Quick Start Guide

Cisco WAP581 Wireless-AC/N Dual Radio Access Point with 2.5GbE LAN

Welcome

Thank you for choosing the Cisco WAP581 Wireless-AC/N Dual Radio Wave 2 Access Point with 2.5GbE LAN. The Cisco WAP581 is an indoor dual radio 802.11acWave2 + 802.11acWave1 access point with Power over Ethernet (PoE). -PoE Supplied by UL Listed I.T.E.

Noᴛᴇ The unit should be connected to PoE networks only, without routing to the outside plant.

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 **To reset the device to factory default settings:, page11**.

Package Contents

- Wireless Access Point
- Mounting kit
- This Quick Start Guide
- Ethernet cable
- Pointer Card with China RoHS
- Technical Support Contacts
- EU Directives 1999/5/EC Compliance Information (for EU SKU only)

1 Before You Begin

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

- A computer with one of the following browser support:
  - Internet Explorer 9.0 or later
  - A recent version of either Chrome, Firefox or Safari
- Tools for installing the hardware
- One or more Ethernet network switches with either PoE, PoE injector or external power adapter

2 Cisco WAP581 Wireless-AC/N Premium Dual Radio Access Point with PoE Setup Features

Front Panel

The front panel of the device consists of a single system LED. For a full description of the colors of the light and its indications, see **Verifying the Hardware Installation, page 6**.

Back Panel

The back panel of the device has two RJ-45 Ethernet ports. Facing the back of the device, the right port (labeled "ETH0/PD") is an 2.5GbE with 802.3at & 802.3af

Power over Ethernet (PoE) port which is used to power your device. The left port (labeled "ETH1") is a general Gigabit Ethernet LAN interface. Both are auto-sensing, Gigabit Ethernet (802.3) ports used to connect your WAP devices to network devices, such as computers, routers, or switches. We strongly recommend that you use a Category 5e or better cable for Gigabit connectivity.

Side Panel

The side panel of the device consists of the following:

- Kensington Lock Slot—Helps to secure the unit physically using a cable attached to the device.

- Reset button—See **Rebooting the Devices or Returning them to their Factory Default Settings, page10** for information on the Reset button.

Default Setting

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 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.

If your network does not have an existing DHCP server, the WAP581 will start a DHCP server for WLAN stations and stop the DHCP client when WAP581 is in factory default. The DHCP server will assign the IP address from 192.168.1.20 to 192.168.1.100.

3 Mounting the Cisco WAP581 Wireless-AC/ N Premium Dual Radio Access Point with PoE Setup

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).

- **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 WAP581 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 mounting bracket has some flexibility so that you can reuse existing holes drilled for a Cisco WAP551 or WAP561 device. The installer can remove the Cisco WAP551 or WAP561 and mount the Cisco WAP581. You will need 4pcs of anchors and screws to mount the device. The dimensions for the mount kit screws are as follows
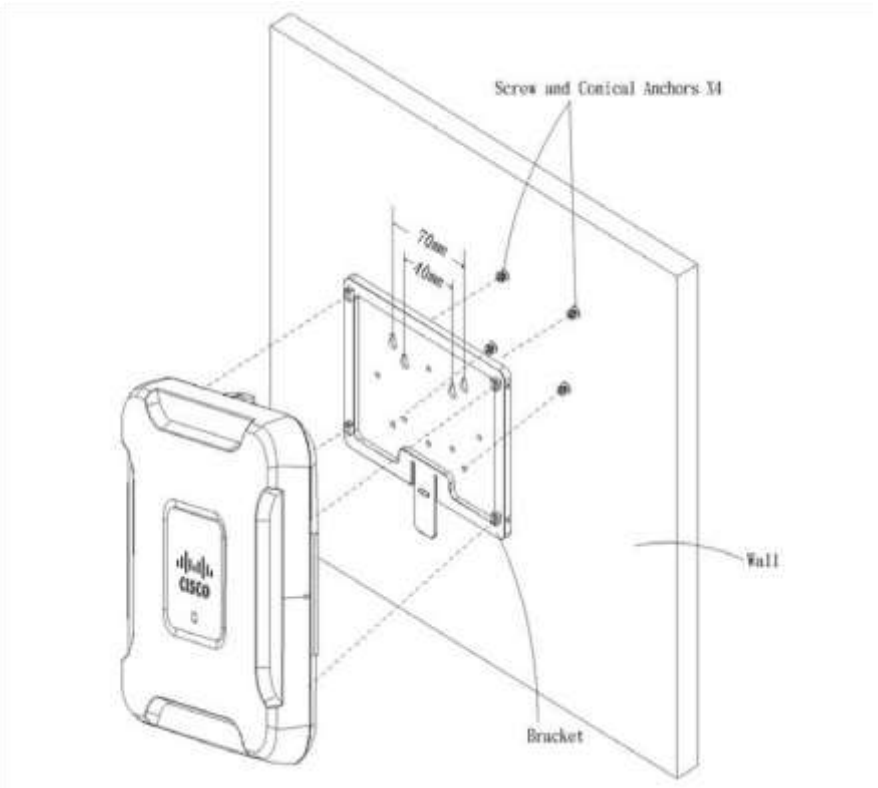
:
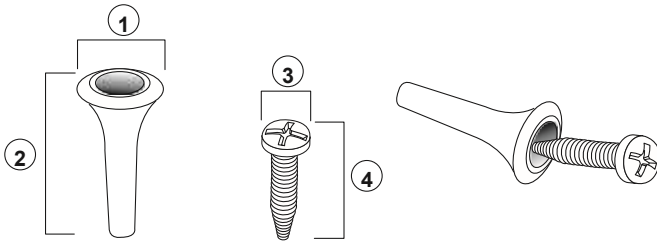
1 7.8 to 8.3 mm/ 2 21.8 to 22.3 mm/ 3 5.5 to 6.0 mm/ 4 17.5 to 18.2mm/ .31 to .33 in   .86 to .88 in   .22 to .24 in   .69 to .72 in

The details to mount the Cisco WAP581 on a hard ceiling or wall is depicted in the following diagram

Screw and Conical Anchors X4

70mm

40mm

Wall

Bracket

⚠️

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:

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 2.75 inches (70 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 cable through the break-out tab found in the back of the bracket.

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4 Connecting the Cisco WAP581 WirelessAC/N Premium Dual Radio Access Point with PoE Setup

The WiFi default SSID is "Cisco SB-Setup" with the passphrase "cisco123" in WPA2-PSK AES. This wireless default configuration will not allow traffic between WiFi and Ethernet; users will need to go through the setup wizard to resume the traffic between WiFi and Ethernet.

The user can also perform the initial configuration using a wired Ethernet connection.

To connect the device to the wired network:

Step 1 Connect the Ethernet cable to the Ethernet port of a PoE switch.

Step 2 Connect the other end of the network Ethernet cable to the Ethernet port (PoE) of the wireless access point.

  Note WAP581 bundles the two Ethernet ports to be link aggregation mode. If the two Ethernet ports have been connected at the same time, the link partner must also support link aggregation.

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

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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	The WAP581 is out of power.

	Solid (Green)	The Cisco WAP581 is normal; no wireless client connected.
	Flashing (Green)	The device is booting.
	Solid (Blue)	The Cisco WAP581 is normal; at least one wireless client connected.
	Flashing (Blue)	The Cisco WAP581 is upgrading the firmware.
	Solid (Red)	The Cisco WAP581 fails to boot with both firmware images.
	Flashing cycle with Green and Blue	Indicates the availability of new firmware updates for the hardware that can be downloaded from Cisco.com
Ethernet: Left-Green	Off	No Ethernet link.
	Solid Green	Ethernet link is active.
	Flashing Green	Transmitting or receiving data.
Ethernet No.0: Right-Green	Off	Gigabit Ethernet Link is active
	Solid Green	2.5Gigabit Ethernet Link is active
Ethernet No.1: Right-Green	Off	Fast Ethernet Link is active
	Solid Green	Gigabit Ethernet Link is active

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

6 Getting Started with the Configuration

To configure the wireless access points, you can either use Ethernet or wireless. Please follow these steps to access the Wizard and then the web-based configuration utility from your computer by Ethernet:

STEP 1 Ethernet: 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, page10** for troubleshooting information, or if you do not have a DHCP server.

Wireless: Search the wireless SSID "CiscoSB-Setup", and connect to this SSID with the passphrase "cisco123".

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

a. The wireless access points can be accessed and managed by Cisco network tools and services including the Cisco FindIT Network Discovery Utility that enables you to automatically discover all supported Cisco 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 Microsoft Internet Explorer browser from Apple's website by visiting: http://www.apple.com/bonjour/

c. Locate the IP address assigned by your DHCP server by accessing your router or DHCP server. See your DHCP server instructions for more information.

STEP 3 Launch a web browser, such as Microsoft 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. We strongly recommend that you use the Setup Wizard for the first installation.The Setup Wizard turns on the Wi-Fi radio, which allows you to connect wirelessly. For more advanced configurations, see the Administration Guide. A link to the Administration Guide is found in **, page11**.

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

⁊ Suggested Next Steps

Smart Power Source

Smart PoE is designed for detecting the power level from the PSE (Power Sourcing Equipment) side; it does not matter whether 802.3at or 802.3af mode, the WAP581 will operate at the appropriate mode automatically.

Smart PoE ensures that the WAP581 remains functional once powered by 802.3af PSE, and intelligently to adjust operations below:

- Second Ethernet port disabled
- 2.4-GHz 802.11n radio in 2x2:2 spatial-stream mode
- 5-GHz 802.11ac radio operates without restrictions

In case of an error while installing, try the following troubleshooting procedures described in this section:

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:

STEP 1 Verify that the Cisco WAP581 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.

   a. If you have previously downloaded Cisco FindIT, open Internet Explorer and launch Cisco FindIT. For more information on downloading Cisco FindIT, see www.cisco.com/go/findit.

   b. 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 choosing **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 Installation Failure

No Power

- Power up the switch and your computer if they are turned off.

- Make sure your PoE switch is powered on and the lights indicate that you have a link. See **Verifying the Hardware Installation, page 6**.

- 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, page 6**.

- Check the Ethernet cable to ensure that it is firmly connected to your devices. Devices connected by the Ethernet cable can include the WAP device, and routers, any switches, 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 solid red, contact system support; see **, page11**.

Incorrect IP Address

The most likely cause of connectivity failure is an incorrect IP address. The Web browser may be pointing 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, 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.

8 Rebooting the Devices or Returning them to their Factory Default Settings

To reboot your device:

- The Cisco WAP581 uses PoE power supply; unplug your PoE port Ethernet connection for three seconds and plug it back in.

  or

- With the power on, press the Reset button with an opened paper clip 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:

With the power on, press and hold the Reset button with an opened paper clip for more than 10 seconds. The system light will go off.

Release the Reset button when the system light turns on.

9 Where to Go from Here

Support	
Cisco Support Community	www.cisco.com/go/smallbizsupport
Cisco 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 Firmware Downloads	www.cisco.com/go/smallbizfirmware
	Select a link to download firmware for Cisco Products. No login is required.
Cisco Open Source Requests	www.cisco.com/go/ smallbiz_opensource_request
Cisco Partner Central (Partner Login Required)	www.cisco.com/c/en/us/partners
Product Documentation	
Cisco WAP581 Administration Guide	www.cisco.com/go/300_wap_resources
Cisco Power Adapters	www.cisco.com/go/wap_accessories

10 Regulatory Declarations

FCC ID: ………………………………………………………………………………………….……………PD5-WAP581
IC: ………………………………………………………………………………………..…………….…3970A-WAP581

FCC Statement

Federal Communication Commission Interference Statement

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 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 device is restricted for indoor use.

IMPORTANT NOTE:

FCC 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 25cm between the radiator & your body.

All cables used to connect peripherals must be shielded and grounded. Operation with cables connected to peripherals that are not shielded and grounded may result in interference to radio and television reception.

IC Statement

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

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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.

les dispositifs fonctionnant dans la bande 5150-5250 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.

IMPORTANT NOTE:

IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 30cm between the radiator & your body.

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 30 cm de distance entre la source de rayonnement et votre corps.

Japan Statement

5GHz band 1 and band 2 (W52, W53): Indoor use only

Americas Headquarters

Cisco Systems, Inc. www.cisco.com

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers
are listed on the Cisco website at www.cisco.com/go/offices.

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