connecting a PC to the Router Console Port

This step is optional; it is required only if you want to use the Cisco IOS CLI instead of SDM to configure or troubleshoot the router. To use Cisco IOS, you must connect the router to a terminal or to a PC with terminal emulation software. Terminal emulation software should be configured with the following settings:

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

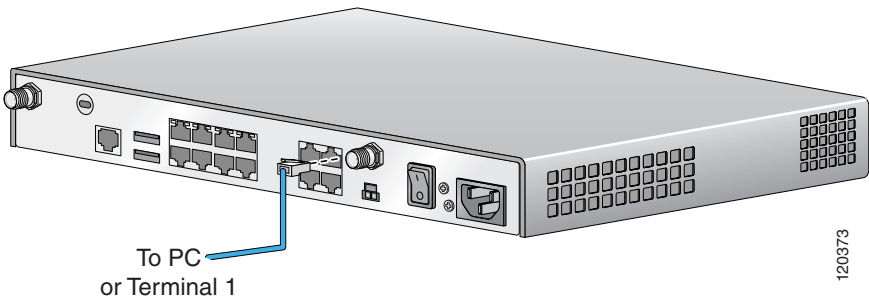
The *Cisco 1800 Series Integrated Services Routers (Fixed) Software Configuration Guide* describes how to configure the router by using Cisco IOS software.

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

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**Step 1**    Connect the RJ-45 end of the console cable to the CONSOLE port on the back panel of the router, as shown in Figure 4.

**Figure 4**    *Connecting the Console Cable to the Router*



**Step 2**    Connect the DB-9 end of the console cable to the console port (also called the *serial port*) on your PC. If this adapter does not fit your PC console port, you must provide an adapter that fits.

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## 8 Verifying Your Installation

You can verify that you have correctly installed your router by checking the LEDs as described in Table 1.

**Table 1**    *LEDs That Verify Installation*

LED	Meaning
SYS OK	Steady green—Router has successfully booted up and the software is functional. Blinking green—Router is booting or in ROM monitor mode.
POE <sup>1</sup>	Off—Inline power supply not installed. Steady green—Inline power supply OK. Amber—Power denied.
FE 0–9	Steady green—Ethernet link is established. Blinking green—Activity on the Ethernet link. Off—No link.
CD <sup>2</sup>	Steady green—Modem connection established (carrier detect). Off—No connection established.
SPD <sup>2</sup>	Steady green—Connection at high speed (V.90). Off—Connection at low speed (V.32/V.32b/V.34).
BUSY <sup>2</sup>	Blinking green—Activity over modem line. Off—No activity.

**Table 1**      **LEDs That Verify Installation (Continued)**

LED	Meaning
LINK <sup>3</sup>	Steady green—ISDN S/T connection established. Off—No ISDN S/T connection established.
B1 <sup>3</sup>	Blinking green—Activity on first B channel. Off—No activity on first B channel.
B2 <sup>3</sup>	Blinking green—Activity on second B channel. Off—No activity on second B channel.
PPP	Steady green—At least one PPP connection established. Off—No PPP link established.
VPN	Steady green—At least one VPN tunnel established. Off—No VPN tunnel established.
CF	Blinking green—CompactFlash memory being accessed. Do not remove CompactFlash memory. Off—CompactFlash memory is not being accessed. It is safe to remove CompactFlash memory.

1. Inline power is a field-upgradable option only. It is not installed by default.

2. This LED is on the Cisco 1811 router only.

3. This LED is on the Cisco 1812 router only.

## 9 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.







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