

Getting Started Guide: Cisco Aironet 1140 Series Autonomous Access Point

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Getting Started Guide

Cisco Aironet 1140 Series Autonomous Access Point

78-18997-01

1 About this Guide

This Guide explains how to install and configure your Cisco Aironet 1140 Series Autonomous Access Point. This guide also provides mounting instructions and limited troubleshooting procedures.

2 Safety Instructions

Translated versions of the following safety warnings are provided in the translated safety warnings document that is shipped with your access point. The translated warnings are also in the *Safety Warnings for Cisco Aironet Access Points*, which is available on your documentation CD and [cisco.com](http://www.cisco.com).

Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

Statement 1071

SAVE THESE INSTRUCTIONS

Warning Read the installation instructions before you connect the system to its power source. **Statement 1004**

Warning This product must be connected to a Power-over-Ethernet (PoE) IEEE 802.3af compliant power source or an IEC60950 compliant limited power source.

Statement 353

Warning This equipment must be externally grounded using a customer-supplied ground wire before power is applied. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

Statement 366

Warning Installation of the equipment must comply with local and national electrical codes. **Statement 1074**

Warning This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 20A. **Statement 1005**

Warning Do not operate your wireless network device near unshielded blasting caps or in an explosive environment unless the device has been modified to be especially qualified for such use. **Statement 245B**

Caution When mounting the access point to a wall or ceiling, be sure to use appropriate fasteners. The fasteners used must be capable of maintaining a minimum pullout force of 20 lbs (9 kg) and must use all 4 indented holes on the low-profile mounting bracket.

Caution This product and all interconnected equipment must be installed indoors within the same building, including the associated LAN connections as defined by Environment A of the IEEE 802.3af Standard.

Note The access point is suitable for use in environmental air space in accordance with section 300.22.C of the National Electrical Code and sections 2-128, 12-010(3), and 12-100 of the Canadian Electrical Code, Part 1, C22.1. You should not install the power supply or power injector in air handling spaces.

Note Use only with listed ITE equipment.

3 Overview

This section explains necessary tasks prior to installing the 1140 series access point.

Verifying Shipped Components

To unpack and verify the contents of the 1140 series access point and accessory kit, follow these steps:

Step 1 Unpack and remove the access point and the accessory kit from the shipping box.

Step 2 Return any packing material to the shipping container and save it for future use.

Step 3 Verify that you have received the items shown in Figure 1. If any item is missing or damaged, contact your Cisco representative or reseller for instructions.

Figure 1 Shipping Box Contents

- 1

Standard ceiling adjustable T-rail clip
- 2

Mounting bracket
- 3

1140 series access point
- 4

6-32 x 1/4 in. (0.63 cm) at head screws

Key Ports and Components

Familiarize yourself with the access point before continuing with the installation.
access point key components.

Figure 2 sl

Figure 2 Access Point Ports and Connections

- 1

Kensington lock slot
- 2

Power connection
- 3

Ethernet port
- 4

Console port
- 5

Security padlock and hasp
- 6

Low-profile mounting bracket pins (feet for desk or table-top mount)

Performing a Site Survey

Before you mount and deploy your access point, we recommend that you perform a site survey (or

Note You can mount the access point above a suspended ceiling but you must purchase additional mounting hardware: See the ["Mounting the Access Point"](#) section for additional information.

- Access point power options: power supplied by a DC power supply, PoE from a network device, or a PoE power injector/hub (usually located in a wiring closet).

Note Access points mounted in a building's environmental airspace must be powered using PoE to comply with safety regulations.

Cisco recommends that you make a site map showing access point locations so that you can record the device MAC addresses from each location and return them to the person who is planning or managing your wireless network.

4 Obtaining and Assigning an IP Address

To browse to the access point Express Setup page, you must either obtain or assign the access point IP address using one of these methods:

Note The access point does not have a default IP address.

- Assign a static IP address by connecting to its console port and accessing the access point CLI.
- Use a DHCP server (if available) to automatically assign an IP address. You can find out the DHCP-assigned IP address by using one of the following methods:
 - Connect to the access point console port and use a Cisco IOS command to display the IP address, such as `show interface bvi1`.
 - Provide your organization's network administrator with your access point MAC address. Your network administrator will query the DHCP server using the MAC address to identify the IP address. The MAC address is on a label attached to the bottom of the access point.
 - Use the CLI and serial port to identify the assigned IP address.

Connecting to the Access Point Locally

If you need to configure the access point locally (without connecting it to a wired LAN), you can connect a PC to its console port by using a DB-9 to RJ-45 serial cable.

Caution Be careful when handling the access point. The bottom plate might be hot.

Note The Cisco part number for the serial cable is AIR-CONCAB1200.

Step 2 Set up a terminal emulator on your PC to communicate with the access point. Use the following settings for the terminal emulator connection: 9600 baud, 8 data bits, no parity, 1 stop bit, and no flow control.

Assigning the IP Address to the BVI

When you assign an IP address to the access point by using the CLI, you must assign the address to the bridge-group virtual interface (BVI). Beginning in a privileged EXEC mode, follow these steps to assign an IP address to the access point BVI using the access point console port.

Command	Purpose
Step 1 <code>configure terminal</code>	Enter global configuration mode.
Step 2 <code>interface bvi1</code>	Enters interface configuration mode for the BVI.
Step 3 <code>ip address ip_address net_mask</code>	Assigns an IP address and subnet mask address to the BVI.

Assigning an IP Address Using the CLI

Follow these steps to access the CLI using a Telnet session. These steps are for a PC running Microsoft Windows with a Telnet terminal application. Check your PC operating instructions for detailed instructions.

Step 1 Select Start > Programs > Accessories > Telnet.

If Telnet is not listed in your Accessories menu, select Start > Run, type Telnet in the entry field, and press Enter.

Step 2 When the Telnet window appears, click Connect and select Remote System.

Step 3 In the Host Name field, type the access point IP address and click Connect.

Note If you are connected to the access point using a Telnet session, you lose your connection to the access point when you assign a new IP address to the BVI. If you need to continue configuring the access point using Telnet, use the new IP address to open another Telnet session to the access point.

5 Mounting the Access Point

Note The integrated antenna design of the 1140 series access point is designed for horizontal surfaces, (table top and ceiling installations). When mounted to such surfaces, the integrated antennas produce the best antenna radiation pattern. For advanced features such as voice, location, and rogue access point detection, ceiling mounting is strongly recommended. However, for smaller areas such as conference rooms, kiosks, transportation, and hot-spot usage where the customer is concerned primarily with data coverage and not advanced features, you can mount the unit on a wall using wall anchors.

Caution Do not use plastic wall anchors or the keyhole slots on the mounting bracket for ceiling installations. When mounting the access point on a hard ceiling, use four fasteners capable of maintaining a minimum pullout force of 20 lbs (9 kg).

6 Configuring Basic Settings

Before you can configure basic settings, the access point and your PC needs an IP address. See the "Obtaining and Assigning an IP Address" section.

Follow these steps to configure basic settings for the access point using the GUI Express Setup page.

Step 1 Open your browser, and enter the access point IP address in the address field. A username and password screen appears.

Step 2 Enter the username Cisco and password Cisco. The username and password are case sensitive.

Step 3 Press Enter. The Summary Status page appears.

Step 4 If required, configure the power settings as described in the previous section. Otherwise, Click **Express Setup**. The Express Setup page appears.

Step 5 Configure the settings using the following sections as a guide.

- **Host Name**—The host name (or system name) is a name for the access point that identifies it on your network. The system name appears in the titles of the management system pages.
- **Configuration Server Protocol**—This setting specifies how the access point obtains an IP address.

DHCP—IP address is automatically assigned by the network DHCP server.

Static IP—The access point uses a static IP address that you enter in the IP address field.

- **IP Address**—This setting assigns or changes the access point IP address. If DHCP is enabled, the access point obtains its IP address from your network DHCP server. You can assign a static IP address in this field.
- **IP Subnet Mask**—The IP subnet mask identifies the subnet on which the access point resides. This subnet is provided by your network administrator. If DHCP is enabled, leave this field blank.
- **Default Gateway**—The default gateway identifies the address the access point uses to access another network. This gateway is provided by your network administrator. If DHCP is enabled, leave this field blank.

- **SNMP Community**—The SNMP Community setting identifies and sets attributes for the Simple Network Management Protocol (SNMP) used to manage the network on which the access point resides.

Read-Only—Access point allows only SNMP read access.

Read-Write—Access point allows read and write access.

Configuring the Radios

Your 1140 series access point includes two internal radios, which must be configured individually in Express Setup. Select the role, optimization setting, and extension capabilities for Radio0 (802.11N 2.4GHz) and Radio1 (802.11N 5GHz).

- **Role in Radio Network**—Determines what function each radio in the access point performs in the wireless network.

Access Point—Specifies that the unit operates as an access point connected to the main Ethernet LAN network. In this mode, wireless clients associate to the access point.

Repeater—Specifies that the unit operates as a repeater access point not connected to Ethernet LAN. In this mode, wireless clients associate to the access point.

Root Bridge—Specifies that the unit operates as a root bridge and connects directly to the main Ethernet LAN. In this mode, the unit accepts associations from other Cisco Aironet non-root bridges and wireless client devices.

Workgroup Bridge—Specifies that the unit operates as a workgroup bridge connected to a small wired Ethernet LAN network through an Ethernet hub or switch. The workgroup bridge must associate to a Cisco Aironet access point or bridge.

Scanner—Specifies that the unit is configured by a Cisco WLSE and operates as a scanner and reports network traffic to the Cisco WLSE.

- **Optimize Radio Network For**—Optimizes the access point radio performance in the wireless network by adjusting data rates. This setting must match the setting on the clients.

Throughput—Maximizes data volume handled by the access point but might reduce its range.

Range—Maximizes the access point range but might reduce throughput.

Default—The access point uses its default data rate settings for the radio selected.

Custom—The access point uses settings that you enter on the radio settings page. Clicking Custom takes you to the radio settings page.

- **Aironet Extensions**—By default, the access point uses Cisco Aironet 802.11 extensions to detect the capabilities of Cisco Aironet client devices and to support features that require specific interaction between the access point and associated client devices. Aironet extensions must be enabled to support features such as load balancing, Message Integrity Check (MIC), Temporal Key Integrity Check (TKIP), Repeater Mode, and World Mode. Disabling Aironet Extensions disables the features mentioned above, but it sometimes improves the ability of non-Cisco client devices to associate to the access point.

22/09/2019

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Setting

Default

System Name

ap

Configuration Server Protocol DHCP

IP Address

Assigned by DHCP

Note The access point does not have a default IP address.

IP Subnet Mask

Assigned by DHCP

Default Gateway

Assigned by DHCP

Role in Radio Network

Access point

Web Server

Standard (HTTP)

SNMP Community

default Community

Optimize Radio Network for

Throughput

Aironet Extensions

Enable

Note You can restore the access point to its factory defaults by unplugging the power jack and plugging it back in while holding the Mode button down until the Ethernet LED turns amber (approximately 2 to 3 seconds).

Enabling the Radio Interfaces

The access point radios are disabled by default, and there is no default SSID. You must create an SSID and enable the radios before the access point allows wireless associations from other devices. Refer to the "Configuring Basic Security Settings" section for instructions on configuring the SSID.

Follow these steps to enable the radio interfaces:

Step 5 Click Apply.

Step 6 Return to the Summary Status page and click 802.11N . The 5-GHz radio status p
appears.

5GHz . The 5-GHz radio status p

Step 7 Repeat Steps 3-5.

Step 8 Close your web browser.

Configuring Security Settings

After you assign basic settings to your access point, you must configure security settings to prevent unauthorized access to your network. Because it is a radio device, the access point can communicate beyond the physical boundaries of your work site.

Just as you use the Express Setup page to assign basic settings, you can use the Express Security page to create unique SSIDs and assign one of four security types to them. For detailed security information, refer to the *Cisco IOS Software Configuration Guide for Cisco Aironet Access* F

Configuring Basic Security Settings

You can use the Express Security page to create unique SSIDs and assign one of four security types to them. This illustration shows the Express Security page.

SSIDs that you create appear in the SSID table at the bottom of the page. You can create up to 16 SSIDs on the access point.

Using VLANs

If you use VLANs on your wireless LAN and assign SSIDs to VLANs, you can create multiple SSIDs by using any of the four security settings on the Express Security page. However, if you do not use VLANs on your wireless LAN, the security options that you can assign to SSIDs are limited because of the limited Express Security page encryption options. Without VLANs, encryption settings (WEP and ciphers) apply to an interface, such as the radio, and you cannot use more than one encryption setting on an interface. For example, when you create an SSID with static WEP with VLANs disabled, you cannot create additional SSIDs with WPA authentication because they use different encryption settings. If you find that the security setting for an SSID conflicts with another SSID, you can delete one or more SSIDs to eliminate the conflict.

If any VLANs are defined on the access point, the trunk port on the switch must be limited to allow only the VLANs defined on the access point.

Express Security Types

There are four security types you can assign to an SSID:

- No security—The least secure option. Use this option only for SSIDs used in a public space, and assign it to a VLAN that restricts access to your network.
- Static WEP Key—More secure than no security. Static WEP keys are vulnerable to attack. There are two different lengths for WEP keys: 40-bit and 128-bit (hexadecimal or ASCII characters). Cisco access points use hexadecimal characters. Client adapters can use either, depending on how the vendor chooses to configure them.
- EAP Authentication—Enables 802.1x authentication. Requires an IP address and shared secret from an authentication server on your network (server authentication port 1645). You do not need to enter a WEP key.
- WPA—Wi-Fi Protected Access (WPA) permits wireless access to users authenticated against a database through the services of an authentication server and encrypts their IP traffic with stronger algorithms than those used in WEP. As with EAP authentication, you must enter the IP address and shared secret for an authentication server on your network (server authentication port 1645).

Configuring Security for 802.11n

To achieve 802.11n speeds, you need to configure the access point for no encryption or WPA2/AES encryption. Any other setting eliminates 802.11n capabilities from the configuration.

Express Security Limitations

- You cannot configure multiple authentication servers. To configure multiple authentication servers, click **Security > Server Manager**.
- You cannot configure multiple WEP keys. To configure multiple WEP keys, click **Security > Encryption Manager**.
- You cannot assign an SSID to a VLAN that is already configured on the access point. To assign an SSID to an existing VLAN, choose **Security > SSID Manager**.
- You cannot configure combinations of authentication types on the same SSID (such as MAC address authentication and EAP authentication). To configure combinations of authentication types, choose **Security > SSID Manager**.

Using the Express Security Page

Follow these steps to create an SSID using the Express Security page:

Step 1 Type the SSID in the SSID entry field. The SSID can contain up to 32 alphanumeric characters.

Note These characters are not allowed in the SSID: +,], /, ", TAB, and trailing SPACE.

Step 2 To broadcast the SSID in the access point beacon, check the Broadcast SSID in Beacon check box.

Note When you broadcast the SSID, devices that do not specify an SSID can associate to the access point. This is a useful option for an SSID used by guests or client devices in public space. If you do not broadcast the SSID, client devices cannot associate to the access point unless their SSID matches this SSID, so only one SSID can be included in the access point beacon.

Step 3 (Optional) Check the Enable VLAN ID check box and enter a VLAN number (1 through 4095) to assign the SSID to a VLAN. You cannot assign an SSID to an existing VLAN.

Step 4 (Optional) Check the Native VLAN check box to mark the VLAN as the native VLAN.

Step 5 Select the security setting for the SSID. The settings are listed in order of their robustness, from No Security to WPA, which is the most secure setting.

If you select Static WEP Key, choose the key number and encryption size and enter the encryption key (10 hexadecimal characters for 40-bit keys or 26 hexadecimal characters for 128-bit keys).

If you select EAP Authentication or WPA, enter the IP address and shared secret for the authentication server on your network.

Your 802.11n security configuration must be either no encryption or WPA2/AES. Any

7 Troubleshooting

This section offers some diagnostic and configuration suggestions for troubleshooting your access point.

Checking the Access Point LED

Figure 3 shows the location of the access point Status LED.

Figure 3 Access Point LED Location

1 Status LED

Note Regarding LED status colors, it is expected that there will be small variations in color intensity and hue from unit to unit. This is within the normal range of the LED manufacturer's specifications and is not a defect.

Table 2 shows the access point LED diagnostics for various conditions.

Table 2 Access Point LED Diagnostic Messages

Message Type	Status LED	Message Meaning
--------------	------------	-----------------

		Initializing FLASH le system
		FLASH memory test OK
		Initializing Ethernet
		Ethernet OK
		Starting Cisco IOS
Association status	Green	Initialization successful
		Normal operating condition, but no wireless client associated
	Blue	Normal operating condition, at least one wireless client association
Operating status	Blinking blue	Software upgrade in progress
	Rapidly cycling through blue, green, red, and white	Access point location command invoked
Boot loader warnings	Blinking blue	Con guration recovery in progress (MODE button pushed for 2 to 3 seconds)
	Red	Ethernet failure or image recovery (MODE button pushed for 20 to 30 seconds)
	Blinking green	Image recovery in progress (MODE button released)
	Blinking red	Ethernet link not operational
Boot loader errors	Red	DRAM memory test failure
	Blinking red and blue	FLASH le system failure

		Boot environment failure
		No Cisco image file
		Boot failure
Cisco IOS errors	Red	Software failure; try disconnecting and reconnecting unit power
	Cycling through blue, green, red, and orange	General warning; insufficient inline power

Configuring System Power Settings

After connecting the access point to a power source, its status LED might be amber, which can indicate that the access point is unable to verify that the power source equipment (PSE) is supplying sufficient power. In such cases, you need to configure settings on the access point or the switch to identify your power source.

Identify your power source and switch condition, and then make sure that your devices are configured with an IP address.

Follow these steps to configure the system power settings using the GUI:

Step 1 Open your browser and enter the access point IP address in the address field. A login and password screen appears.

Step 2 Enter the username Cisco and password Cisco. The username and password are case sensitive.

Step 3 When the access point does not receive enough power for full operations, it is in low power mode. If your access point is in low power mode, a warning message appears indicating that all radios are disabled due to insufficient power. Click OK to continue. The System Configuration page appears.

Step 4 Scroll down to the System Power Settings section as shown in Figure 4.

Figure 4 Low Power Mode Warning

Note To verify switch status, you need to use the switch CLI. See the Cisco IOS software configuration guide for your switch.

Table 3 System Power Settings

Power Source	System Power Settings	Switch Status
Cisco PSE supporting Cisco Intelligent Power Management feature ¹	Power Settings: Power Negotiation selected Power Injector: Unchecked	power inline auto
Cisco PSE not supporting Cisco Intelligent Power Management feature ¹	Power Settings: Prestandard Compatibility selected Power Injector: Unchecked	power inline auto
Cisco Aironet Power Injector with a Cisco PSE supporting Intelligent Power Management feature ¹	Power Settings: Power Negotiation selected Power Injector: Unchecked	power inline never
Cisco Aironet Power Injector with a Cisco PSE not supporting Cisco Intelligent Power Management feature ¹	Power Settings: Power Negotiation selected Power Injector: Checked MAC address ²	power inline never
Cisco Aironet Power Injector with a non-Cisco switch	No configuration requirement	
802.3af-compliant switch that does not support Cisco inline power (non-Cisco switch)	No configuration requirement	

- 2 MAC address is the 12- character hexadecimal address of the switch port to which the access point is attached. The MAC address format is HHHH.HHHH.HHHH.

Step 6 Click Apply. The access point reboots configured with the power settings you specified.

Note You might have to refresh your browser screen to see the current status indicating that the access point radios are enabled.

Finding More Troubleshooting Help

If you are still experiencing difficulty, before contacting Cisco, look for a solution to your problem in this guide or the troubleshooting chapter of the hardware installation guide for the access point you are using. These, and other documents, are available on Cisco.com. Follow these steps to access and download these documents:

Step 1 Open your web browser and go to <http://www.cisco.com>.

Step 2 Click **Products & Services**. A pop-up window appears.

Step 3 Click Wireless. The Wireless Introduction page appears.

Step 4 Scroll down to the Product Portfolio section.

Step 5 Under Access Points, click **Cisco Aironet 1140 Series**. The Cisco Aironet 1140 Series Introduction page appears.

Step 6 Scroll down to the Support window and click **Install and Upgrade**. The Cisco Aironet 1140 Series Install and Upgrade page appears.

Step 7 Click **Install and Upgrade Guides**. The Cisco Aironet 1140 Series Install and Upgrade Guides page appears.

Step 8 Select the section that best suits your troubleshooting needs.

8 Access Point Specifications

Table 4 lists the technical specifications for the 1140 series autonomous access point.

Table 4 Access Point Specifications

Category	Specification
Dimensions (LxWxD)	8.68 x 8.68 x 1.84 in. (22.04 x 22.04 x 4.67 cm)
Weight	1.9 lbs (0.86 kg)

Humidity	10% to 90% (noncondensing)
Antenna	Integrated
Compliance	The 1140 series access point complies with UL 2043 for products installed in a building's environmental air handling spaces, such as above suspended ceilings.
Safety	UL 60950-1 CAN/CSA C22.2 No. 60950-1 IEC 60950-1 with all national deviations EN 60950-1 UL 2043
EMI and Susceptibility	FCC Part 15.107 and 15.109 Class B ICES-003 Class B (Canada) EN 301.489 EN 55022 Class B, 2000 version EN 55024 AS/NZS 3548 Class B VCCI Class B
Radio	FCC Part 15.247, 15.407 Canada RSS-210 Japan Telec 33, 66, T71 EN 330.328, EN 301.893 FCC Bulletin OET-65C Industry Canada RSS-102
Maximum power and channel settings	Maximum power and the channels allowed in your regulatory domain, refer to <i>Channels and Maximum Power Settings for Cisco Aironet Lightweight Access Points</i> . This document is available on cisco.com .

9 Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly What's New in Cisco Product Documentation, which also lists all new

10 Declarations of Conformity and Regulatory Information

This section provides declarations of conformity and regulatory information for the Cisco Aironet 1140 Series Autonomous Access Point.

Manufacturers Federal Communication Commission Declaration of Conformity Statement

Models	Certi cation Numbers
AIR-AP1141N-A-K9	LDK102069
AIR-AP1142N-A-K9	LDK102070

Manufacturer:

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA

This device complies with Part 15 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 of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and radiates radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference. However, there is no guarantee that interference will not occur. If this equipment does cause interference to radio or television

Caution The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency when using the integrated antennas. Any changes or modification to the product not expressly approved by Cisco could void the user's authority to operate this device.

Caution Within the 5.15 to 5.25 GHz band (5 GHz radio channels 34 to 48) the UNII devices are restricted to indoor operations to reduce any potential for harmful interference to co-channel Mobile Satellite System (MSS) operations.

VCCI Statement for Japan

Warning This is a Class B product based on the standard of the VCCI Council. If this is used near a radio or television receiver in a domestic environment, it may cause radio Interference. Install and use the equipment according to the instruction manual.

VCCI-B

Guidelines for Operating Cisco Aironet Access Points in Japan

This section provides guidelines for avoiding interference when operating Cisco Aironet access points in Japan. These guidelines are provided in both Japanese and English.

Japanese Translation

English Translation

This equipment operates in the same frequency bandwidth as industrial, scientific, and medical devices such as microwave ovens and mobile object identification (RF-ID) systems (licensed premises radio stations and unlicensed specified low-power radio stations) used in factory production lines.

1. Before using this equipment, make sure that no premises radio stations or specified low-power radio stations of RF-ID are used in the vicinity.
2. If this equipment causes RF interference to a premises radio station of RF-ID, promptly change the frequency or stop using the device; contact the number below and ask for recommendations on avoiding radio interference, such as setting partitions.
3. If this equipment causes RF interference to a specified low-power radio station of RF-ID, contact the number below.

Contact Number: 03-6434-6500

Statement 371—Power Cable and AC Adapter

English Translation

When installing the product, please use the provided or designated connection cables/power cables/AC adapters. Using any other cables/adapters could cause a malfunction or a re. Electrical

Canadian Compliance Statement

AIR-AP1141N-E-K9 2461B-102069

AIR-AP1142N-E-K9 2461B-102070

This Class B Digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte les exigences du Règlement sur le matériel brouilleur du Canada.

This device complies with Class B Limits of Industry Canada. 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.

Cisco Aironet Access Points are certified to the requirements of RSS-210. The use of this device in a system operating either partially or completely outdoors may require the user to obtain a license for the system according to the Canadian regulations. For further information, contact your local Industry Canada office.

European Community, Switzerland, Norway, Iceland, and Liechtenstein

Models:

AIR-AP1141N-E-K9

AIR-AP1142N-E-K9

The following standards were applied:

- Radio—EN 300.328-1, EN 300.328-2, EN 301.893
- EMC—EN 301.489-1, EN 301.489-17
- Safety—EN 60950-1

Note This equipment is intended to be used in all EU and EFTA countries. Outdoor use may be restricted to certain frequencies and/or may require a license for operation. For more details, contact Cisco Corporate Compliance.

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Declaration of Conformity with Regard to the R&TTE Directive 1999/5/EC

Declaration of Conformity for RF Exposure

United States

This system has been evaluated for RF exposure for Humans in reference to ANSI C 95.1 (American National Standards Institute) limits. The evaluation was based on ANSI C 95.1 and FCC OET Bulletin 65C rev 01.01. The minimum separation distance from the antenna to general bystander is 7.9 inches (20cm) to maintain compliance.

Canada

This system has been evaluated for RF exposure for Humans in reference to ANSI C 95.1

This system has been evaluated for RF exposure for Humans in reference to the ICNIRP (International Commission on Non-Ionizing Radiation Protection) limits. The evaluation was based on the EN 50385 Product Standard to Demonstrate Compliance of Radio Base stations and Fixed Terminals for Wireless Telecommunications Systems with basic restrictions or reference levels related to Human Exposure to Radio Frequency Electromagnetic Fields from 300 MHz to 40 GHz. The minimum separation distance from the antenna to general bystander is 20cm (7.9 inches).

Australia

This system has been evaluated for RF exposure for Humans as referenced in the Australian Radiation Protection standard and has been evaluated to the ICNIRP (International Commission on Non-Ionizing Radiation Protection) limits. The minimum separation distance from the antenna to general bystander is 20cm (7.9 inches).

Administrative Rules for Cisco Aironet Access Points in Taiwan

This section provides administrative rules for operating Cisco Aironet access points in Taiwan. The rules for all access points are provided in both Chinese and English.

Chinese Translation

For those low-power radio-frequency devices that have already received a type-approval, companies, business units or users should not change its frequencies, increase its power or change its original features and functions.

Article 14

The operation of the low-power radio-frequency devices is subject to the conditions that no harmful interference is caused to aviation safety and authorized radio station; and if interference is caused, the user must stop operating the device immediately and can't re-operate it until the harmful interference is clear.

The authorized radio station means a radio-communication service operating in accordance with the Communication Act.

The operation of the low-power radio-frequency devices is subject to the interference caused by the operation of an authorized radio station, by another intentional or unintentional radiator, by industrial, scientific and medical (ISM) equipment, or by an incidental radiator.

Chinese Translation

Operation of Cisco Aironet Access Points in Brazil

This section contains special information for operation of Cisco Aironet access points in Brazil.

Access Point Models

AIR-AP1142N-T-K9

Figure 5 Brazil Regulatory Information

Portuguese Translation

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

English Translation

This equipment operates on a secondary basis and consequently must accept harmful interference, including interference from stations of the same kind. This equipment may not cause harmful interference to systems operating on a primary basis.

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