

# Release Notes for Cisco Wireless Controllers and Lightweight Access Points, Cisco Wireless Release 8.10.185.0

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## About the Release Notes

This release notes document describes what is new or changed in this release, instructions to upgrade to this release, and provides information about the open and resolved caveats for this release. Unless otherwise noted, in this document, Cisco Wireless Controllers are referred to as *controllers*, and Cisco lightweight access points are referred to as *access points* or *APs*.

## Supported Cisco Wireless Controller Platforms

The following controller platforms are supported in this release:

- Cisco 3504 Wireless Controller
- Cisco 5520 Wireless Controller
- Cisco 8540 Wireless Controller
- Cisco Virtual Wireless Controller (vWLC) on the following platforms:
  - VMware vSphere Hypervisor (ESXi) Version 5.x and 6.x
  - Hyper-V on Microsoft Server 2012 and later versions (support introduced in Release 8.4)
  - Kernel-based virtual machine (KVM) (support introduced in Release 8.1). After KVM is deployed, we recommend that you do not downgrade to a Cisco Wireless release that is earlier than Release 8.1).
- Cisco Wireless Controllers for High Availability for Cisco 3504 Wireless Controller, Cisco 5520 Wireless Controller, and Cisco 8540 Wireless Controller
- Cisco Mobility Express



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**Note** In a network that includes Cisco Catalyst Center (formerly Cisco DNA Center) and Cisco AireOS controller, and the controller fails provisioning with **Error NA serv CA certificate file transfer failed** error, as a workaround, we recommend you reboot the affected AireOS controller.

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## Supported Cisco Access Point Platforms

The following Cisco AP platforms are supported in this release:

- Cisco Catalyst 9105 Access Points
- Cisco Catalyst 9130 Access Points
- Cisco Catalyst 9120 Access Points
- Cisco Catalyst 9117 Access Points
- Cisco Catalyst 9115 Access Points
- Cisco Aironet 700 Series Access Points
- Cisco Aironet 700W Series Access Points
- Cisco AP803 Integrated Access Point
- Integrated Access Point on Cisco 1100, 1101, and 1109 Integrated Services Routers
- Cisco Aironet 1700 Series Access Points
- Cisco Aironet 1800 Series Access Points
- Cisco Aironet 1810 Series OfficeExtend Access Points
- Cisco Aironet 1810W Series Access Points
- Cisco Aironet 1815 Series Access Points
- Cisco Aironet 1830 Series Access Points
- Cisco Aironet 1840 Series Access Points
- Cisco Aironet 1850 Series Access Points
- Cisco Aironet 2700 Series Access Points
- Cisco Aironet 2800 Series Access Points
- Cisco Aironet 3700 Series Access Points
- Cisco Aironet 3800 Series Access Points
- Cisco Aironet 4800 Series Access Points
- Cisco ASA 5506W-AP702
- Cisco Aironet 1530 Series Access Points
- Cisco Aironet 1540 Series Access Points
- Cisco Aironet 1560 Series Access Points
- Cisco Aironet 1570 Series Access Points
- Cisco Industrial Wireless 3700 Series Access Points
- Cisco Catalyst IW6300 Heavy Duty Series Access Points

- Cisco 6300 Series Embedded Services Access Points

Cisco AP803 is an integrated access point module on the Cisco 800 Series Integrated Services Routers (ISRs). For more information about the stock-keeping units (SKUs) for the AP803 Cisco ISRs, see:

<http://www.cisco.com/c/en/us/products/routers/800-series-routers/brochure-listing.html>.

For more information about the integrated access point on Cisco 1100 ISR, see the product data sheet:

<https://www.cisco.com/c/en/us/products/collateral/routers/1000-series-integrated-services-routers-isr/datasheet-c78-739512.html>.

For information about the Cisco Wireless software releases that support specific Cisco access point modules, see the "[Software Release Support for Specific Access Point Modules](#)" section in the *Cisco Wireless Solutions Software Compatibility Matrix* document.

## What's New in Release 8.10.185.0

There are no new features that are introduced in this release. For more information about updates in this release, see the [Unfixed and Fixed Issues in Release 8.10.190.0](#) section in this document.



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**Note** For a complete list of all the documentation published for Cisco Wireless Release 8.10, see the Documentation Roadmap at: <https://www.cisco.com/c/en/us/td/docs/wireless/doc-roadmap/doc-roadmap-release-810.html>

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## What's Changed in Release 8.10.185.0

This section provides information about the changes and enhancements that are introduced in this release.

### Secure Data Wipe for Cisco Access Points

The data wipe function has been enhanced to meet the NIST 800-88 data wipe standards. You may sanitize data from the AP using the following methods:

- Controller
  - GUI (factory reset): **Wireless > Access Points > All APs**. Click the AP name and click **Reset AP Now**.
  - CLI (factory reset): **clear ap config ap-name**

For more information, see the AireOS [Configuration Guide](#).

- Using the AP Mode button

For more information, see the respective Cisco Access Point *Hardware Installation Guide* or *Deployment Guide*.

- AP Console Clear Command
  - Cisco Wave 1 (IOS) APs: **clear capwap ap all-config**
  - Cisco Wave 2 APs: **clear capwap ap all-config**

## Software Release Types and Recommendations

**Table 1: Release Types**

Release Type	Description	Benefit
Maintenance Deployment (MD)	Software releases that provide bug-fix support and ongoing software maintenance. These releases are categorized as Maintenance Deployment (MD).  These releases are long-living releases with ongoing software maintenance.	Provides you with a software release that offers stability and long support duration with periodic maintenance releases (MRs).
Early Deployment (ED)	Software releases that provide new features and new hardware platform support in addition to bug fixes. These releases are categorized as Early Deployment (ED).  These releases are short-lived releases.	Allows you to deploy the latest features and new hardware platforms or modules.

For detailed release recommendations, see the *Guidelines for Cisco Wireless Software Release Migration Bulletin* at:

<http://www.cisco.com/c/en/us/products/collateral/wireless/8500-series-wireless-controllers/bulletin-c25-730741.html>.

**Table 2: Upgrade Path to Cisco Wireless Release 8.10.185.0**

Current Software Release	Upgrade Path to Release 8.10.185.0
8.5.x	You can upgrade directly to Release 8.10.185.0.
8.6.x	You can upgrade directly to Release 8.10.185.0.
8.7.x	You can upgrade directly to Release 8.10.185.0.
8.8.x	You can upgrade directly to Release 8.10.185.0.
8.9.x	You can upgrade directly to Release 8.10.185.0.
8.10.x	You can upgrade directly to Release 8.10.185.0.

## Upgrading a Cisco Wireless Release

This section describes the guidelines and limitations that you must be aware of when you are upgrading the Cisco Wireless release and the procedure to upgrade.

### Guidelines and Limitations

- An existing WLAN with ? in its name continues to be supported with this upgrade. However, you cannot include ? in the name when creating a new WLAN.

- If an AP locks out the console due to default management user credentials, you must configure the controller AP global credential with non-default username and password to get access to the AP console.
- WPA3 upgrade and downgrade guidelines:
  - If you want to upgrade from Release 8.5 to 8.10 and have WPA1 configured with none of the WPA1 AKM valid for Release 8.10, the WPA1 configuration is disabled after the upgrade.
  - If you downgrade from Release 8.10 to Release 8.5, if any AKM for SAE is configured, the AKM validation fails after the downgrade. The security is set to WPA2 and AKM to 802.1X. However, PMF configuration is retained, which results in an error.
  - FT set to enabled state and PMF set to Required state is allowed in Release 8.10 because PMF and FT configurations are decoupled. However, in Release 8.5, this configuration is invalid. Therefore, upon downgrading to Release 8.5, the WLAN might be disabled.
- Software downgrade guidelines for Release 8.10:
  - If you plan to downgrade the Cisco controller from Release 8.10 software, we recommend you to downgrade to Release 8.5.151.0 or later release to prevent the controller configuration files from being corrupted.
  - If you have configured new country codes in Release 8.10 and if you plan to downgrade to an earlier release, then we recommend that you remove the new country code configurations prior to the downgrade. For more information, see [CSCvq91895](#).
- Before downgrading or upgrading the Cisco Controller to another release check for APs or AP modes support. Ensure that only supported APs are connected and also the APs are moved to supported modes on the release that the controller is upgraded or downgraded to.
- Legacy clients that require RC4 or 3DES encryption type are not supported in Local EAP authentication.
- If you downgrade to Release 8.0.140.0 or 8.0.15x.0, and later upgrade to a later release and also have the multiple country code feature configured, then the configuration file could get corrupted. When you try to upgrade to a later release, special characters are added in the country list causing issues when loading the configuration. For more information, see [CSCve41740](#).



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**Note** Upgrade and downgrade between other releases does not result in this issue.

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- After downloading the new software to the Cisco APs, it is possible that a Cisco AP may get stuck in an upgrading image state. In such a scenario, it might be necessary to forcefully reboot the controller to download a new controller software image or to reboot the controller after the download of the new controller software image. You can forcefully reboot the controller by entering the **reset system forced** command.
- It is not possible to download some of the older configurations from the controller because of the Multicast and IP address validations. See the "Restrictions on Configuring Multicast Mode" section in the *Cisco Wireless Controller Configuration Guide* for detailed information about platform support for global multicast and multicast mode.
- When a client sends an HTTP request, the controller intercepts it for redirection to the login page. If the HTTP GET request that is intercepted by the controller is longer than 2000 bytes, the controller drops the packet. Track the Caveat ID [CSCuy81133](#) for a possible enhancement to address this restriction.

- When downgrading from one release to an earlier release, you might lose the configuration from your current release. The workaround is to reload the previous controller configuration files that are saved in the backup server, or to reconfigure the controller.
- When you upgrade a controller to an intermediate release, wait until all the APs that are associated with the controller are upgraded to the intermediate release before you install the latest controller software. In large networks, it can take some time to download the software on each AP.
- You can upgrade to a new release of the controller software or downgrade to an earlier release even if FIPS is enabled.
- When you upgrade to the latest software release, the software on the APs associated with the controller is also automatically upgraded. When an AP is loading software, each of its LEDs blinks in succession.
- Controllers support standard SNMP MIB files. MIBs can be downloaded from the software download page on Cisco.com.
- The controller software that is factory-installed on your controller and is automatically downloaded to the APs after a release upgrade and whenever an AP joins a controller. We recommend that you install the latest software version available for maximum operational benefit.
- Ensure that you have a TFTP, HTTP, FTP, or SFTP server available for the software upgrade. Follow these guidelines when setting up a server:

- Ensure that your TFTP server supports files that are larger than the size of controller software image. Some TFTP servers that support files of this size are tftpd32 and the TFTP server within Cisco Prime Infrastructure. If you attempt to download the controller software image and your TFTP server does not support files of this size, the following error message appears:

```
TFTP failure while storing in flash
```

- If you are upgrading through the distribution system network port, the TFTP or FTP server can be on the same subnet or a different subnet because the distribution system port is routable.
- The controller Bootloader stores a copy of the active primary image and the backup image. If the primary image becomes corrupted, you can use the Bootloader to boot with the backup image.

With the backup image stored before rebooting, from the **Boot Options** menu, choose **Option 2: Run Backup Image** to boot from the backup image. Then, upgrade with a known working image and reboot controller.

- You can control the addresses that are sent in the Control and Provisioning of Wireless Access Points (CAPWAP) discovery responses when NAT is enabled on the Management Interface, using the following command:

```
config network ap-discovery nat-ip-only {enable | disable}
```

The following are the details of the command:

**enable**—Enables use of NAT IP only in a discovery response. This is the default. Use this command if all the APs are outside the NAT gateway.

**disable**—Enables use of both NAT IP and non-NAT IP in a discovery response. Use this command if APs are on the inside and outside the NAT gateway, for example, Local Mode and OfficeExtend APs are on the same controller.



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**Note** To avoid stranding of APs, you must disable the AP link latency (if enabled) before you use the disable option in the **config network ap-discovery nat-ip-only** command. To disable AP link latency, use the **config ap link-latency disable all** command.

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- Do not power down the controller or any AP during the upgrade process. If you do this, the software image might get corrupted. Upgrading the controller with a large number of APs can take as long as 30 minutes, depending on the size of your network. However, with the increased number of concurrent AP upgrades supported, the upgrade time should be significantly reduced. The APs must remain powered, and controller must not be reset during this time.
- After you perform the following functions on the controller, reboot it for the changes to take effect:
  - Enable or disable LAG.
  - Enable a feature that is dependent on certificates (such as HTTPS and web authentication).
  - Add a new license or modify an existing license.



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**Note** Reboot is not required if you are using Right-to-Use licenses.

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- Increase the priority of a license.
- Enable HA.
- Install the SSL certificate.
- Configure the database size.
- Install the vendor-device certificate.
- Download the CA certificate.
- Upload the configuration file.
- Install the Web Authentication certificate.
- Make changes to the management interface or the virtual interface.

## Upgrading Cisco Wireless Software (GUI)

### Procedure

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- Step 1** Upload your controller configuration files to a server to back up the configuration files.
- Note** We highly recommend that you back up your controller configuration files prior to upgrading the controller software.
- Step 2** Follow these steps to obtain controller software:

- a) Browse to the Software Download portal at: <https://software.cisco.com/download/home>.
- b) Search for the controller model.
- c) Click **Wireless LAN Controller Software**.
- d) The software releases are labeled as described here to help you determine which release to download. Click a controller software release number:
  - Early Deployment (ED)—These software releases provide new features and new hardware platform support as well as bug fixes.
  - Maintenance Deployment (MD)—These software releases provide bug fixes and ongoing software maintenance.
  - Deferred (DF)—These software releases have been deferred. We recommend that you migrate to an upgraded release.
- e) Click the filename *<filename.aes>*.
- f) Click **Download**.
- g) Read the Cisco End User Software License Agreement and click **Agree**.
- h) Save the file to your hard drive.
- i) Repeat steps *a* through *h* to download the remaining file.

**Step 3** Copy the controller software file *<filename.aes>* to the default directory on your TFTP, FTP, SFTP, or USB server.

**Step 4** (Optional) Disable the controller 802.11 networks.

**Note** For busy networks, controllers on high utilization, and small controller platforms, we recommend that you disable the 802.11 networks as a precautionary measure.

**Step 5** Choose **Commands > Download File** to open the **Download File to Controller** page.

**Step 6** From the **File Type** drop-down list, choose **Code**.

**Step 7** From the **Transfer Mode** drop-down list, choose **TFTP**, **FTP**, **SFTP**, **HTTP**, or **USB**.

**Step 8** Enter the corresponding server details as prompted.

**Note** Server details are not required if you choose HTTP as the transfer mode.

**Step 9** Click **Download** to download the software to the controller.

A message indicating the status of the download is displayed.

**Note** Ensure that you choose the **File Type** as **Code** for both the images.

**Step 10** After the download is complete, click **Reboot**.

**Step 11** If you are prompted to save your changes, click **Save and Reboot**.

**Step 12** Click **OK** to confirm your decision to reboot the controller.

**Step 13** If you have disabled the 802.11 networks, reenable them.

**Step 14** (Optional) To verify that the controller software is installed on your controller, on the controller GUI, click **Monitor** and view the **Software Version** field under **Controller Summary**.



## CIMC Utility Upgrade for 5520 and 8540 Controllers

The AIR-CT5520-K9 and AIR-CT8540-K9 controller models are based on Cisco UCS server C series, C220 and C240 M4 respectively. These controller models have CIMC utility that can edit or monitor low-level physical parts such as power, memory, disks, fan, temperature, and provide remote console access to the controllers.

We recommend that you upgrade the CIMC utility to a version that has been certified to be used with these controllers. Controllers that have older versions of CIMC installed are susceptible to rebooting without being able to access FlexFlash, with the result that the manufacturing certificates are unavailable, and thus SSH and HTTPS connections will fail, and access points will be unable to join. See: [CSCvo33873](#). The recommended versions addresses the vulnerability tracked in [CSCvo01180](#) caveat.

The certified CIMC images are available at the following locations:

**Table 3: CIMC Utility Software Image Information**

Controller	Current CIMC Version	Recommended CIMC Version	Link to Download the CIMC Utility Software Image
Cisco 5520 Wireless Controller Cisco 8540 Wireless Controller	2.x	3.0(4r)	<a href="https://software.cisco.com/download/home/286281345/type/283850974/release/3.0(4r)">https://software.cisco.com/download/home/286281345/type/283850974/release/3.0(4r)</a>  <b>Note</b> We recommend you to upgrade the firmware from 2.0(13i) to 3.0(4r) using TFTP, SCP protocols only.
Cisco 5520 Wireless Controller Cisco 8540 Wireless Controller	3.0(4d)	3.0(4r)	<a href="https://software.cisco.com/download/home/286281345/type/283850974/release/3.0(4r)">https://software.cisco.com/download/home/286281345/type/283850974/release/3.0(4r)</a>
Cisco 5520 Wireless Controller Cisco 8540 Wireless Controller	4.0(1a)	4.0(2n)	<a href="https://software.cisco.com/download/home/286281345/type/283850974/release/4.0(2n)">https://software.cisco.com/download/home/286281345/type/283850974/release/4.0(2n)</a>

**Table 4: Firmware Upgrade Path to 4.x version**

Current Firmware Version	Upgrade Path to 4.x version
2.x	You must upgrade to a 3.x version and then upgrade to the recommended 4.x version.
3.x	You can upgrade directly to the recommended 4.x version.

- For information about upgrading the CIMS utility version 2.x, see the *Introduction to Cisco IMC Secure Boot* section in the *Cisco UCS C-Series Servers Integrated Management Controller CLI Configuration Guide, Release 3.0*:

[https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/c/sw/cli/config/guide/3\\_0/b\\_Cisco\\_UCS\\_C-Series\\_CLI\\_Configuration\\_Guide\\_301/b\\_Cisco\\_UCS\\_C-Series\\_CLI\\_Configuration\\_Guide\\_201\\_chapter\\_01101.html#d92865e458a1635](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/sw/cli/config/guide/3_0/b_Cisco_UCS_C-Series_CLI_Configuration_Guide_301/b_Cisco_UCS_C-Series_CLI_Configuration_Guide_201_chapter_01101.html#d92865e458a1635)

For information about upgrading the CIMS utility version 2.x using webUI, see the *Updating the Firmware* section [https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/c/sw/gui/config/guide/3\\_0/b\\_Cisco\\_UCS\\_C-Series\\_GUI\\_Configuration\\_Guide\\_for\\_HTML5\\_Based\\_Servers\\_301/b\\_Cisco\\_UCS\\_C-Series\\_GUI\\_Configuration\\_Guide\\_207\\_chapter\\_01101.html#task\\_C137961E9E8A4927A1F08740184594CA](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/sw/gui/config/guide/3_0/b_Cisco_UCS_C-Series_GUI_Configuration_Guide_for_HTML5_Based_Servers_301/b_Cisco_UCS_C-Series_GUI_Configuration_Guide_207_chapter_01101.html#task_C137961E9E8A4927A1F08740184594CA).



**Note** When upgrading the firmware using the webUI method, you must select **Install Firmware through Remote Server** option when prompted in the webUI.

- For information about upgrading the CIMC utility, see the *Updating the Firmware on Cisco UCS C-Series Servers* chapter in the *Cisco Host Upgrade Utility 3.0 User Guide*:

[https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/c/sw/lomug/2-0-x/3\\_0/b\\_huu\\_3\\_0\\_1/b\\_huu\\_2\\_0\\_13\\_chapter\\_011.html](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/sw/lomug/2-0-x/3_0/b_huu_3_0_1/b_huu_2_0_13_chapter_011.html)

- **Updating Firmware Using the Update All Option**

This section mentions specific details when using CIMC utility with Cisco 5520 or 8540 controllers. For general information about the software and UCS chassis, see *Release Notes for Cisco UCS C-Series Software, Release 3.0(4)* at:

[https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/release/notes/b\\_UCS\\_C-Series\\_Release\\_Notes\\_3\\_0\\_4.html](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/release/notes/b_UCS_C-Series_Release_Notes_3_0_4.html)

*Release Notes for Cisco UCS C-Series Software, Release 4.0(2)* at:

[https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/release/notes/b\\_UCS\\_C-Series\\_RN\\_4\\_0\\_2.html](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/release/notes/b_UCS_C-Series_RN_4_0_2.html)

**Table 5: Resolved Caveats for Release 4.0(2f)**

Caveat ID	Description
CSCvn80088	NI-HUU fails to handle the special characters in the password of CIFS remote share

**Table 6: Resolved Caveats for Release 3.0(4l)**

Caveat ID	Description
CSCvp41543	SSH weak KeyExchange algorithm [diffie-hellman-group14-sha1] has to be removed

## Interoperability with Other Clients

This section describes the interoperability of controller software with other client devices.

The following table describes the configuration that is used for testing the client devices.

**Table 7: Test Bed Configuration for Interoperability**

Hardware or Software Parameter	Hardware or Software Configuration Type
Release	8.10.x
Cisco Wireless Controller	Cisco 3504 Wireless Controller
Access Points	Cisco 9130, 9120 and 3800 APs
Radio	802.11ax (2.4 GHz or 5 GHz), 802.11ac, 802.11a, 802.11g, 802.11n (2.4 GHz or 5 GHz)
Security	Open, WPA3-SAE/OWE ( WPA3 Supported Clients), WPA2+WPA3 ( Mixed Mode) PSK (WPA2-AES), 802.1X (WPA2-AES)(EAP-PEAP)
RADIUS	Cisco ISE 2.6 Cisco ISE 2.7
Types of tests	Association, Traffic ( TCP/UDP/ICMP) and Roaming between APs

The following table lists the client types on which the tests were conducted. Client types included laptops, handheld devices, phones, and printers.

**Table 8: Client Types**

Client Type and Name	Driver / Software Version
<b>Wi-Fi 6 Devices (Mobile Phone and Laptop)</b>	
Apple iPhone 11	iOS 14.1
Apple iPhone SE 2020	iOS 14.1
Dell Intel AX1650w	Windows 10 ( 21.90.2.1)
DELL LATITUDE 5491 (Intel AX200)	Windows 10 Pro (21.40.2)
Samsung S20	Android 10
Samsung S10 (SM-G973U1)	Android 9.0 (One UI 1.1)
Samsung S10e (SM-G970U1)	Android 9.0 (One UI 1.1)
Samsung Galaxy S10+	Android 9.0
Samsung Galaxy Fold 2	Android 10
Samsung Galaxy Flip Z	Android 10
Samsung Note 20	Android 10
<b>Laptops</b>	
Acer Aspire E 15 E5-573-3870 (Qualcomm Atheros QCA9377)	Windows 10 Pro (12.0.0.832)

<b>Client Type and Name</b>	<b>Driver / Software Version</b>
Apple Macbook Air 11 inch	OS Sierra 10.12.6
Apple Macbook Air 13 inch	OS Catalina 10.15.4
Apple Macbook Air 13 inch	OS High Sierra 10.13.4
Macbook Pro Retina	OS Mojave 10.14.3
Macbook Pro Retina 13 inch early 2015	OS Mojave 10.14.3
Dell Inspiron 2020 Chromebook	Chrome OS 75.0.3770.129
Google Pixelbook Go	Chrome OS 84.0.4147.136
HP chromebook 11a	Chrome OS 76.0.3809.136
Samsung Chromebook 4+	Chrome OS 77.0.3865.105
DELL Latitude 3480 (Qualcomm DELL wireless 1820)	Win 10 Pro (12.0.0.242)
DELL Inspiron 15-7569 (Intel Dual Band Wireless-AC 3165)	Windows 10 Home (18.32.0.5)
DELL Latitude E5540 (Intel Dual Band Wireless AC7260)	Windows 7 Professional (21.10.1)
DELL XPS 12 v9250 (Intel Dual Band Wireless AC 8260 )	Windows 10 (19.50.1.6)
DELL Latitude 5491 (Intel AX200)	Windows 10 Pro (21.40.2)
DELL XPS Latitude12 9250 (Intel Dual Band Wireless AC 8260)	Windows 10 Home (21.40.0)
Lenovo Yoga C630 Snapdragon 850 (Qualcomm AC 2x2 Svc)	Windows 10(1.0.10440.0)
Lenovo Thinkpad Yoga 460 (Intel Dual Band Wireless-AC 9260)	Windows 10 Pro ( 21.40.0)
<b>Note</b>	For clients using Intel wireless cards, we recommend you to update to the latest Intel wireless drivers if advertised SSIDs are not visible.
<b>Tablets</b>	
Apple iPad Pro	iOS 13.5
Apple iPad Air2 MGLW2LL/A	iOS 12.4.1
Apple iPad Mini 4 9.0.1 MK872LL/A	iOS 11.4.1
Apple iPad Mini 2 ME279LL/A	iOS 12.0
Microsoft Surface Pro 3 – 11ac	Qualcomm Atheros QCA61x4A
Microsoft Surface Pro 3 – 11ax	Intel AX201 chipset. Driver v21.40.1.3

<b>Client Type and Name</b>	<b>Driver / Software Version</b>
Microsoft Surface Pro 7 – 11ax	Intel Wi-Fi chip (HarrisonPeak AX201) (11ax, WPA3)
Microsoft Surface Pro X – 11ac & WPA3	WCN3998 Wi-Fi Chip (11ac, WPA3)
<b>Mobile Phones</b>	
Apple iPhone 5	iOS 12.4.1
Apple iPhone 6s	iOS 13.5
Apple iPhone 8	iOS 13.5
Apple iPhone X MQA52LL/A	iOS 13.5
Apple iPhone 11	iOS 14.1
Apple iPhone SE MLY12LL/A	iOS 11.3
ASCOM SH1 Myco2	Build 2.1
ASCOM SH1 Myco2	Build 4.5
ASCOM Myco 3 v1.2.3	Android 8.1
Drager Delta	VG9.0.2
Drager M300.3	VG2.4
Drager M300.4	VG2.4
Drager M540	DG6.0.2 (1.2.6)
Google Pixel 2	Android 10
Google Pixel 3	Android 11
Google Pixel 3a	Android 11
Google Pixel 4	Android 11
Huawei Mate 20 pro	Android 9.0
Huawei P20 Pro	Android 9.0
Huawei P40	Android 10
LG v40 ThinQ	Android 9.0
One Plus 8	Android 10
Oppo Find X2	Android 10
Redmi K20 Pro	Android 10
Samsung Galaxy S7	Android 6.0.1
Samsung Galaxy S7 SM - G930F	Android 8.0
Samsung Galaxy S8	Android 8.0
Samsung Galaxy S9+ - G965U1	Android 9.0

<b>Client Type and Name</b>	<b>Driver / Software Version</b>
Samsung Galaxy SM - G950U	Android 7.0
Sony Xperia 1 ii	Android 10
Sony Xperia xz3	Android 9.0
Xiaomi Mi10	Android 10
Spectralink 8744	Android 5.1.1
Spectralink Versity Phones 9540	Android 8.1
Vocera Badges B3000n	4.3.2.5
Vocera Smart Badges V5000	5.0.4.30
Zebra MC40	Android 5.0
Zebra MC40N0	Android Ver: 4.1.1
Zebra MC92N0	Android Ver: 4.4.4
Zebra TC51	Android 7.1.2
Zebra TC52	Android 8.1.0
Zebra TC55	Android 8.1.0
Zebra TC57	Android 8.1.0
Zebra TC70	Android 6.1
Zebra TC75	Android 6.1.1
<b>Printers</b>	
Zebra QLn320 Printer	LINK OS 6.3
Zebra ZT230 Printer	LINK OS 6.3
Zebra ZQ310 Printer	LINK OS 6.3
Zebra ZD410 Printer	LINK OS 6.3
Zebra ZT410 Printer	LINK OS 6.3
Zebra ZQ610 Printer	LINK OS 6.3
Zebra ZQ620 Printer	LINK OS 6.3
<b>Wireless Module</b>	
Intel 11ax 200	Driver v21.40.1.3, v21.20.1.1
Intel AC 9260	Driver v21.40.0
Intel Dual Band Wireless AC 8260	Driver v19.50.1.6

## Key Features Not Supported in Controller Platforms

This section lists the features that are not supported on various controller platforms:



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**Note** In a converged access environment that has controllers running AireOS code, High Availability Client SSO and native IPv6 are not supported.

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### Key Features Not Supported in Cisco 3504 Wireless Controller

- Cisco WLAN Express Setup Over-the-Air Provisioning
- Mobility controller functionality in converged access mode
- VPN Termination (such as IPsec and L2TP)

### Key Features Not Supported in Cisco 5520 and 8540 Wireless Controllers

- Internal DHCP Server
- Mobility controller functionality in converged access mode
- VPN termination (such as IPsec and L2TP)
- Fragmented pings on any interface

### Key Features Not Supported in Cisco Virtual Wireless Controller

- Cisco Umbrella
- Software-defined access
- Domain-based ACLs
- Internal DHCP server
- Cisco TrustSec
- Access points in local mode
- Mobility or Guest Anchor role
- Wired Guest
- Multicast



---

**Note** FlexConnect locally switched multicast traffic is bridged transparently for both wired and wireless on the same VLAN. FlexConnect APs do not limit traffic based on IGMP or MLD snooping.

---

- FlexConnect central switching in large-scale deployments



- Note**
- FlexConnect central switching is supported in only small-scale deployments, wherein the total traffic on controller ports is not more than 500 Mbps.
  - FlexConnect local switching is supported.

- 
- Central switching on Microsoft Hyper-V deployments
  - AP and Client SSO in High Availability
  - PMIPv6
  - Datagram Transport Layer Security (DTLS)
  - EoGRE (Supported only in local switching mode)
  - Workgroup bridges
  - Client downstream rate limiting for central switching
  - SHA2 certificates
  - Controller integration with Lync SDN API
  - Cisco OfficeExtend Access Points

## Key Features Not Supported in Access Point Platforms

This section lists the key features that are not supported on various Cisco Aironet AP platforms. For detailed information about feature support on Cisco Aironet Wave 2 and 802.11ax APs, see:

[https://www.cisco.com/c/en/us/td/docs/wireless/access\\_point/feature-matrix/ap-feature-matrix.html](https://www.cisco.com/c/en/us/td/docs/wireless/access_point/feature-matrix/ap-feature-matrix.html)

### Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP, 1810W, 1815, 1830, 1850, 2800, 3800, and 4800 Series APs

*Table 9: Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP, 1810W, 1815, 1830, 1850, 2800, 3800, and 4800 Series APs*

Operational Modes	<ul style="list-style-type: none"> <li>• Autonomous Bridge and Workgroup Bridge (WGB) mode           <p><b>Note</b> WGB is supported in Cisco Aironet 2800, 3800 Series APs.</p> </li> <li>• Mesh mode           <p><b>Note</b> Mesh mode is supported in Cisco Aironet 1815i, 1815m, 1830, 1850, 2800, 3800, and 4800 Series APs in Release 8.10.x.</p> </li> <li>• LAG behind NAT or PAT environment</li> </ul>
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Protocols	<ul style="list-style-type: none"> <li>• Full Cisco Compatible Extensions (CCX) support</li> <li>• Rogue Location Discovery Protocol (RLDP)</li> <li>• Telnet</li> </ul>
Security	<ul style="list-style-type: none"> <li>• CKIP, CMIC, and LEAP with Dynamic WEP</li> <li>• Static WEP for CKIP</li> <li>• WPA2 + TKIP</li> </ul> <p><b>Note</b> WPA +TKIP and TKIP + AES protocols are supported.</p>
Quality of Service	<p>Cisco Air Time Fairness (ATF)</p> <p><b>Note</b> ATF is supported in Cisco Aironet 2800, 3800, and 4800 Series APs in Release 8.10.</p>
FlexConnect Features	<ul style="list-style-type: none"> <li>• PPPoE</li> <li>• Multicast to Unicast (MC2UC)</li> </ul> <p><b>Note</b> VideoStream is supported</p> <ul style="list-style-type: none"> <li>• Traffic Specification (TSpec) <ul style="list-style-type: none"> <li>• Cisco Compatible eXtensions (CCX)</li> <li>• Call Admission Control (CAC)</li> </ul> </li> <li>• VSA/Realm Match Authentication</li> <li>• SIP snooping with FlexConnect in local switching mode</li> </ul>



**Note** For Cisco Aironet 1850 Series AP technical specifications with details on currently supported features, see the [Cisco Aironet 1850 Series Access Points Data Sheet](#).

## Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP, and 1810W Series APs

**Table 10: Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP, and 1810W Series APs**

Operational Modes	Mobility Express
FlexConnect Features	Local AP authentication
Location Services	Data RSSI (Fast Locate)

## Key Features Not Supported in Cisco Aironet 1830, 1850, and 1815 Series APs

*Table 11: Key Features Not Supported in Cisco Aironet 1830, 1850, and 1815 Series APs*

Operational Modes	Mobility Express is not supported in Cisco 1815t APs.
FlexConnect Features	Local AP Authentication
Location Services	Data RSSI (Fast Locate)

## Key Features Not Supported in Mesh Networks

- Load-based call admission control (CAC). Mesh networks support only bandwidth-based CAC or static CAC
- High availability (Fast heartbeat and primary discovery join timer)
- AP acting as supplicant with EAP-FASTv1 and 802.1X authentication
- AP join priority (Mesh APs have a fixed priority)
- Location-based services

## Key Features Not Supported in Cisco Aironet 1540 Mesh APs

- Dynamic Mesh backhaul data rate.




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**Note** We recommend that you keep the Bridge data rate of the AP as auto.

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- Background scanning
- Noise-tolerant fast convergence

## Key Features Not Supported on Cisco Aironet 1560 APs

- MAC Authentication FlexConnect Local Authentication
- Noise-tolerant fast convergence
- Static WEP

## Key Features Not Supported on Cisco Catalyst IW6300 Heavy Duty Series AP and 6300 Series Embedded Services AP

- MAC Authentication FlexConnect Local Authentication
- Noise-tolerant fast convergence
- Static WEP

## Unfixed and Fixed Issues in Release 8.10.190.0

### Open Caveats for Release 8.10.185.0

Table 12: Open Caveats

Identifier	Headline
<a href="#">CSCvv81814</a>	Cisco 1850 AP: Firmware assert @0x00942D74/0x00942D79
<a href="#">CSCvw28085</a>	OEAP flooding syslog messages: 'parse_tx_bcn: Bcn payload is NULL'
<a href="#">CSCvx51916</a>	'ASLR ENTROPY INSUFFICIENT' messages on C9120
<a href="#">CSCvy60791</a>	9130AXI - Dual Radio Assignment config is not present in Controller GUI
<a href="#">CSCwb20581</a>	Controller: AireOS system reloaded unexpectedly due to Emweb
<a href="#">CSCwc48042</a>	Cisco Wave 2 AP does not comply with EAP timeouts on the Controller (central auth)
<a href="#">CSCwc49970</a>	Cisco Aironet 2800, 3800, 4800 Channel 165 not allowed
<a href="#">CSCwc64201</a>	Cisco 9105 as WGB fails to forward packets OTA producing gaps in the communication
<a href="#">CSCwd41463</a>	Cisco 3800, 4800 APs stop sending IGMP membership report
<a href="#">CSCwd71613</a>	AP 9120 detects its own BSSID as Malicious/impersonating
<a href="#">CSCwd78616</a>	Most AP9115 Tx power high and abnormal DCA Channel Assignment due to no neighbors
<a href="#">CSCwd79502</a>	9800 device tracking stale entry due to anchored client getting IPv4 and IPv6 in different VLANs
<a href="#">CSCwd90742</a>	AP 9120AX kernel crash - PC is at rhb_del_interface+0xc
<a href="#">CSCwe00848</a>	Kernel panic - not syncing: Fatal exception 9105 randomly reloads unexpectedly
<a href="#">CSCwe13020</a>	Cisco Catalyst 9120 AP is not transmitting directed broadcast over the air on iPSK
<a href="#">CSCwe15203</a>	Controller displays CleanAir status as N/A for multiple APs
<a href="#">CSCwe17920</a>	[IW3702]: SUNCOR Port-9124 not forwarding traffic to WGB after session TO
<a href="#">CSCwe18353</a>	C9130 AP Kernel Panic Crash PC: __dma_inv_range / LR: __swiotlb_unmap_page
<a href="#">CSCwe22861</a>	Observing AID leak in Flex Cisco Wave 2 APs running 8.10.171.0
<a href="#">CSCwe24263</a>	C9130 Inconsistent Tx power levels advertised in beacons

Identifier	Headline
<a href="#">CSCwe29911</a>	Cisco 3802 FQI/NMI reset: __rmqueue & get_page_from_freelist
<a href="#">CSCwe30473</a>	Radio firmware reloads unexpectedly due to RC queue stuck
<a href="#">CSCwe30558</a>	Cisco 9130 AP reloads unexpectedly due to kernel panic
<a href="#">CSCwe30572</a>	Cisco Wave 2 AP leaking NAT IP sometimes from iOX app
<a href="#">CSCwe31030</a>	9105AXW APs crashing - NMI watchdog: BUG: soft lockup - CPU#3 stuck for 22s! [shared_printenv:10129]
<a href="#">CSCwe32005</a>	C9130 running 8.10.183.0 release software: Packet loss on Digital Signage device
<a href="#">CSCwe39871</a>	9105 AP takes 20ms between M4 (4-way handshake) and allow client traffic forwarding
<a href="#">CSCwe41945</a>	C9130 AP Radio Firmware reloads unexpectedly with no core file generated
<a href="#">CSCwe43294</a>	C9105AXW and 1815W: Flex RLAN AP does not apply VLAN in the Ethernet port after AAA VLAN override
<a href="#">CSCwe44216</a>	Cisco AP reloads unexpectedly due to kernel panic (PC is at vfp_reload_hw+0x30/0x44)
<a href="#">CSCwe44991</a>	C9105AX AP: Kernel panic crash
<a href="#">CSCwe45894</a>	AP won't forward IGMPv3 query to wireless clients.
<a href="#">CSCwe46834</a>	C9120AXI-E AP is transmitting at Higher power than reported.

## Resolved Caveats for Release 8.10.185.0

Table 13: Resolved Caveats

Identifier	Headline
<a href="#">CSCvv96364</a>	3800 APs running 17.3.1: process WCPd reloads unexpectedly
<a href="#">CSCvw20363</a>	2800/3800 WGB fails to connect via PEAP if client cert is not installed
<a href="#">CSCvx32806</a>	Cisco Wave 2 APs stuck in bootloop due to image checksum verification failed
<a href="#">CSCvx80422</a>	AP drops packets addressed to 10.128.128.127 or 10.128.128.128
<a href="#">CSCwa48702</a>	Kernel panic crash in C9130AX AP
<a href="#">CSCwa68709</a>	Cisco 9115 AP reports DFS on channels incorrectly: 'blocked list due to be cleared'
<a href="#">CSCwa93884</a>	Cisco iOX app install failure during app activation phase 'Error while creating app start up script'

Identifier	Headline
<a href="#">CSCwb08291</a>	C9105AXW Introducing latency when clients are using RLAN ports
<a href="#">CSCwb23886</a>	Cisco 1810W: RLAN DHCP issues with certain client models
<a href="#">CSCwb34231</a>	Cisco 9115 AP: Power Saving Client State on radio
<a href="#">CSCwb41815</a>	AP not copy DHCP ACK packets to the controller after enable 'cts manual' on switch in 8.10
<a href="#">CSCwb51757</a>	High channel utilization on 5GHz radio with 40Mhz
<a href="#">CSCwb82694</a>	9105/9115/9120 series access points unable to handle out of order packets
<a href="#">CSCwb96560</a>	AppHost: App install fails when USB state is disabled in ap-join profile
<a href="#">CSCwc02477</a>	Cisco 9130 AP does not transmit EAP Identity Request
<a href="#">CSCwc12918</a>	Cisco controller reloads unexpectedly in SNMPTask due to Reaper Reset
<a href="#">CSCwc31331</a>	C9130 access points unexpectedly reload in run_timer_softirq
<a href="#">CSCwc32182</a>	AP 1852 Radio Firmware Crash
<a href="#">CSCwc38912</a>	LWA Client is immediately deleted when joining Flex WLAN after Site/Policy Tag change
<a href="#">CSCwc55632</a>	Cisco 9124 MAP failing to connect 1562 RAP after first reload of MAP
<a href="#">CSCwc56767</a>	Cisco 5520 Controller reloads unexpectedly when executing the command "show tech"
<a href="#">CSCwc72194</a>	Cisco 9120 AP: Radio Core Dump: wl0: wlc_check_assert_type HAMMERING
<a href="#">CSCwc73462</a>	For FlexConnect groups config.backslash \ in the end of the radius servers shared secret not allowed
<a href="#">CSCwc75732</a>	Firmware Radio reloads unexpectedly on Cisco 4800 Access point on 17.3.5b code
<a href="#">CSCwc78435</a>	C9130AP sending incorrect channel list on out of band DFS event causing client connectivity issues
<a href="#">CSCwc81656</a>	AIR-CAP2702E-K-K9 Flash File System Corruption
<a href="#">CSCwc87688</a>	Cisco 9120 AP: shows very high noise level randomly on 5-GHz radio
<a href="#">CSCwc89719</a>	AP1832 Reloads Unexpectedly due to radio failure (radio recovery failed)
<a href="#">CSCwc94898</a>	WGB AP stuck in EAPOL state
<a href="#">CSCwc99024</a>	8.10.162.0    5520 Controller    Unexpected Reload on Task emweb
<a href="#">CSCwd00751</a>	AP 2802 reloads unexpectedly running 8.10.171 software release

Identifier	Headline
<a href="#">CSCwd02898</a>	C9300 not flushing remote MAC address after roaming to a local AP
<a href="#">CSCwd03803</a>	AP1815I reboot --- PC is at edma_poll / LR is at dma_cache_maint_page
<a href="#">CSCwd05593</a>	Cisco 9120 TX STUCK Due to Data Block PS and AP Radio Crash
<a href="#">CSCwd06795</a>	No EAP failure on wrong password when using Local EAP
<a href="#">CSCwd07551</a>	Controller 5520 unexpectedly reloads due to Dot1x_NW_MsgTask_7
<a href="#">CSCwd08259</a>	AP C9120, C9115, C9105 Radio firmware reloads unexpectedly running 17.3 or later
<a href="#">CSCwd08926</a>	CW9162 AP Client connection failure with BLE configured as native Scan
<a href="#">CSCwd10570</a>	9130 beacon with incorrect datarates - different rates for same slot different BSSIDs
<a href="#">CSCwd19631</a>	9120 AP cannot operate in mGig when EEE is enabled on switchport
<a href="#">CSCwd21996</a>	CleanAir sensor reloads unexpectedly for 9120 Access Points
<a href="#">CSCwd36552</a>	AP9120 reloads unexpectedly with Kernel panic - not syncing: Fatal exception
<a href="#">CSCwd37092</a>	Cisco 2800,3800,4800,1562,6300 series AP:Slow TCP downloads, failing EAP-TLS in 8.10.181.0/17.3.6 SW
<a href="#">CSCwd37280</a>	Sleeping client fails; AireOS foreign does not send idle timeout payload
<a href="#">CSCwd38925</a>	Cisco C9105 reloads unexpectedly in multiple times PC is at wlc_key_get and LR is at wlc_prep_pdu
<a href="#">CSCwd39605</a>	Cisco 9117 AP reloads unexpectedly due to kernel panic at console_unlock+0x320/0x3ac
<a href="#">CSCwd40355</a>	Controller 5520 Running 8.10.171.0: System Reloads Unexpectedly Task NFV9_Task
<a href="#">CSCwd40731</a>	AP keep reloading due to kernel panic - not syncing: softlockup: hung tasks
<a href="#">CSCwd44421</a>	Controller does not report correct output of Air Quality AQ for different 9130 APs
<a href="#">CSCwd46815</a>	Cisco 2800/3800/4800/1562/6300 series APs: EAP-TLS is failing for the wired clients behind MAP
<a href="#">CSCwd49166</a>	Cisco 3800 AP consistently reporting high QBSS load
<a href="#">CSCwd55757</a>	Wave 2 APs Reloads Unexpectedly on Systemd critical process crash - dnsmasq-host.service failed
<a href="#">CSCwd58182</a>	3800 series AP Reloads Unexpectedly due to kernel panic (PC is at vfp_reload_hw+0x30/0x44)

Identifier	Headline
<a href="#">CSCwd59921</a>	Cisco 9130 AP Dropping EAP-TLS Frames
<a href="#">CSCwd60034</a>	3800 AP Radio reloads unexpectedly due to beacon stuck
<a href="#">CSCwd60376</a>	C9120 AP Kernel panic with PC is at pci_generic_config_read+0x34/0xa8
<a href="#">CSCwd72847</a>	9115 AP's intermittently stop transmitting multicast traffic downstream
<a href="#">CSCwd74571</a>	Process: wepd reloads unexpectedly due to reusing freed packets
<a href="#">CSCwd77823</a>	9130 Ap Radio Firmware crashing randomly
<a href="#">CSCwd79462</a>	Controller wont report correctly output of Air Quality AQ for 4800 AP model
<a href="#">CSCwd80290</a>	Cisco IOS AP image validation certificate failed/expired, causing AP join issues.
<a href="#">CSCwd81523</a>	C9130 not sending EAP_ID_RESP next assoc-req after PMF client tx death in middle of EAP handshake
<a href="#">CSCwd83840</a>	Wireless clients unable to connect to Cisco 1830 AP 'writing to fd 27 failed!'
<a href="#">CSCwd89752</a>	Wireless LAN Controller restarts due to null pointer when running 'debug spectrum all enable'
<a href="#">CSCwd91054</a>	COS-APs not encrypting EAP_ID_REQ after M1-M4 and not updating PMKID for dot1x OKC
<a href="#">CSCwd92780</a>	[Vanc] [9120][17.3.7.12] tx phy error/ucode unexpectedly reloads
<a href="#">CSCwe04602</a>	AP 9120 fails to forward traffic to wireless client for about 60 seconds
<a href="#">CSCwe07297</a>	C9120 AP crash due to Radio firmware crashed
<a href="#">CSCwe07802</a>	Cisco 2800/3800/4800/1562 APs drop upstream EAP packets
<a href="#">CSCwe11476</a>	C9130 kernel panic with filp_close and do_close
<a href="#">CSCwe14029</a>	Controller assigning 20 MHz instead of 40 MHz channel width incorrectly to 9130 AP
<a href="#">CSCwe18185</a>	Day 0 Factory image for new out of the box C9130 (VID03) does not contain iox.tar.gz
<a href="#">CSCwe19858</a>	Cisco 9130 AP advertises incorrect Local Power Constraint value in management frames

## Related Documentation

### Wireless Products Comparison

- Use this tool to compare the specifications of Cisco wireless access points and controllers:

<https://www.cisco.com/c/en/us/products/wireless/wireless-lan-controller/product-comparison.html>

- Product Approval Status:

[https://prdapp.cloudapps.cisco.com/cse/prdapp/jsp/externalsearch.do?action=externalsearch&page=EXTERNAL\\_SEARCH](https://prdapp.cloudapps.cisco.com/cse/prdapp/jsp/externalsearch.do?action=externalsearch&page=EXTERNAL_SEARCH)

- Wireless LAN Compliance Lookup:

<https://www.cisco.com/c/dam/assets/prod/wireless/wireless-compliance-tool/index.html>

### Cisco Wireless Controller

For more information about the controllers, lightweight APs, and mesh APs, see these documents:

- The quick start guide or the installation guide for your particular controller or access point
- [Cisco Wireless Solutions Software Compatibility Matrix](#)
- [Cisco Legacy Wireless Solutions Software Compatibility Matrix](#)
- [Cisco Wireless Controller Configuration Guide](#)
- [Cisco Wireless Controller Command Reference](#)
- [Cisco Wireless Controller System Message Guide](#)

For all controller software related documentation, see:

<http://www.cisco.com/c/en/us/support/wireless/wireless-lan-controller-software/tsd-products-support-series-home.html>

### Cisco Mobility Express

- [Cisco Mobility Express Release Notes](#)
- [Cisco Mobility Express User Guide](#)
- [Cisco Aironet Universal AP Priming and Cisco AirProvision User Guide](#)

### Cisco Aironet Access Points for Cisco IOS Releases

- [Release Notes for Cisco Aironet Access Points for Cisco IOS Releases](#)
- [Cisco IOS Configuration Guides for Autonomous Aironet Access Points](#)
- [Cisco IOS Command References for Autonomous Aironet Access Points](#)

### Open Source Used in Controller and Access Point Software

Click this link to access the documents that describe the open source used in controller and access point software:

<https://www.cisco.com/c/en/us/about/legal/open-source-documentation-responsive.html>

### Cisco Prime Infrastructure

[Cisco Prime Infrastructure Documentation](#)



### **Cisco Connected Mobile Experiences**

*[Cisco Connected Mobile Experiences Documentation](#)*

### **Cisco Digital Network Architecture**

<https://www.cisco.com/c/en/us/support/wireless/dna-spaces/series.html>

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