

Overview

This guide is designed to help you replace or change a radio module in both the autonomous and lightweight models of the Cisco Aironet 1250 Series Access Point (hereafter referred to as the *access point*). You can replace or change a radio module on your site without special tools. The procedure is simple; however, we recommend that you become familiar with the contents of this guide before you attempt to replace or change a radio module.

The autonomous access points can support standalone network configurations with all configuration settings maintained within the access points. The lightweight access points operate in conjunction with a Cisco wireless LAN controller with all configuration information maintained within the controller.

The 1250 series access point is a Wi-Fi certified, wireless LAN transceiver. The access point supports two radio modules: a 2.4-GHz radio, and a 5-GHz radio (draft 802.11n, version 2.0). You can configure the radios separately, using different settings on each. The access point connects wireless and wired networks or is the center point of a stand-alone wireless network. In large installations, wireless users within radio range of an access point can roam throughout a facility while maintaining uninterrupted access to the network.

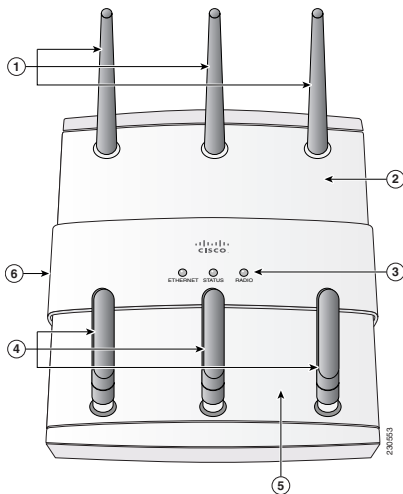
Radio Module Slots

The access point has two radio module slots: Slot 0 and Slot 1. Slot 0 can only be used with the 2.4-GHz radio module and slot 1 can only be used with the 5-GHz radio module.

- 2.4 GHz
- 5 GHz
- Draft 802.11n, version 2.0

Figure 1 shows the access point with 2.5-GHz and 5-GHz radio modules installed.

Figure 1 Access Point with 802.11b/g and 802.11a Radio Modules



1	2.4-GHz antennas	4	5-GHz antennas
2	2.4-GHz radio module	5	5-GHz radio module
3	LEDs	6	Security lock slot (hidden)

Radio modules can be initially placed in any slot before the radios are configured with non-default parameters. New radio configuration changes are associated with the module slot in which the radio module is located.

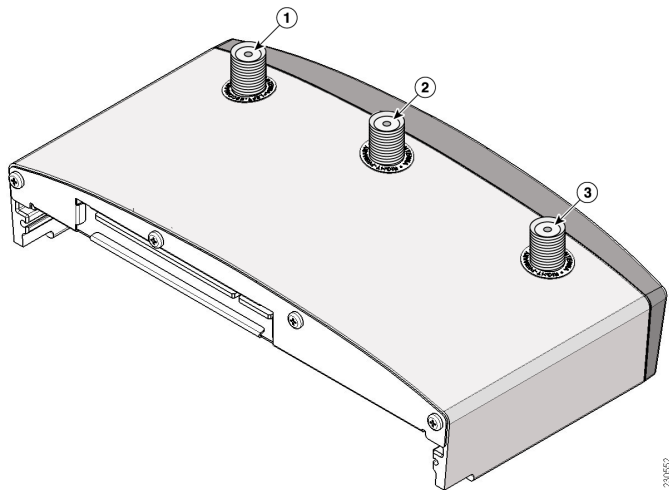
When the default radio settings are changed, the radio modules should not be moved to a different slot. After configuration changes are made, moving the radio modules to a different module slot requires that you reconfigure the radio settings for that slot.

The access point supports single- or dual-radio operation. Each radio uses dual-diversity antennas. A blank module is available for single-radio configurations.

The 5-GHz radio incorporates an Unlicensed National Information Infrastructure (UNII) radio transceiver operating in the UNII 5-GHz frequency bands.

[Figure 2](#) shows a typical radio module.

Figure 2 **Typical Radio Module**



1	Radio antenna connector (A-Tx/Rx)	3	Radio antenna connector (B-Tx/Rx)
2	Radio antenna connector (C-Rx)		

**Note**

5-GHz antennas have a blue dot or blue label to correspond to the blue labels around the antenna connectors on the 5-GHz radio module.

Safety Information

The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. When used with approved Cisco Aironet antennas, Cisco Aironet products meet the uncontrolled environmental limits found in OET-65 and ANSI C95.1, 1991.

Proper installation of this radio according to the instructions found in this manual will result in user exposure that is substantially below the FCC recommended limits.

- Do not hold any component containing a radio so that the antenna is very close to or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- The use of wireless devices in hazardous locations is limited to the constraints posed by the safety directors of such environments.

Declaration of Conformity with Regard to the EU Directive 1999/5/EC (R&TTE Directive)

This declaration is only valid for configurations (combinations of software, firmware and hardware) provided and/or supported by Cisco Systems. The use software or firmware not supported/provided by Cisco Systems may result that the equipment is no longer compliant with the regulatory requirements.

Warnings

Translated versions of the following safety warnings are provided in the *Translated Safety Warnings for Cisco Aironet Access Points* document that ships with the access point.



Warning

Read the installation instructions before you connect the system to its power source. Statement 1004



Warning

Do not operate your wireless network device near unshielded blasting caps or in an explosive environment unless the device has been modified to be especially qualified for such use. Statement 245B



Warning

In order to comply with FCC radio frequency (RF) exposure limits, antennas should be located at a minimum of 7.9 inches (20 cm) or more from the body of all persons. Statement 332

Unpacking the Radio Module

Each access point package contains the following items:

- One radio module
- One radio compliance label
- Two access point compliance labels
- This guide
- Cisco product registration and Cisco documentation feedback cards

Follow these steps to unpack the access point:

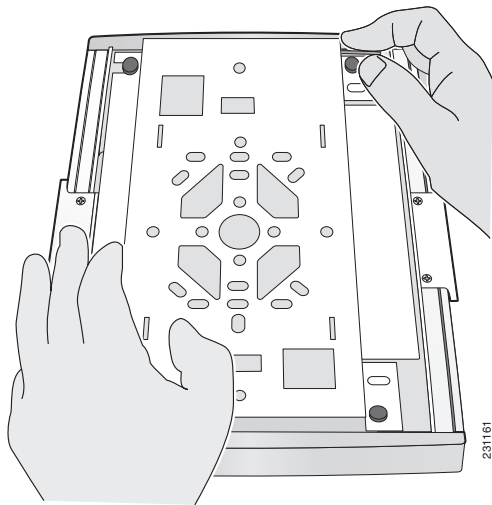
- Step 1** Open the shipping container and carefully remove the contents.
 - Step 2** Return all packing materials to the shipping container and save it.
 - Step 3** Ensure that all items listed above are included in the shipment. Check each item for damage. If any item is damaged or missing, notify your authorized Cisco sales representative.
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Removing the Mounting Plate

If the access point uses the mounting plate, you must remove it before you can remove and replace a radio module. Follow these steps to remove the mounting plate.

- Step 1** Grasp the access point with both hands as shown in [Figure 3](#).

Figure 3 **Removing the Mounting Plate**



Step 2 With your right thumb or forefinger, pull the security hasp toward you to release it from the mounting plate.

Step 3 Maintain pressure on the security hasp, use your thumb or forefinger to push the mounting plate to the right, and slide it off the mounting plate pins.

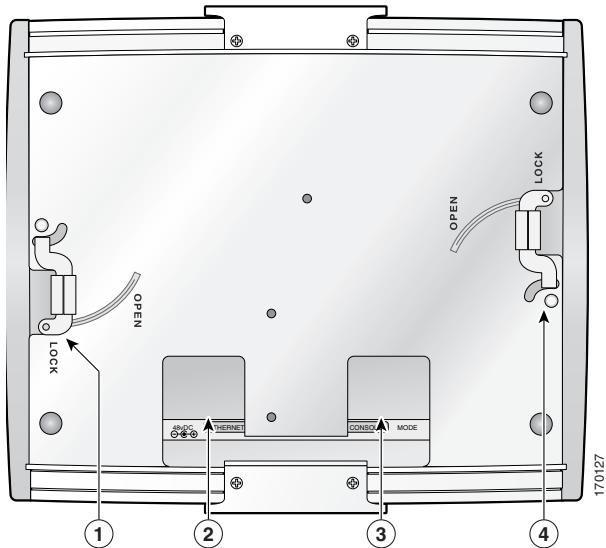
Step 4 Remove the mounting plate from the access point.

Removing a Radio Module

The access point has two latches for securing or removing modules from the unit. Follow these steps to remove a radio module from the access point.

- Step 1** Turn the access point off.
- Step 2** If required, remove the access point from its mounting plate. See the [“Removing the Mounting Plate” section on page 9](#) for details.
- Step 3** Remove the power and Ethernet cables from the access point.
- Step 4** Take the access point to a suitable work location.
- Step 5** Place the access point so that the bottom of the unit is facing up as shown in [Figure 4](#).

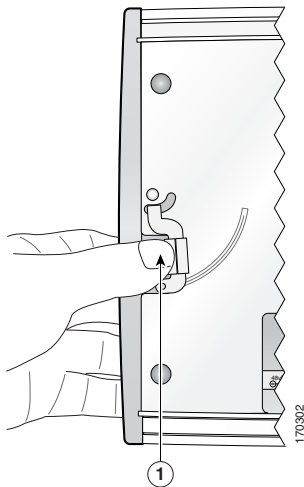
Figure 4 **Access Point Module Latches**



1	Slot 1 module latch	3	Console port cable bay
2	Ethernet cable bay	4	Slot 0 module latch

Step 6 Use your hand or thumb to push the module lever to the open position. (see [Figure 5](#)).

Figure 5 *Opening the Module Latch*



1	Push module lever to open position
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Step 7 When the module lever reaches the open position, gently pull the radio module from the access point.

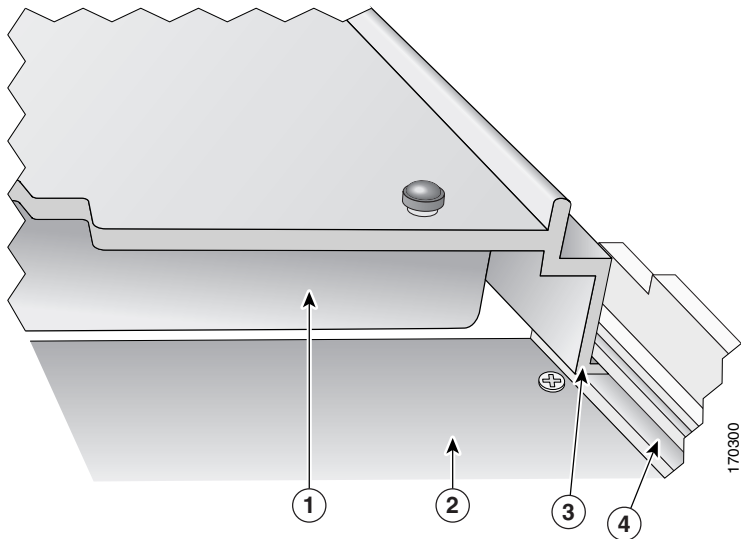
Installing a Radio Module

No special tools are required to install a radio module.

Follow these steps to install a radio module.

Step 1 Carefully insert the radio module rails into the radio module slots (see [Figure 6](#)).

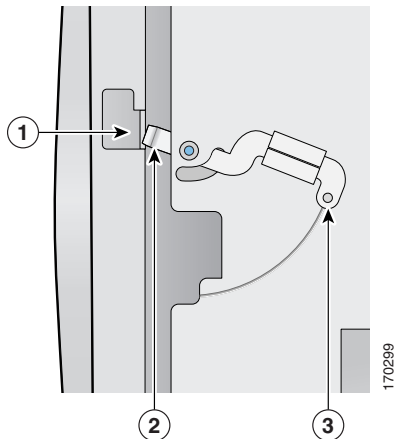
Figure 6 *Inserting the Radio Module*



1	Radio module slot on access point	3	Access point module rail
2	Radio module	4	Radio module slot

- Step 2** Slowly slide the radio module into the module slot until the module is firmly seated in the slot.
- Step 3** Make sure that the module latch is fully open (see [Figure 7](#)).

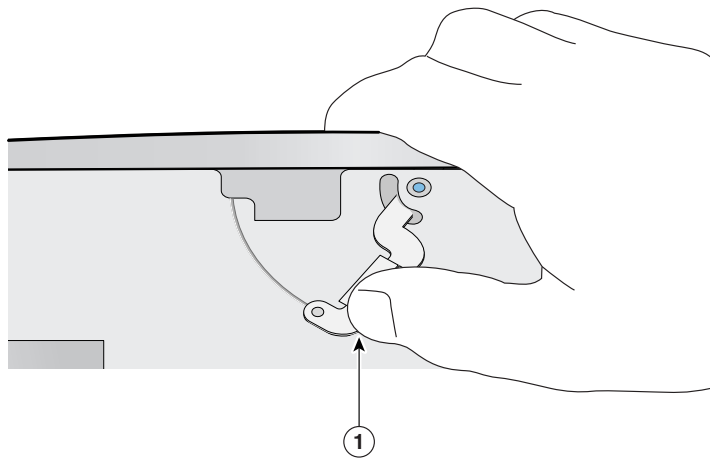
Figure 7 *Module Latch Position During Module Installation*



1	Radio module latch notch	3	Latch open position
2	Module latch		

Step 4 Use your thumb to close the module latch while squeezing with your fingers. Continue pushing until the module latch clicks (see [Figure 8](#)).

Figure 8 *Closing the Module Latch*



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1	Module latch
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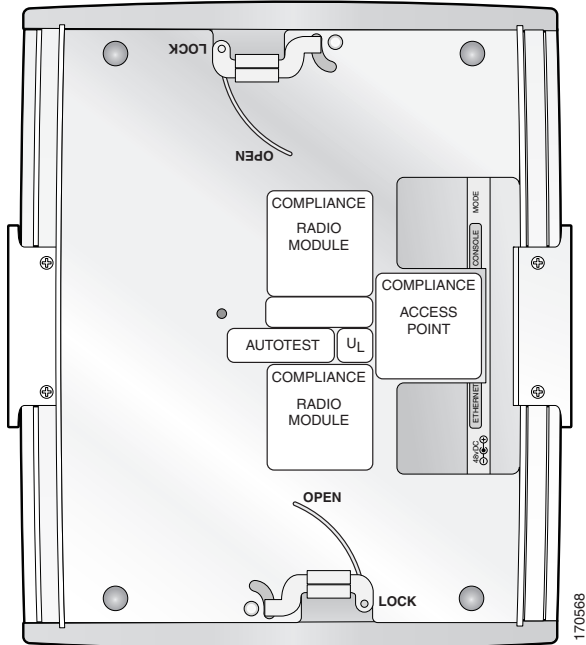
- Step 5** Attach the radio compliance and access point compliance labels on the bottom plate of the access point. See [“Attaching the Compliance Labels” section on page 18](#) for detailed instructions.
- Step 6** Configure the radio module.
- Step 7** Return the access point to its location onsite and return it to operational status.
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Attaching the Compliance Labels

After you install or replace a radio module, you must attach the radio compliance label provided. Attaching this label updates the compliance status of the access point. Attaching this label is mandatory and is required by the regulatory agency in your country.

The access point has space on the bottom plate reserved for compliance labels. The label locations are shown in [Figure 9](#).

Figure 9 Access Point Compliance Labels



The radio compliance labels occupy the spaces marked *Compliance Radio Module* in Figure 9. These spaces may or may not contain labels depending on how your access point was originally configured.

The product compliance label occupies the space marked *Compliance Access Point* in Figure 9. Every access point has a product compliance label attached. The information on this label varies, depending on the radio modules installed.

Make sure that your access point has the correct labels after you install or upgrade a radio module so that it will be in compliance with regulations in your country.

Applying the Labels

The radio module ships with the radio compliance label for the radio you ordered. Carefully apply the label in the radio compliance label space closest to the slot.

Configuring the Radio Module

Configuration instructions specific to your intended use are covered in the “Configuring the Access Point for the First Time” chapter of the *Cisco IOS Software Configuration Guide for Cisco Aironet Access Points*. This and other related documents are available on cisco.com. Follow this link to access and download it:

http://www.cisco.com/en/US/products/ps6973/products_installation_and_configuration_guides_list.html

Cisco also recommends that you have the following documents available:

- *Cisco IOS Software Configuration Guide for Cisco Aironet Access Points*—provides detailed information for advanced configurations.
- *Cisco Aironet Command Reference for Cisco Aironet Access Points and Bridges*—lists all Cisco IOS commands with descriptions and syntax instructions.
- *Cisco Aironet 1250 Series Access Point Hardware Installation Guide*—provides mounting instructions, compliance information, and technical specifications.
- *Release Notes for Cisco Aironet Access Points for Cisco IOS Release 12.4(3g)JA* (or later)—provides system requirements, new feature descriptions, important notes, limitations, and last-minute updates.

These documents are also available on cisco.com at the following URL:

http://www.cisco.com/en/US/products/ps6973/products_installation_and_configuration_guides_list.html

Make sure that you are using a computer connected to the same network as the access point, and obtain the following information from your network administrator:

- The access point host name.
- The case-sensitive SSID for your 802.11 radio network.
- A Simple Network Management Protocol (SNMP) community name and the SNMP file attribute (if SNMP is in use).
- The Media Access Control (MAC) address from the label on the bottom of the access point (such as 0016462584c), if you plan to use the Cisco IP Setup Utility to find an access point IP address.
- If your network is not connected to a DHCP server, the access point IP address, default gateway, and subnet mask.

In Case of Difficulty

If you followed the instructions in previous sections of this guide, you should have had no trouble getting the radio module installed and running. If you do experience difficulty, the following sections provide basic troubleshooting information.

Before contacting Cisco, look for a solution to your problem in this guide or the troubleshooting chapter of the *Cisco Aironet 1250 Series Access Point Hardware Installation Guide*.

The Technical Assistance Center (TAC) contains additional troubleshooting information. Follow this link to access the TAC on cisco.com:

<http://www.cisco.com/cisco/web/support/index.html>

Checking the Access Point LEDs

If your access point is not working properly, check the Status, Ethernet, and Radio LEDs on the top panel. You can use the LED colors to assess the unit status.

The LED meanings are in this table.

Ethernet LED	Radio LED	Status LED	Meaning
–	–	Green	Normal operation; no wireless clients associated.
–	–	Blue	Normal operation; at least one wireless client associated.
Green	–	–	Ethernet link is operational.

Ethernet LED	Radio LED	Status LED	Meaning
Blinking green	–	–	Transmitting or receiving Ethernet packets.
–	Blinking green	–	Transmitting or receiving radio packets.
–	–	Blinking blue	Software upgrade in progress.
Blinking green	Blinking green	Blinking green	Access location command.
–	–	Blinking red	Ethernet link not operational.
Red	–	Red	Ethernet failure.
Amber	–	Blinking blue	Configuration recovery in progress (Mode button pressed for 2 to 3 seconds).
Blinking green	Red	Blinking green	Image recovery in progress (Mode button pressed for 20 to 30 seconds).
Blinking amber	–	–	Ethernet transmit or receive errors.

Ethernet LED	Radio LED	Status LED	Meaning
–	Blinking amber	–	Maximum retries or buffer full failure on radio.
Red	Red	–	Software failure.
–	–	Cycling blue, green, red, off	General warning; insufficient inline power.

For more details on these LED status codes, see the “Troubleshooting” chapter of the *Cisco Aironet 1250 Series Access Point Hardware Installation Guide*.

Compliance Information

This equipment has been tested and found to comply with the European Telecommunications Standard ETS 300.328. This standard covers Wideband Data Transmission Systems referred to in CEPT recommendation T/R 10.01.

This type-accepted equipment is designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed in accordance with the instruction manual, may cause harmful interference to radio communications.

The Declarations of Compliance for this product relevant to the European Union and other countries following EU Directive 1999/5/EC (R&TTE Directive) can be found in the *Cisco Aironet 1250 Series Access Point Hardware Installation Guide*. This guide is available on Cisco.com.