



# Overview

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The Cisco Aironet access point is a wireless LAN transceiver that serves as the center point of a stand-alone wireless network or as the connection point between wireless and wired networks. In large installations, wireless users within radio range of an access point can roam throughout a facility while maintaining uninterrupted access to the network.

This chapter provides information on the following topics:

- Key features
- Network configuration examples
- Access point specifications

# Key Features

This section describes the key features of the access point:

- Inline power
- Omni-directional antennas
- Ethernet and serial ports
- Indicators
- Industrial temperature range and UL 2043 rating for 350 series metal case access point

## Inline Power

Cisco Aironet 350 series access points receive power through the Ethernet cable, so you do not need to run a separate power cord to the access point. Plug the Ethernet cable into the Ethernet port on the back of the access point and plug the other end into one of three possible power sources:

- A Cisco Aironet power injector
- A switch with inline power, such as the Cisco Catalyst 3524-PWR-XL switch
- A power patch panel, such as the Cisco Catalyst Inline Power Patch Panel

**Note**

Cisco Aironet 340 series access points rely on a separate power supply plugged into the power port on the back of the access point.

**Caution**

Cisco Aironet power injectors are designed for use with 350 series access points and bridges only. Using the power injector with other Ethernet-ready devices can damage the equipment.

**Caution**

Cisco Aironet Power Injectors are not rated for operation in a building's environmental air space, such as above suspended ceilings.

**Caution**

The operational voltage range for Cisco Aironet 350 series access points and bridges is 24 to 60 VDC. Higher voltage can damage the equipment.

## Omni-Directional Antennas

The access point's omni-directional, 2.2 dBi antennas provide diversity coverage for your wireless LAN area. Diversity coverage helps maintain a clear radio signal between the access point and wireless client devices. Just as you can improve signal clarity on your car radio at a stoplight by creeping ahead a few inches, the access point can improve signal quality by choosing the antenna that is receiving the best signal from a client device.

Some access points models are equipped with dual reverse-polarity TNC connectors that you can use to connect to your own antennas for special applications.

## Ethernet and Serial Ports

### Ethernet Port

The access point's Ethernet port accepts an RJ-45 connector, linking the access point to your 10/100 Ethernet LAN. The 350 series access point receives power through the Ethernet cable from a switch with inline power, from a power patch panel, or from the access point's power injector.

### Serial Port

The access point's serial port provides console access to the access point's management system. Use a nine-pin, straight-through, male-to-female serial cable to connect your computer's COM 1 or COM 2 port to the access point's serial port. Assign the following port settings to a terminal emulator to open the management system pages: 9600 baud, 8 data bits, No parity, 1 stop bit, and Xon/Xoff flow control.

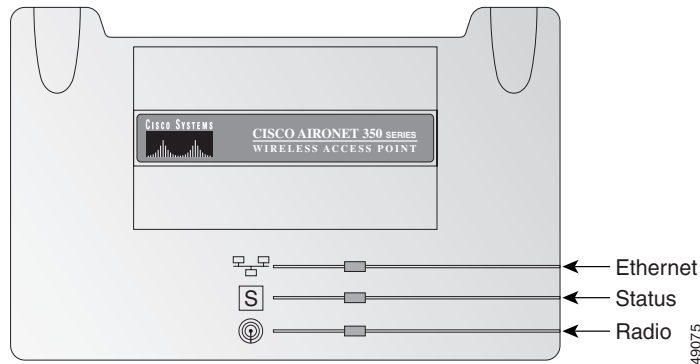
### Metal Enclosure

The 350 series metal case access point contains a metal enclosure having adequate fire resistance and low smoke-producing characteristics suitable for operation in a building's environmental air space in accordance with Section 300-22(c) of the NEC. The 350 series metal case access point also supports an industrial temperature operating range.

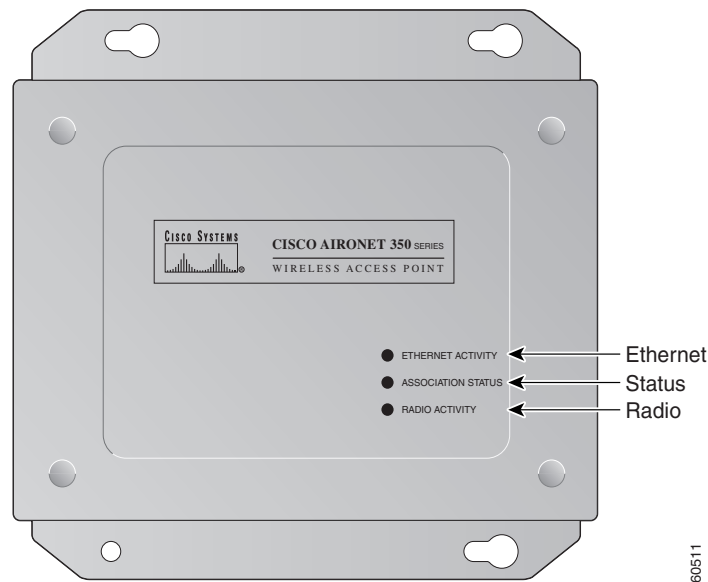
## Indicators

The three indicators on top of the access point report Ethernet activity, association status, and radio activity. The indicators are labeled in [Figure 1-1](#) and [Figure 1-2](#).

**Figure 1-1** Indicators on the 340 and 350 Series Access Point



**Figure 1-2** Indicators on the 350 Series Metal Case Access Point



- The Ethernet indicator signals Ethernet traffic on the wired LAN. This indicator blinks green when a packet is received or transmitted over the Ethernet infrastructure. The indicator blinks red when the Ethernet cable is not connected.
- The association status indicator signals operational status. Blinking green indicates that the access point is operating normally but is not associated with any wireless client devices. Steady green indicates that the access point is associated with at least one wireless client device.
- The radio indicator 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 radio.

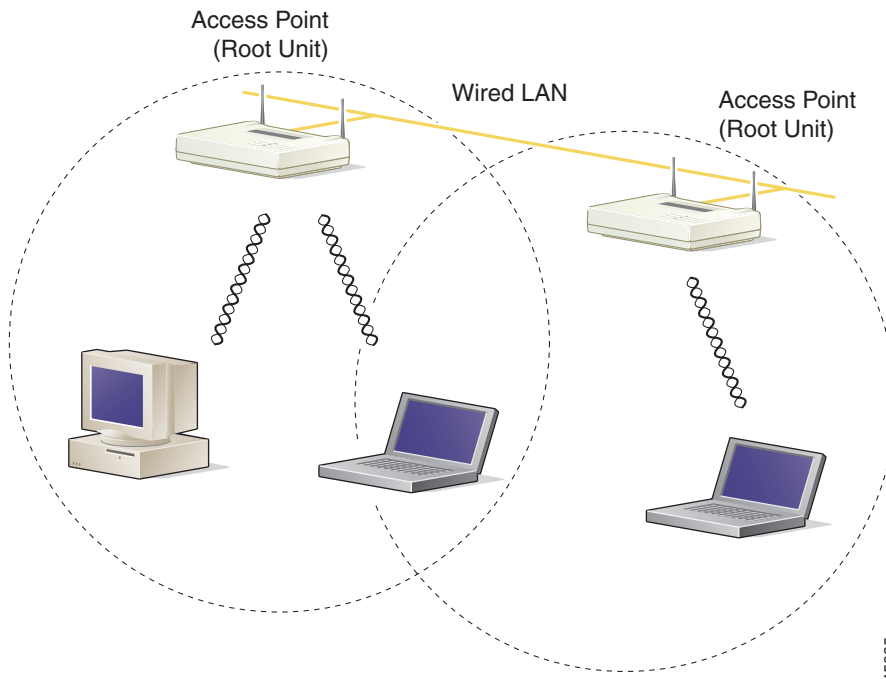
# Network Configuration Examples

This section describes the access point's role in three common wireless network configurations. The access point's default configuration is as a root unit on a wired LAN. The other two possible roles, repeater unit and central unit in an all-wireless network, require specific changes to the default configuration.

## Root Unit on a Wired LAN

An access point connected directly to a wired LAN provides a connection point for wireless users. If more than one access point is connected to the LAN, users can roam from one area of a facility to another without losing their connection to the network. As users move out of range of one access point, they automatically connect to the network (associate) through another access point. The roaming process is seamless and transparent to the user. [Figure 1-3](#) shows access points acting as root units on a wired LAN.

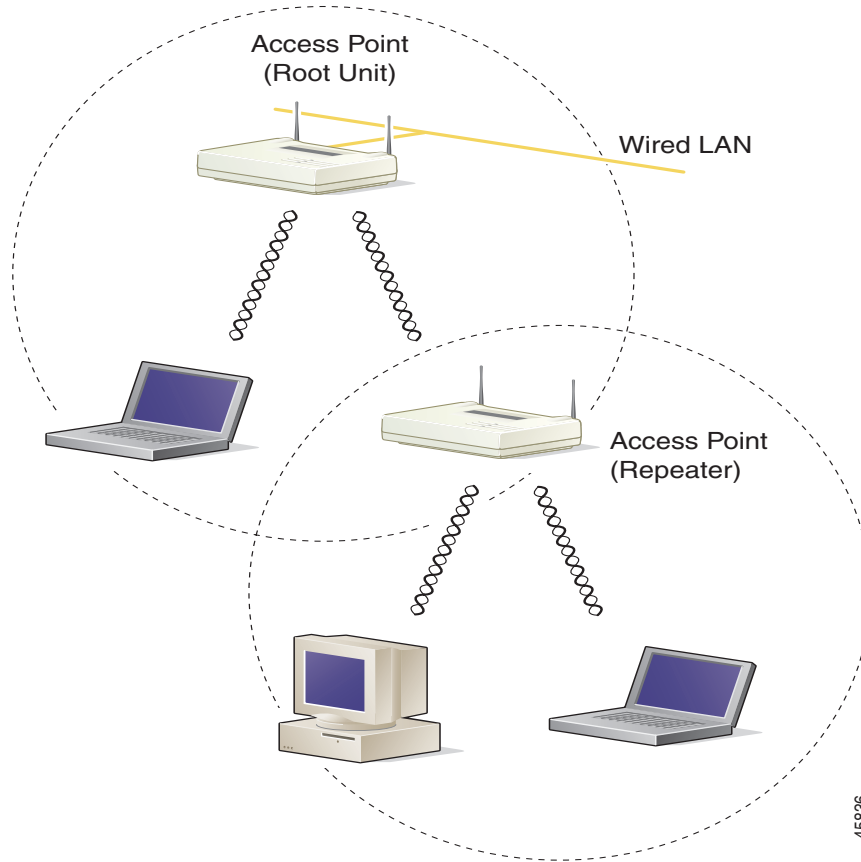
**Figure 1-3** Access Points as Root Units on a Wired LAN



# Repeater Unit That Extends Wireless Range

An access point can be configured as a stand-alone repeater to extend the range of your infrastructure or to overcome an obstacle that blocks radio communication. The repeater forwards traffic between wireless users and the wired LAN by sending packets to either another repeater or to an access point connected to the wired LAN. The data is sent through the route that provides the greatest performance for the client. [Figure 1-4](#) shows an access point acting as a repeater.

**Figure 1-4** Access Point as Repeater

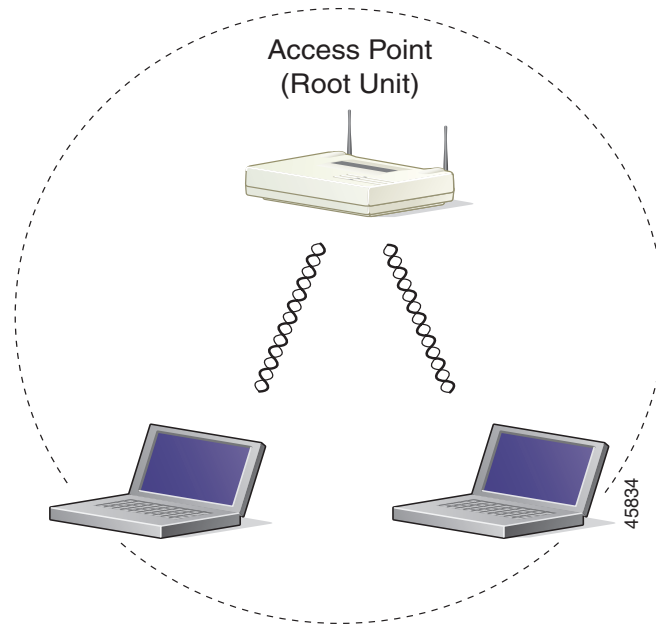


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## Central Unit in an All-Wireless Network

In an all-wireless network, an access point acts as a stand-alone root unit. The access point is not attached to a wired LAN; it functions as a hub linking all stations together. The access point serves as the focal point for communications, increasing the communication range of wireless users. [Figure 1-5](#) shows an access point in an all-wireless network.

**Figure 1-5** Access Point as Central Unit in All-Wireless Network




# Access Point Specifications

Table 1-1 lists specifications for the access point.

**Table 1-1**      **Access Point Specifications**

Category	Specification
<b>Physical</b>	
Size	6.30 in. (16 cm) W x 4.72 in. (12 cm) D x 1.45 in. (3.7 cm) H
Status indicators	Three indicators on the top panel: Ethernet traffic, status, and radio traffic
Connectors	On the back panel: An RJ-45 jack for 10/100 Ethernet connections; a nine-pin serial connector; a power connector (plug-in AC adapter) for a regulated 5V input (340 series only)
Voltage range	24 to 60 VDC (regulated 5 VDC for 340 series only)
Operating temperature range	32 to 122°F (0 to 50°C) for 340 and 350 series –4 to 131°F (–20 to 55°C) for 350 series metal case 32 to 104°F (0 to 40°C) for power injectors
Weight	Less than 1 lb (0.45 kg) for 340 and 350 series 1.43 lbs (0.64 kg) for 350 series metal case
<b>Radio</b>	
Power output	100, 50, 30, 20, 5, or 1 mW for 350 series 30, 20, 5, or 1 mW for 340 series (Depending on the regulatory domain in which the access point is installed)
Frequency	2.400 to 2.497 GHz (Depending on the regulatory domain in which the access point is installed)
Range	Indoor: 150 ft at 11 Mbps (100 ft for 340 series only) 350 ft at 1 Mbps (300 ft for 340 series only) Outdoor: 800 ft at 11 Mbps (400 ft for 340 series only) 2000 ft at 1 Mbps (1500 ft for 340 series only)
Modulation	Direct Sequence Spread Spectrum
Data rates	1, 2, 5.5, and 11 Mbps

**Table 1-1**      **Access Point Specifications (continued)**

Category	Specification
Antenna	Two captured 2.2 dBi gain antennas or a diversity system with two reverse-TNC connectors (antennas for this model are sold separately). Some models in the 340 series have one 2.2 dBi gain antenna.
Compliance	<p data-bbox="781 453 1471 674">Operates license-free under FCC Part 15 and complies as a Class B computing device. Complies with DOC regulations. Complies with the following: ETS 300.328, FTZ 2100, MPT 1349, FCC Part 15.107 and 15.109 Class B, ICES-003 Class B (Canada), CISPR 22 Class B, AS/NZS 3548 Class B, VCCI Class B, EN 50082-1, UL1950, CSA 22.2 No. 950, EN 60950, IEC 60950, VCCI, and others (see Appendix B).</p> <p data-bbox="781 688 1471 783">350 series metal case access point complies with UL 2043 for products installed in air handling spaces, such as above suspended ceilings.</p> <div data-bbox="911 804 1471 972" style="border: 1px solid black; padding: 5px;"> <p data-bbox="911 804 992 873" style="text-align: center;"> <b>Caution</b></p> <p data-bbox="1027 846 1471 972">Cisco Aironet Power Injectors are not rated for UL 2043 and should not be placed in air handling spaces, such as above suspended ceilings.</p> </div>

