



Troubleshooting Lightweight Access Points

This chapter provides troubleshooting procedures for basic problems with the 1100 series lightweight access point. For the most up-to-date, detailed troubleshooting information, refer to the Cisco Technical Support and Documentation website at the following URL:

http://www.cisco.com/en/US/products/hw/wireless/tsd_products_support_category_home.html

Sections in this chapter include:

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Guidelines for Using 1100 Series Lightweight Access Points

Keep these guidelines in mind when you use a 1100 series lightweight access point:

- The access points can only communicate with Cisco 2006 or 4400 series wireless LAN controllers.

**Note**

Cisco 4100 series, Aireospace 4012 series, and Aireospace 4024 series wireless LAN controllers are not supported because they lack the memory required to support access points running Cisco IOS software.

- The access points do not support Wireless Domain Services (WDS) and cannot communicate with WDS devices. However, the controller provides functionality equivalent to WDS when the access point associates to it.
- The access points support eight Basic Service Set Identifiers (BSSIDs) per radio and a total of eight wireless LANs per access point. When the access point associates to a controller, only wireless LANs with IDs 1 through 8 are pushed to the access point.
- The access points do not support Layer 2 LWAPP. They must get an IP address and discover the controller using DHCP, DNS, or IP subnet broadcast.
- The access points do not have a console port.

**Note**

You are unable to manually configure controller information on the 1100 series lightweight access point, because it does not have a console port.

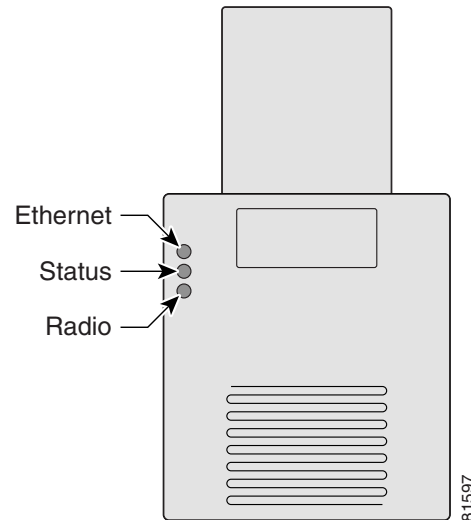
Using DHCP Option 43

You can use DHCP Option 43 to provide a list of controller IP addresses to the access points, enabling the access point to find and join a controller. For additional information, refer to the [“Configuring DHCP Option 43 for Lightweight Access Points”](#) section on page F-1.

Checking the Lightweight Access Point LEDs

If your access point is not communicating, check the three LEDs on the top panel. You can use them to quickly assess the unit's status. [Figure 6-1](#) shows the LEDs.

Figure 6-1 Access Points LEDs



The LEDs signals have the following meanings (for additional details refer to [Table 6-1](#)):

- The Ethernet LED signals traffic on the wired LAN, or Ethernet infrastructure. This LED is normally green when an Ethernet cable is connected, and blinks green when a packet is received or transmitted over the Ethernet infrastructure. The LED is off when the Ethernet cable is not connected.
- The status LED signals operational status. Steady green indicates that the access point is associated with at least one wireless client. Blinking green indicates that the access point is operating normally but is not associated with any wireless devices.
- The radio LED blinks green to indicate radio traffic activity. The light is normally off, but it blinks green whenever a packet is received or transmitted over the access point's radio.

Table 6-1 Top Panel LED Signals

Message type	Ethernet LED	Status LED	Radio LED	Meaning
Boot loader status	Green	–	Green	DRAM memory test.
	–	Amber	Red	Board initialization test
	–	Blinking green	Blinking green	Flash memory test.
	Amber	Green	–	Ethernet initialization test.
	Green	Green	Green	Starting Cisco IOS.
Association status	–	Green	–	At least one wireless client device is associated with the unit.
	–	Blinking green	–	No client devices are associated; check the unit's SSID and WEP settings.
Operating status	–	Green	Blinking green	Transmitting/receiving radio packets.
	Green	–	–	Ethernet link is operational.
	Blinking green	–	–	Transmitting/receiving Ethernet packets.
Boot Loader Errors	Red	–	Red	DRAM memory test failure.
	–	Red	Red	File system failure.
	Red	Red	–	Ethernet failure during image recovery.
	Amber	Green	Amber	Boot environment error.
	Red	Green	Red	No Cisco IOS image file.
	Amber	Amber	Amber	Boot failure.
Operation Errors	–	Green	Blinking amber	Maximum retries or buffer full occurred on the radio.
	Blinking amber	–	–	Transmit/receive Ethernet errors.
	–	Blinking amber	–	General warning.
Configuration Reset	–	Amber	–	Resetting the configuration options to factory defaults.
Failure	Red	Red	Red	Firmware failure; try disconnecting and reconnecting unit power.
Firmware Upgrade	–	Red	–	Loading new firmware image.
Controller status	Alternating green, red, and amber ¹			Connecting to the controller. Note If the access point remains in this mode for more than five minutes, the access point is unable to find the controller. Ensure a DHCP server is available or that the access point has been primed with the controller information.

1. This status indication has the highest priority and overrides other status indications.

Returning the Access Point to Autonomous Mode

You can return a lightweight access point to autonomous mode by loading a Cisco IOS release that supports autonomous mode (such as Cisco IOS Release 12.3(8)JA or earlier). If the access point is associated to a controller, you can use the controller to load the Cisco IOS release. If the access point is not associated to a controller, you can load the Cisco IOS release using TFTP.

Using a Controller to Return the Access Point to Autonomous Mode

Follow these steps to return a lightweight access point to autonomous mode using a controller:

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- Step 1** Log into the CLI on the controller to which the access point is associated and enter this command:
- ```
config ap tftp-downgrade tftp-server-ip-address filename access-point-name
```
- (where:
- a) *tftp-server-ip-address* is the IP address of the TFTP server
  - b) *filename* is the full path and filename of the access point image file, such as `D:/Images/c1100-k9w7-tar.123-8.JA.tar`
  - c) *access-point-name* is the name that identifies the access point on the controller.)
- Step 2** Wait until the access point completes the reboot, as indicated by the Status LED turning green to indicate a client is associated or blinking green to indicate a client is not associated.
- Step 3** After the access point reboots, reconfigure it using the access point GUI or the CLI. For additional information refer to the *Cisco Aironet 1100 Series Access Point Hardware Installation Guide* available at this URL:
- [http://www.cisco.com/en/US/products/hw/wireless/tsd\\_products\\_support\\_category\\_home.html](http://www.cisco.com/en/US/products/hw/wireless/tsd_products_support_category_home.html)
- To browse to the 1100 series access point documentation, click **Cisco Aironet 1100 Series** listed under “Wireless LAN Access.”
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### Using the MODE Button to Return the Access Point to Autonomous Mode

Follow these steps to return a lightweight access point to autonomous mode using the access point MODE button and a TFTP server:



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**Note** The access point MODE button is enabled by default, but you need to verify that the MODE button is enabled (see the “[MODE Button Setting](#)” section on page 6-6).

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- Step 1** Set the static IP address of the PC on which your TFTP server software runs to an address between 10.0.0.2 and 10.0.0.30.
- Step 2** Make sure that the PC contains the access point image file (such as *c1100-k9w7-tar.123-8.JA.tar* for a 1100 series access point) in the TFTP server folder and that the TFTP server is activated.
- Step 3** Rename the access point image file in the TFTP server folder to **c1100-k9w7-tar.default**.
- Step 4** Connect the PC to the access point using a Category 5 (CAT5) Ethernet cable.
- Step 5** Disconnect power from the access point.

- Step 6** Press and hold the **MODE** button while you reconnect power to the access point.
- Step 7** Hold the **MODE** button until the Radio LED turns red (approximately 20 to 30 seconds) and then release.
- Step 8** Wait until the access point reboots, as indicated by all LEDs turning green followed by the Status LED blinking green.
- Step 9** After the access point reboots, reconfigure it using the access point GUI or the CLI. For additional information refer to the *Cisco Aironet 1100 Series Access Point Hardware Installation Guide* available at this URL:

[http://www.cisco.com/en/US/products/hw/wireless/tsd\\_products\\_support\\_category\\_home.html](http://www.cisco.com/en/US/products/hw/wireless/tsd_products_support_category_home.html)

To browse to the 1100 series access point documentation, click **Cisco Aironet 1100 Series** listed under “Wireless LAN Access.”

## MODE Button Setting

The lightweight access point MODE button is configured from your controller. Use these controller CLI commands to view and configure the MODE button:

- 1) `config ap rst-button enable <access-point-name>/all`
- 2) `config ap rst-button disable <access-point-name>/all`
- 3) `show ap config general <access-point-name>`  
(Where *access-point-name* is the name that identifies the access point on the controller.)

## Obtaining the Autonomous Access Point Image File

The autonomous access point image file can be obtained from the Cisco.com software center using these steps:



### Note

To download software from the Cisco.com software center, you must be a registered user. You can register from the main Cisco.com web page at this URL: <http://cisco.com>.

- Step 1** Use your Internet browser to access the Cisco Software Center at the following URL:  
<http://tools.cisco.com/support/downloads/pub/MDFTree.x?butype=wireless>
- Step 2** Click **Wireless LAN Access > Aironet Access Points > Cisco Aironet 1100 Series**.
- Step 3** Click **Cisco Aironet 1100 Access Point**.
- Step 4** On the Enter Network Password window, enter your Cisco.com username and password and click **OK**.
- Step 5** Click **IOS**.
- Step 6** Choose the Cisco IOS release desired, such as 12.3.11.JA.
- Step 7** Click **WIRELESS LAN** for an access point image file, such as c1100-k9w7-tar.123-11.JA.tar.
- Step 8** On the Enter Network Password window, enter your Cisco.com username and password and click **OK**.
- Step 9** On the Security Information window, click **Yes** to display non-secure items.

- Step 10** On the Encryption Software Export Authorization page, read the information and check **Yes** or **No** to the question asking if the image is for use by you or your organization. Click **Submit**.
  - Step 11** If you checked **No**, enter the requested information and click **Submit**.
  - Step 12** Click **Yes** to continue.
  - Step 13** Click **DOWNLOAD**.
  - Step 14** Read and accept the terms and conditions of the Software Download Rules.
  - Step 15** On the Enter Network Password window, enter your Cisco.com username and password and click **OK**.
  - Step 16** Click **Save** to download your image file to your hard disk.
  - Step 17** Select the desired download location on your hard disk and click **Save**.
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## Obtaining the TFTP Server Software

You can download TFTP server software from several web sites. Cisco recommends the shareware TFTP utility available at this URL:

<http://tftpd32.jounin.net>

Follow the instructions on the website for installing and using the utility.

