



Quick Start Guide



283935

Cisco Small Business

**WAP551 Single-Radio 450Mbps 802.11n
Access Point with PoE**

and

**WAP561 Dual-Radio 450Mbps 802.11n Access
Point with PoE**

Versión en Español para México en el CD
Version en français sur CD
Versione italiana sul CD
Deutsch Version auf CD

日本語バージョン CD

Welcome

Thank you for choosing the Cisco Small Business WAP551 or WAP561 Wireless Access Point. The Cisco WAP551 is a single-radio, selectable-band, 450Mbps data rate 802.11n access point, and the Cisco WAP561 is a dual-radio variant of the Cisco WAP551.

This guide is designed to familiarize you with the general layout of the access point, describe how to deploy the device in your network, and describe how to configure the device. Your access point has more features and functionality than what is described in this guide. For additional information, see the Administration Guide. A link to the Administration Guide is found in **“Where to Go From Here” on page 11**.

Package Contents

- Wireless Access Point
- Mounting kit
- This Quick Start Guide
- Product CD
- Ethernet Cable

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Before You Begin

Before you begin the installation, make sure that you have the following equipment and services:

- A computer with Browser support for:
 - Internet Explorer v7.0 or later
 - Chrome v5.0 or later
 - Firefox v3.0 or later
 - Safari v3.0 or later
- Tools for installing the hardware
- One or more Ethernet network switches
- Uninterruptible Power Supply (UPS) to provide backup power to essential devices

2

Cisco WAP551 and WAP561 Wireless-N Access Point Features

Front Panel

The front panel of the devices consists of three lights: Power, WLAN, and LAN. For full descriptions of the colors of the lights and their indications, see [“Verifying the Hardware Installation”](#). A Kensington lock slot is found under the lights.

Back Panel

The back panel of the devices consists of:

- Power Button—Use this button to turn the power on and off. It is not applicable when using PoE.
- Power Jack—Use this jack if you are not using PoE.
- Kensington Lock Slot—Use to attach a cable and lock to the device.
- Reset—See [“Rebooting the Devices or Returning them to their Factory Default Settings”](#) for information on the Reset button.
- RJ-45 Ethernet Port—Use this auto-sensing, Gigabit Ethernet (802.3) port to connect to network devices, such as computers, routers, or switches. Cisco strongly recommends using Cat5 or better cable for Gigabit connectivity. You may use the Ethernet port to power your device using PoE.

Default Settings

| Parameter | Default Value |
|-----------------|---------------------------------|
| Username | cisco |
| Password | cisco |
| LAN IP Address | DHCP address assigned by server |
| Fallback LAN IP | 192.168.1.245 |
| Subnetwork Mask | 255.255.255.0 |

If you are using a Cisco Small Business RV Series router, the default range for the DHCP assigned address is from 192.168.1.100 to 192.168.1.254. Any device connecting to the same LAN will be assigned an IP address in this range.

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Mounting the Cisco WAP551 and WAP561 Wireless-N Access Points

You can place your access point on a desktop, or mount it on a wall or ceiling.

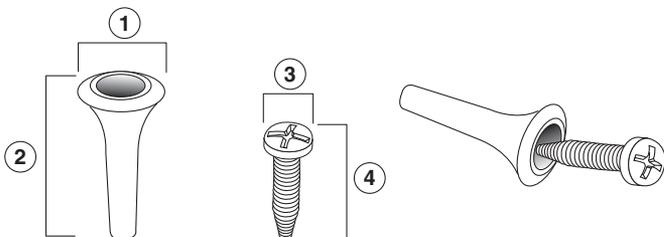
Placement Tips

- **Ambient Temperature**—To prevent the access point from overheating, do not operate it in an area that exceeds an ambient temperature of 104°F (40°C).
- **Air Flow**—Both side panels have vents which must be unobstructed to prevent overheating.
- **Mechanical Loading**—The device should be level, stable, and secure to prevent it from sliding or shifting out of position.

Wall and Ceiling Mounting

The Cisco WAP551 and WAP561 can be wall or ceiling-mounted.

There is a mounting kit packed with your device. The kit is designed to install your device to the wall or the ceiling. The dimensions for the mount kit screws are as follows:



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1 7.8 to 8.3 mm/ .31 to .33 in 2 21.8 to 22.3 mm/ .86 to .88 in 3 5.5 to 6.0 mm/ .22 to .24 in 4 17.5 to 18.2mm/ .69 to .72 in



WARNING

Insecure mounting might damage the device or cause injury. Cisco is not responsible for damages incurred by insecure wall or ceiling mounting.

To mount the WAP device to a wall or ceiling:

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- STEP 1** Determine where you want to mount the device. Verify that the surface is smooth, flat, dry, and sturdy.
 - STEP 2** Drill two pilot holes into the surface x.xx inches (xx mm) apart for your Cisco WAP device.
 - STEP 3** Insert a screw into each hole, leaving a gap between the surface and the base of the screw head.
 - STEP 4** Place the upper slots of the bracket over the screws, adjust the screws accordingly, and slide the bracket down until the screws fit snugly into the slots.
 - STEP 5** Using the bracket as a template, drill two more holes for the lower screws.
 - STEP 6** Insert a screw into each lower hole.
 - STEP 7** Slide the WAP device into the bracket, placing the cables or cords through the break-out tab found in the back of the bracket.
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Connecting the Cisco WAP551 and WAP561 Wireless-N Access Points

These instructions assume that you will be using PoE to power your WAP device. If PoE is not provided, power adaptors are sold separately; see **Where to Go From Here, page 11**. To connect the device to the network:

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- STEP 1** Connect the Ethernet cable to the Ethernet port of a switch or a router.
 - STEP 2** Connect the other end of the network Ethernet cable to the Ethernet port of the wireless access point.

After installation, all lights should be active. Refer to **Verifying the Hardware Installation, page 6** for details about the different lights on each switch.

5

Verifying the Hardware Installation

To verify the hardware installation, complete the following tasks:

- Check the cable connections.
- Check the state of the indicator lights.

| Label | Activity | Description |
|--------------|----------------------------------|--|
| Power | Off | Power is off. |
| | Solid Green | Power is on. Normal operation. |
| | Flashing Green | Bootting or firmware ppgrade. |
| | Solid Red | Bootting or firmware upgrade failed. |
| WLAN | Off | Wireless is disabled, for both 2.4 GHz and 5 GHz wireless networks |
| | Solid Green | Wireless 2.4 GHz band is enabled. |
| | Solid Amber | Wireless 5 GHz band is enabled. |
| | Solid Blue | Concurrent wireless modes are enabled. WAP561 only. |
| | Flashing | Transmitting or receiving data. |
| | Flashing Fast (2x Flashing rate) | Wi-Fi Protected Setup (WPS) is synchronizing. |
| LAN | Off | No Ethernet link. |
| | Solid Green | GE Ethernet link is active. |
| | Solid Amber | FE Ethernet link is active. |
| | Flashing | Transmitting or receiving data. |

NOTE If you need help resolving a problem, visit the Cisco Small Business Support Community at www.cisco.com/go/smallbizsupport.

6

Getting Started with the Configuration

To configure the wireless access points, follow these steps to access the Wizard and then the web-based configuration utility from your computer.

STEP 1 Connect the wireless access point to the same network (IP subnet) as your computer. The factory default IP address configuration of the access points is DHCP. Make sure your DHCP server is running and can be reached.

See “**Incorrect IP Address**” on page 9 for troubleshooting information, or if you do not have a DHCP server.

STEP 2 Locate the IP address of the wireless access point.

a. The wireless access points can be accessed and managed by Cisco Small Business network tools and services including the Cisco FindIT Network Discovery Utility that enables you to automatically discover all supported Cisco Small Business devices in the same local network segment as your computer. You can get a snapshot view of each device or launch the product configuration utility to view and configure the settings. For more information, see www.cisco.com/go/findit.

b. The wireless access points are Bonjour-enabled and automatically broadcast their services and listen for services being advertised by other Bonjour-enabled devices. If you have a Bonjour-enabled browser, such as Microsoft Internet Explorer with a Bonjour plug-in, or the Apple Mac Safari browser, you can find the wireless access point on your local network without knowing its IP address.

You can download the complete Bonjour for Internet Explorer browser from Apple’s Web site by visiting <http://www.apple.com/bonjour/>.

c. Locate the IP address assigned by your DHCP server by accessing your router/DHCP Server; see your DHCP server instructions for information.

STEP 3 Launch a web browser, such as Internet Explorer or Mozilla Firefox.

STEP 4 In the Address field enter the default DHCP address and press the **Enter** key.

STEP 5 Enter the default user name of **cisco** and password of **cisco** in the User Name and Password fields.

STEP 6 Click **Login**. The Wireless Access Point Setup Wizard appears.

- STEP 7** Follow the Setup Wizard instructions to finish the WAP device installation. For more advanced configurations, see the Administration Guide. A link to the Administration Guide is found in **“Where to Go From Here” on page 11**.

Congratulations, you can now start using your wireless access point.

7 Suggested Next Steps

In case of an error while installing, try the following troubleshooting procedures:

Troubleshooting

If you cannot display the configuration utility, you can test the ability of the computer to communicate with the device by using **ping**. To use **ping** on a computer running Windows:

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- STEP 1** Verify that the Cisco WAP551 or WAP561 is powered on and the lights indicate the appropriate links.
- STEP 2** Locate the device’s IP address. While there are different ways to locate your device’s IP address, this procedure uses Cisco FindIT.
- d. If you have previously downloaded Cisco FindIT, open Mozilla Firefox and launch Cisco FindIT. For more information on downloading Cisco FindIT, see www.cisco.com/go/findit.
 - e. In the Cisco FindIT display, place your mouse over the device’s name. The device IP address is displayed along with other device information.
- STEP 3** Open a command window by using **Start > Run** and enter **cmd**.
- STEP 4** At the **Command** window prompt enter **ping** and the *device IP address*. In this example, we **pinged 192.0.2.10**.

If successful, you should get a reply similar to the following:

```
Pinging 192.0.2.10 with 32 bytes of data:  
Reply from 192.0.2.10: bytes=32 time<1ms TTL=128
```

If it fails, you should get a reply similar to the following:

```
Pinging 192.0.2.10 with 32 bytes of data:  
Request timed out.
```

Possible Cause of Failure

No Power

- Power up the switch and your computer if they are turned off.
- If your access point is using PoE, make sure your PoE switch is powered on and the lights indicate that you have a link. See [“Verifying the Hardware Installation” on page 6](#).
- Verify that the power button is on; only applicable if you are not using PoE.
- Verify that the devices on your network are not plugged into a switchable outlet.

Bad Ethernet Connection

- Check the state of the indicator lights. See [“Verifying the Hardware Installation” on page 6](#).
- Check the connectors of the Ethernet cable to ensure they are firmly plugged into the switch and your computer.
- Verify the connected switch has auto-negotiation enabled. The access point and the switch need the same negotiation parameters set.

Bad Image

After a new firmware installation, if the Power light is flashing quickly, contact system support; see [“Where to Go From Here” on page 11](#).

Incorrect IP Address

The most likely cause of connectivity failure is an incorrect IP address. The Web browser may be pointed to the wrong IP address, or your computer may be configured with an IP address that is not in the same subnet as the device.

Because the factory default IP address configuration is DHCP, make sure that your DHCP server is running and can be reached. You may need to disconnect and reconnect the devices for them to discover their new IP addresses from the DHCP server. You can then query the DHCP server for the new IP address. See [Step 2 of “Getting Started with the Configuration” on page 7](#) for more information on how to find the DHCP address.

If the wireless access points do not receive a DHCP response (there is no DHCP server on your network) after 60 seconds, the access points will fallback to the following default static IP address: 192.168.1.245 and a default mask of 255.255.255.0. To reach that IP address, be sure that your computer is on the 192.168.1.xxx network.

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Rebooting the Devices or Returning them to their Factory Default Settings

To reboot your device:

- If your device uses a power adaptor, use the Power button to **reboot** your device. The Power button only functions when the device uses a power adaptor.
- Unplug your Ethernet connection for three seconds and plug it back in.
- If your devices uses PoE, with the power on, press the Reset button with a bent paperclip for less than three seconds, or until the lights go off.
 - When all the lights go off, release the Reset button.
 - Release the Reset button as soon as the lights go off, or you will restore the device to factory default settings and lose your configurations.

To reset the device to factory default settings:

- To **restore** the device to the factory default settings, with the power on, press-and-hold the Reset button with a bent paperclip for more than 10 seconds.
 - All of the lights will go off.
 - Release the Reset button when power light turns on.
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Where to Go From Here

| Support | |
|---|--|
| Cisco Small Business Support Community | www.cisco.com/go/smallbizsupport |
| Cisco Small Business Support and Resources | www.cisco.com/go/smallbizhelp |
| Phone Support Contacts | www.cisco.com/en/US/support/tsd_cisco_small_business_support_center_contacts.html |
| Cisco Small Business Firmware Downloads | <p>www.cisco.com/go/smallbizfirmware</p> <p>Select a link to download firmware for Cisco Small Business Products. No login is required.</p> <p>Downloads for all other Cisco Small Business products, including Network Storage Systems, are available in the Download area on Cisco.com at www.cisco.com/go/software (registration/login required).</p> |
| Cisco Small Business Open Source Requests | www.cisco.com/go/smallbiz_opensource_request |
| Product Documentation | |
| Cisco Small Business WAP551 and WAP561 Administration Guide | www.cisco.com/go/500_wap_resources |
| Cisco Small Business Power Adaptors | Go to www.cisco.com/go/wap_accessories and select the Resources tab. Scroll down to Technical Documentation. |
| Cisco Small Business | |
| Cisco Partner Central for Small Business (Partner Login Required) | www.cisco.com/web/partners/sell/smb |
| Cisco Small Business Home | www.cisco.com/smb |

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Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

FOR COUNTRY CODE SELECTION USAGE (WLAN DEVICES)

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

Industry Canada statement:

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Caution :

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement:

(i) les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.