Cisco Aironet 1240G Series Access Point

Cisco® Aironet® 1240G Series Access Points provide single-band 802.11g wireless connectivity for challenging RF environments such as factories, warehouses, and large retail establishments (Figure 1). Connectorized antennas, a rugged metal enclosure, and a broad operating temperature range offer extended range and coverage versatility. The Cisco Aironet 1240G Series provides local as well as inline power, including support for IEEE 802.3af Power over Ethernet (PoE).

Figure 1. Cisco Aironet 1240G Access Point

The Cisco Aironet 1240G Series is a component of the Cisco Unified Wireless Network, a comprehensive solution that delivers an integrated, end-to-end wired and wireless network. Using the radio and network management features of the Cisco Unified Wireless Network for simplified deployment, the Cisco Aironet 1240G Series extends the security, scalability, reliability, ease of deployment, and manageability available in wired networks to the wireless LAN (WLAN).

The Cisco Aironet 1240G Series is available in two versions: unified or autonomous. Unified access points operate with the Lightweight Access Point Protocol (LWAPP) and work in conjunction with Cisco wireless LAN controllers and the Cisco Wireless Control System (WCS). When configured with LWAPP, the Cisco Aironet 1240G Series can automatically detect the best-available Cisco wireless LAN controller and download appropriate policies and configuration information with no manual intervention. Autonomous access points are based on Cisco IOS® Software and can optionally operate with the CiscoWorks Wireless LAN Solution Engine (WLSE). Autonomous access points, along with the CiscoWorks WLSE, deliver a core set of features and can be field-upgraded to take full advantage of the benefits of the Cisco Unified Wireless Network as requirements evolve.

Applications

Designed for rugged environments and installations that require antenna versatility, the Cisco Aironet 1240G Series features antenna connectors for extended range or coverage versatility and more flexible installation options. Manufacturing applications, for example, can place WLANs in hazardous locations and remotely place antennas in those locations while securing the Cisco Aironet 1240G Series Access Points.

The metal housing and industrial-grade components of the Cisco Aironet 1240G Series provide the ruggedness and extended operating temperature range required in factories, warehouses, “big box” retail environments, and similar facilities. High transmit power, receive sensitivity, and delay spread for 2.4-GHz radios provide the long range and large coverage area consistent with these applications. Access points can be placed above ceilings or suspended ceilings, allowing antennas to be discreetly placed below drop ceilings. The UL 2043 rating of the Cisco Aironet 1240G Series allows for placement of the access points above ceilings in plenum areas regulated by municipal fire codes. Public access applications such as large hotel buildings can also present a challenging RF environment; the antenna versatility of the Cisco Aironet 1240G Series, together with industry-leading range and coverage, provides reliable performance for the most demanding environments.

Features and Benefits

Table 1 lists the features and benefits of Cisco Aironet 1240G Series Access Points.

Table 1. Features and Benefits of Cisco Aironet 1240G Series Access Points

Feature	Benefit
802.11g radios	The access points provide 54 Mbps of capacity and compatibility with older 802.11b clients.
Dual RP-TNC antenna connectors for 2.4-GHz radios	Antenna connectors support a variety of Cisco 2.4-GHz antennas, providing range and coverage versatility.
Security	• Authentication • Security standards • Wi-Fi Protected Access (WPA) • WPA2 (802.11i) • Cisco Temporal Key Integrity Protocol (TKIP) • Cisco Message Integrity Check (MIC) • IEEE 802.11 WEP keys of 40 and 128 bits • 802.1X Extensible Authentication Protocol (EAP) types: ◦ EAP Flexible Authentication via Secure Tunneling (EAP FAST) ◦ Protected EAP Generic Token Card (PEAP GTC) ◦ PEAP Microsoft Challenge Authentication Protocol Version 2 (PEAP MSCHAP) ◦ EAP Transport Layer Security (EAP TLS) ◦ EAP Tunneled TLS (EAP TTLS) ◦ EAP Subscriber Identity Module (EAP SIM) ◦ Cisco LEAP • Encryption: ◦ Advanced Encryption Standard Counter Mode with Cipher Block Chaining Message Authentication Code Protocol (AES CCMP) encryption (WPA2) ◦ TKIP (WPA) ◦ Cisco TKIP ◦ WPA TKIP ◦ IEEE 802.11 WEP keys of 40 and 128 bits
Current support for 12 nonoverlapping channels, with potentially up to 23 channels	• Lower potential interference with neighboring access points simplifies deployment. • Fewer transmission errors delivers greater throughput.
Rugged metal housing	Metal case and rugged features support deployment in factories, warehouses, the outdoors (NEMA enclosure required), and other industrial environments.
UL 2043 plenum rating and extended operating temperature	The access points support installation in environmental airspaces such as areas above suspended ceilings.

Feature	Benefit
Multipurpose and lockable mounting bracket	The access points provide greater flexibility in installation options for site surveys, as well as theft deterrence.
Support for both local and inline power, including IEEE 802.1af PoE	• Power can be supplied using the Ethernet cable, eliminating the need for costly electrical power line runs to remotely installed access points. • The access points can be powered by IEEE 802.3af PoE, Cisco Inline Power switches, single-port power injectors, or local power.
Hardware-assisted AES encryption	The access points provide high security without performance degradation.

Product Specifications

Table 2 lists the product specifications for Cisco Aironet 1240G Series Access Points.

Table 2. Product Specifications for Cisco Aironet 1240G Series Access Points

Item	Specification

Part Number	• AIR-AP1242G-x-K9
	• AIR-LAP1242G-x-K9
	• Regulatory domains: (x = regulatory domain)
	  ◦ A = FCC
	  ◦ E = ETSI
	  ◦ P = Japan2
	• Customers are responsible for verifying approval for use in their individual countries. To verify approval and to identify the regulatory domain that corresponds to a particular country, please visit: http://www.cisco.com/go/aironet/compliance
	• Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.

Data rates supported	802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps
Network standard	IEEE 802.11b and 802.11g
Uplink	Autosensing 802.3 10 and 100BASE-T Ethernet
Frequency band and operating channels	Americas (FCC) • 2.412 to 2.462 GHz; 11 channels ETSI • 2.412 to 2.472 GHz; 13 channels Japan2 • 2.412 to 2.472 GHz; 13 channels Orthogonal Frequency Division Multiplexing (OFDM) • 2.412 to 2.484 GHz; 14 channels CCK
Nonoverlapping channels	802.11b/g: 3 channels
Receive sensitivity (typical)	802.11g • 1 Mbps: –96 dBm • 2 Mbps: –93 dBm • 5.5 Mbps: –91 dBm • 6 Mbps: –91 dBm • 9 Mbps: –85 dBm • 11 Mbps: –88 dBm • 12 Mbps: –83 dBm • 18 Mbps: –81 dBm • 24 Mbps: –78 dBm • 36 Mbps: –74 dBm • 48 Mbps: –73 dBm • 54 Mbps: –73 dBm

<table>
<tr><th>Item</th><th colspan="2">Specification</th></tr>
<tr><td>Available transmit power settings
(Maximum power setting varies by channel and according to individual country regulations.)</td><td colspan="2">802.11g</td></tr>
<tr><td></td><td>CCK:
20 dBm (100 mW)
17 dBm (50 mW)
14 dBm (25 mW)
11 dBm (12 mW)
8 dBm (6 mW)
5 dBm (3 mW)
2 dBm (2 mW)</td><td>OFDM
17 dBm (50 mW)
14 dBm (25 mW)
11 dBm (12 mW)
8 dBm (6 mW)
5 dBm (3 mW)
2 dBm (2 mW)
–1 dBm (1 mW)</td></tr>
<tr><td>Range (typical)</td><td>Indoor (distance across open office environment):</td><td>Outdoor:</td></tr>
<tr><td></td><td>802.11g:
105 ft (32m) at 54 Mbps
180 ft (55m) at 48 Mbps
260 ft (79m) at 36 Mbps
285 ft (87m) at 24 Mbps
330 ft (100m) at 18 Mbps
355 ft (108m) at 12 Mbps
365 ft (111m) at 11 Mbps
380 ft (116m) at 9 Mbps
410 ft (125m) at 6 Mbps
425 ft (130m) at 5.5 Mbps
445 ft (136m) at 2 Mbps
460 ft (140m) at 1 Mbps</td><td>802.11g:
120 ft (37m) at 54 Mbps
350 ft (107m) at 48 Mbps
550 ft (168m) at 36 Mbps
650 ft (198m) at 24 Mbps
750 ft (229m) at 18 Mbps
800 ft (244m) at 12 Mbps
820 ft (250m) at 11 Mbps
875 ft (267m) at 9 Mbps
900 ft (274m) at 6 Mbps
910 ft (277m) at 5.5 Mbps
940 ft (287m) at 2 Mbps
950 ft (290m) at 1 Mbps</td></tr>
<tr><td></td><td colspan="2">Measured with 2.2-dBi dipole antenna for 2.4 GHz</td></tr>
<tr><td>Compliance</td><td colspan="2">Standards
Safety
UL 60950-1
CAN/CSA-C22.2 No. 60950-1
UL 2043
IEC 60950-1
EN 60950-1
NIST FIPS 140-2 level 2 validation
Radio Approvals
FCC Part 15.247
RSS-210 (Canada)
EN 300.328 (Europe)
ARIB-STD 33 (Japan)
ARIB-STD 66 (Japan)
AS/NZS 4268.2003 (Australia and New Zealand)
EMI and susceptibility (Class B)
FCC Part 15.107 and 15.109
ICES-003 (Canada)
VCCI (Japan)
EN 301.489-1 and -17 (Europe)
EN 60601-1-2 EMC requirements for the Medical Directive 93/42/EEC
Security
802.11i, WPA2, WPA
802.1X
AES, TKIP
Other
IEEE 802.11g and IEEE 802.11a
FCC Bulletin OET-65C
RSS-102</td></tr>
</table>

Item	Specification
Antenna connectors	• 2.4 GHz • Dual RP-TNC connectors
Status LEDs	• Status LED indicates operating state, association status, error or warning condition, boot sequence, and maintenance status. • Ethernet LED indicates status of activity over the Ethernet. • Radio LED indicates status of activity over the radio.
Dimensions (H x W x D)	1.1 x 6.6 x 8.5 in. (2.79 x 16.76 x 21.59 cm)
Weight	2.0 lb (0.9 kg)
Environmental	• Nonoperating (storage) temperature: –40 to 185°F (–4 0 to 85°C) • Operating temperature: –4 to 131°F (–20 to 55°C) • Operating humidity: 10 to 90 percent (noncondensing)
System memory	• 32 MB RAM • 16 MB flash memory
Input power requirements	• 100 to 240 VAC; 50 to 60 Hz (power supply) • 36 to 57 VDC (device)
Powering options	• Local power • 802.3 AF switches • Cisco higher-power switches capable of supporting 13W or greater • Cisco Aironet power injectors (PWRINJ3 and PWRINJ-FIB) • Third-party PoE devices (must meet input power and power draw requirements)
Power draw	• 12.95W maximum **Note**: 12.95W is the maximum power required at the powered device. If the access point is being used in a PoE configuration, the power drawn from the power sourcing equipment will be higher by some amount dependent on the length of the interconnecting cable. This additional power can be as high as 2.45W, bringing the total system power draw (access point and cabling) to 15.4W.
Warranty	1 Year
Wi-Fi certification	

System Requirements

Table 3 lists the system requirements for Cisco Aironet 1240G Series Access Points.

Table 3. System Requirements for Cisco Aironet 1240G Series Access Points

Access Method	Description
Browser	Using the Web browser management GUI requires a computer running Internet Explorer Version 6.0 or later, or Netscape Navigator Version 7.0 or later.
PoE	Power sourcing equipment is compliant with Cisco Inline Power or IEEE 802.3af, and provides at least 12.94W at 48 VDC.

Ordering Information

To place an order, visit the Cisco Ordering Website at: http://www.cisco.com/en/US/ordering/index.shtml

Table 4 lists the product part numbers for Cisco Aironet 1240G Series Access Points.

Table 4. Product Part Numbers for Cisco Aironet 1240G Series Access Points

Part Number	Description
AIR-AP1242G-A-K9	802.11g non-modular Cisco IOS access point; RP-TNC; FCC configuration
AIR-AP1242G-E-K9	802.11g non-modular Cisco IOS access point; RP-TNC; ETSI configuration
AIR-AP1242G-P-K9	802.11g non-modular Cisco IOS access point; RP-TNC; Japan2 configuration
AIR-LAP1242G-A-K9	802.11g non-modular LWAPP access point; RP-TNC; FCC configuration
AIR-LAP1242G-E-K9	802.11g non-modular LWAPP access point; RP-TNC; ETSI configuration
AIR-LAP1242G-P-K9	802.11g non-modular LWAPP access point; RP-TNC; Japan2 configuration

Service and Support

Cisco offers a wide range of services programs to accelerate customer success. These innovative programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, visit Cisco Technical Support Services or Cisco Advanced Services.

For More Information

For more information about the Cisco Aironet 1240G Series, visit http://www.cisco.com/go/wireless or contact your local Cisco account representative.

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