

2.4-GHz Radio Upgrade

This chapter provides upgrade instructions for the 2.4-GHz (IEEE 802.11b-compliant or IEEE 802.11g-compliant) radio card and includes the following sections:

- [Upgrade Overview, page 7-2](#)
- [Opening the Access Cover, page 7-3](#)
- [Removing a Blank Spacer Card, page 7-4](#)
- [Removing a 2.4-GHz Radio, page 7-5](#)
- [Installing a 2.4-GHz Radio, page 7-7](#)

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Upgrade Overview

This section provides instructions for upgrading the access point 2.4-GHz radio. The following operations summarize the upgrade procedure:

1. Remove all cables and power connections from the access point.
2. Follow standard electrostatic discharge (ESD) procedures.
3. Place the access point on an ESD-protected work surface.
4. Open the access point's 2.4-GHz radio access cover.
5. For an access point without a 2.4-GHz radio feature, remove the blank spacer card.
6. For an access point with a 2.4-GHz radio feature, remove the existing 2.4-GHz radio card.
7. Install the new 2.4-GHz radio card.
8. Close the access point 2.4-GHz radio access cover.



Caution

ESD can damage the Cisco Aironet radio and the internal components of the access point. It is recommended that the 2.4-GHz radio upgrade procedures be performed by an ESD-trained service technician at an ESD-protected workstation.



Note

After you install the new radio, all configurable radio settings will be at default values. Refer to the *Cisco IOS Software Configuration Guide for Cisco Aironet Access Points* for complete instructions on configuring the new radio.

Unpacking the Radio

Each 2.4-GHz radio is shipped with the following items:

- Quick start guide
- A product registration card
- A T-10 tamper-resistant Torx L-wrench
- A 2.4-GHz radio compliance label

If anything is missing or damaged, contact your Cisco representative for support.

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Opening the Access Cover

To open the 2.4-GHz radio access cover, follow these steps:

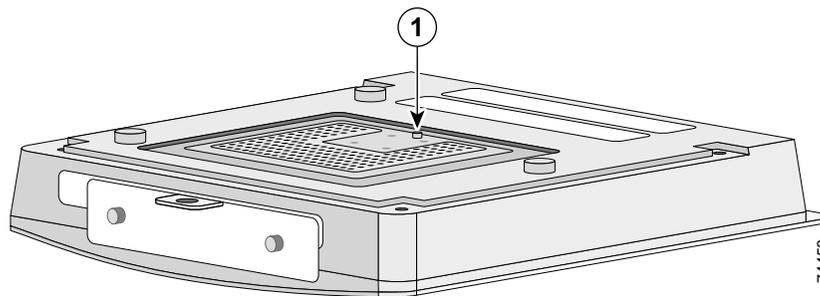
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- Step 1** Remove all cables and power connections from the access point.
 - Step 2** Remove all static-generating items from the work area, such as plastic material, styrofoam cups, and other similar items.
 - Step 3** Place the access point and the new 2.4-GHz radio (in its antistatic bag) on an antistatic work surface.
 - Step 4** Discharge any static buildup on your body by touching a grounded surface (antistatic work surface) before proceeding.
 - Step 5** Position the access point so that the bottom cover is facing up.


Caution

The internal access point components and the 2.4-GHz radio can be damaged by ESD from improper handling.

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- Step 6** Remove the bottom access cover using the T-10 tamper-resistant Torx L-wrench provided with your Cisco radio card (see [Figure 7-1](#)).

Figure 7-1 Location of 2.4-GHz Radio Access Cover Screw



1	Access Cover Screw
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If your access point was not configured with a 2.4-GHz radio, go to the [“Removing a Blank Spacer Card”](#) section. If you are replacing an existing 2.4-GHz radio, go to the [“Removing a 2.4-GHz Radio”](#) section.

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Removing a Blank Spacer Card

When your access point is not factory-configured with a 2.4-GHz radio, it contains a blank spacer card in the internal mini-PCI connector. You must remove the blank spacer card prior to installing a new 2.4-GHz radio card.



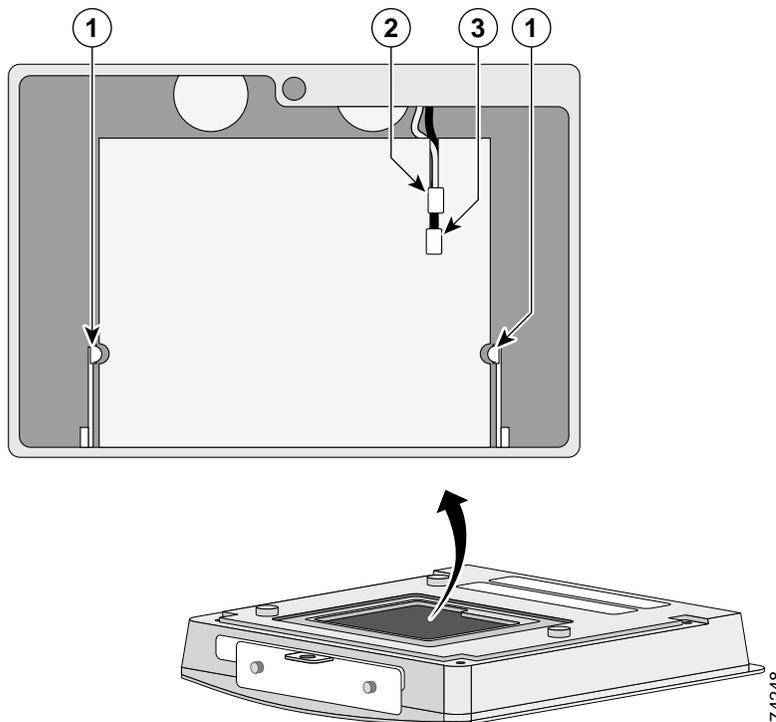
Caution

Handle all components carefully and observe all ESD precautions. The internal access point components and the 2.4-GHz radio can be damaged by ESD from improper handling.

To remove the blank spacer card from the mini-PCI connector, following these steps:

- Step 1** Push the card-retaining clips (on each side of card) away from the card (see [Figure 7-2](#)). When released, the board springs up.

Figure 7-2 Location of Retaining Clips on Blank Spacer Card



1	Card-retaining clips	3	Antenna connector (black wire)
2	Antenna connector (white wire)		

- Step 2** Carefully bend the card near the slots in opposite directions to provide enough clearance to remove the antenna wires.

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Step 3 Remove the antenna wires from the blank spacer card.



Caution To avoid damaging the antenna wire assemblies, handle them by their connectors.

Step 4 Remove the blank spacer card from the mini-PCI connector.

For instructions on installing the radio card, go to the [“Installing a 2.4-GHz Radio”](#) section.

Removing a 2.4-GHz Radio

To remove a 2.4-GHz radio card from your access point, follow these steps:



Caution The internal access point components and the 2.4-GHz radio can be damaged by ESD from improper handling.

Step 1 Use your fingers to carefully remove the antenna wire connectors from the 2.4-GHz radio card.



Caution The antenna connectors can be damaged by using a pair of long-nose pliers during the removal process.

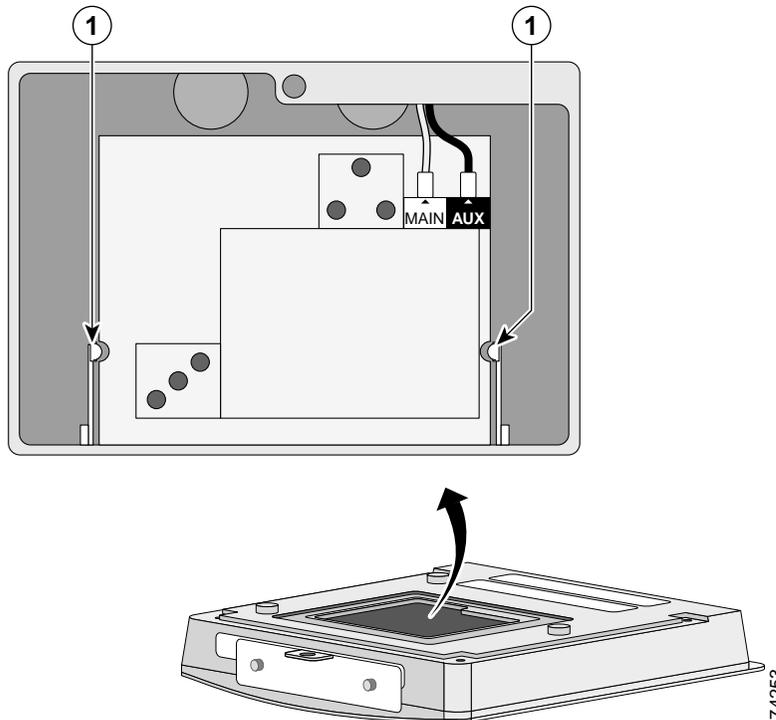


Caution To avoid damaging the antenna wire assemblies, handle them by their connectors.

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- Step 2** Remove the 2.4-GHz radio card from the mini-PCI connector by performing the following operations:
- a. Push the card-retaining clips (on each side of card) away from the card (see [Figure 7-3](#)). When released, the radio card springs up (see [Figure 7-4](#)).

Figure 7-3 Location of Retaining Clips on 2.4-GHz Radio Card



1	Card-retaining clips
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- b. Grasp the radio card only on the edges, being careful not to touch components on the board or the gold connector pins.
 - c. Remove the 2.4-GHz card from the mini-PCI connector.
- Step 3** Place the removed 2.4GHz radio card into an anti-static bag.

For instructions on installing a new radio card, go to the [“Installing a 2.4-GHz Radio”](#) section.

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Installing a 2.4-GHz Radio

To install a new 2.4-GHz radio card into the access point, follow these steps:



Caution

The internal access point components and the 2.4-GHz radio can be damaged by ESD from improper handling.

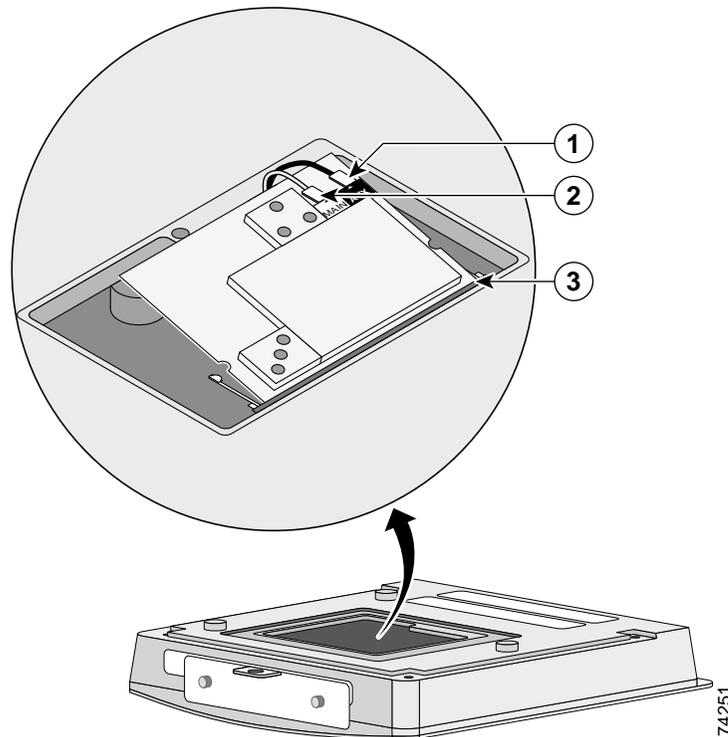
- Step 1** Carefully remove the Cisco Aironet 2.4-GHz radio card from its anti-static bag.
- Step 2** Grasp the radio card only on the edges, being careful not to touch components on the board or the gold connector pins.
- Step 3** Connect the black antenna wire connector to the radio card antenna connector marked by the black label (see [Figure 7-4](#)).



Caution

To avoid damaging the antenna wire assemblies, handle them by their connectors.

Figure 7-4 Antenna Connector Labels and Mini-PCI Connector

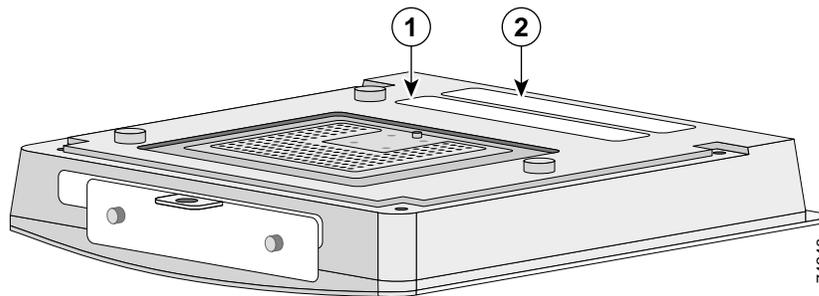


1	Antenna connector (black wire)	3	Mini-PCI connector
2	Antenna connector (white wire)		

- Step 4** Connect the white antenna wire connector to the radio card antenna connector marked by the white label (see [Figure 7-4](#)).

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- Step 5** Insert the radio card into the access point's mini-PCI connector by following these steps:
- Tilt the radio card at approximately 20° to 30° so that its gold pins are aligned with the mini-PCI connector (see [Figure 7-4](#)).
 - Push the card into the mini-PCI connector until it clicks into place.
- Step 6** Carefully push the card down (towards the access point's motherboard) until the card-retaining clips lock into the notches on the side of the radio card (you will hear a click).
- Step 7** Carefully position the antenna wires so that the metal connectors do not touch each other.
-  **Caution** Damage to the radio could occur if the antenna connectors are touching when power is applied. If they are touching, carefully rotate them in opposite directions until they are separated.
- Step 8** Reinstall the 2.4-GHz radio access cover and use the T-10 tamper-resistant Torx L-wrench to tighten the cover's retaining screw.
- Step 9** Remove the backing paper from the 2.4-GHz radio compliance label.
- Step 10** Carefully attach the label in the space provided below the access point's product compliance label as shown in [Figure 7-5](#).

Figure 7-5 Location of Product Compliance Labels

1	2.4-GHz radio compliance label	2	Access point product compliance label
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Note If your access point contains a 5-GHz radio module, there is also a 5-GHz radio compliance label on the back of the unit.



Note If your access point has an existing 2.4-GHz radio compliance label, place your new 2.4-GHz radio compliance label over the existing label.

The radio card installation is now complete. To configure the radio with your wireless network settings, refer to the *Cisco IOS Software Configuration Guide for Cisco Aironet Access Points*.