

**DATA SHEET**

## **CISCO AIRONET 1200 SERIES ACCESS POINTS**



### **PRODUCT OVERVIEW**

Cisco® Aironet® 1200 Series access points deliver the investment protection, versatility, and enterprise-class features demanded by wireless LAN customers. It is designed specifically for challenging environments like factories, warehouses, and large retail establishments that require the antenna versatility associated with connectorized antennas, as well as a rugged metal enclosure and a broad operating temperature range.

Supporting Cisco IOS® Software, the Cisco Aironet 1200 Series is a component of the Cisco Structured Wireless-Aware Network (SWAN) framework, a comprehensive framework that delivers an integrated, end-to-end wired and wireless network. Using the radio and network management features of the Cisco SWAN framework for simplified deployment, the Cisco Aironet 1200 Series extends the security, scalability, reliability, ease of deployment, and manageability available in wired networks to the WLAN.

The Cisco Aironet 1200 Series meets the needs of today's applications and protects future network infrastructure investments. The modular design of the 1200 Series provides a high-performance 802.11g configured access point that allows for either single- or dual-radio configuration. While the 802.11g-configured access point meets the needs of most customers and applications that may not have a current need for 802.11a, an easy 802.11a upgrade kit is available, to increase scalability and performance with complete backward compatibility for legacy clients.

The Cisco Aironet 1200 Series is part of the award-winning Cisco Wireless Security Suite, which supports 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA, and numerous Extensible Authentication Protocol (EAP) types. WPA and WPA2 are the Wi-Fi Alliance certifications for interoperable, standards-based wireless LAN security. These certifications support IEEE 802.1X for user-based authentication, Temporal Key Integrity Protocol (TKIP) for WPA encryption, and Advanced Encryption Standard (AES) for WPA2 encryption. These certifications help to ensure interoperability between Wi-Fi-certified wireless LAN devices from different manufacturers.

The Cisco Aironet 1200 Series hardware-accelerated AES encryption supports enterprise-class, government-grade secure encryption over the wireless LAN without compromising performance. IEEE 802.1X authentication helps to ensure that only authorized users are allowed on the network. The series also provides backward compatibility and support for WPA client devices running TKIP, the RC4 encryption algorithm.

## BENEFITS AND FEATURES

### Investment Protection for Future Network Needs

With large storage capacity and support for Cisco management tools, the Cisco Aironet 1200 Series provides the capacity and the means to upgrade firmware and deliver new features as they become available. For additional investment protection, the Cisco Aironet 1200 Series comes complete with an integrated mounting system that secures the device using the customer's choice of laptop security cables or standard padlocks. The reliability of the 802.11g solution makes the Cisco Aironet 1200 Series a wise investment for enterprise customers. It provides field-proven reliability, featuring a Cisco Aironet fifth-generation 2.4 GHz radio. An available 802.11a radio module upgrade maximizes capacity and performance, delivering up to 54 Mbps data rates on all 12 available channels and allowing the wireless network to scale to accommodate a large number of users. With the Cisco Aironet 1200 Series, a single access point can operate one radio for 802.11b/g clients, while supporting new users by adding a second 802.11a radio to scale network performance and capacity.

### Installation Options Increase Flexibility

As the popularity of wireless LANs increases, enterprises are installing access points in more types of facilities, locations, and orientations. The Cisco Aironet 1200 Series is designed with this in mind. With its broad operating temperature range and cast-aluminum housing, this device provides the ruggedness required in factories, warehouses, and the most challenging environments. Support for inline power over Ethernet (PoE) and local power maximizes powering option flexibility. The access point and integrated mounting system are designed for installation on walls, below ceilings, and, with its plenum ratable metal case, above suspended ceilings.

**Figure 1.** Cisco Aironet 1200 Series Access Points 802.11a Radio Modules



All available radios (802.11a, 802.11b, and 802.11g) provide a variety of transmit power settings to adjust coverage area size. To extend the flexibility of deployments, the 802.11a radio module is available in two versions (Figure 1). Both versions provide up to 12 nonoverlapping channels in the 5 GHz band (subject to local regulations); an additional 11 will become available in 2005 with a field firmware upgrade. One version offers dual antenna connectors for use with a wide variety of Cisco antennas to achieve extended range and application-specific coverage. The second has an integrated antenna design that incorporates diversity omnidirectional (5 dBi) and patch antennas (9 dBi). For ceiling, desktop, or other horizontal installations, the integrated omnidirectional antenna provides an optimal coverage pattern and maximum range. For wall-mount installations,

the patch antenna provides a hemispherical coverage pattern that uniformly directs the radio energy from the wall and across the room. Both the omnidirectional and patch antennas provide diversity for maximum reliability, even in high-multipath environments such as offices and other indoor environments. Coupled with the broadest selection of 2.4 GHz and 5 GHz antennas in the industry, this provides users with unparalleled flexibility in cell size and coverage patterns.

**Table 1.** Features and Benefits of Cisco Aironet 1200 Series Access Points

Feature	Benefit
<b>Cisco SWAN Framework</b>	Extends the security, scalability, reliability, ease of deployment, and manageability available in wired networks to the wireless infrastructure.
<b>Modular Platform</b>	Allows single or dual radio configuration. Provides numerous configuration and upgrade options.
<b>Field-Upgradeable to Dual 802.11a/g Operation</b>	Offers great flexibility and investment protection, allowing network administrators to deploy a wireless network optimized to their particular applications, even as their needs evolve.
<b>Security Architecture Client Authentication and Encryption</b>	<p>Cisco Wireless Security Suite supporting WPA and WPA2, including:</p> <p><b>Authentication</b></p> <ul style="list-style-type: none"> <li>802.1X support, including Cisco LEAP, EAP-Flexible Authentication via Secure Tunneling (EAP-FAST), Protected EAP- Generic Token Card (PEAP-GTC), PEAP-Microsoft Challenge Authentication Protocol Version 2 (PEAP-MSCHAPv2), EAP-Transport Layer Security (EAP-TLS), EAP-Tunneled TLS (EAP-TTLS), and EAP-Subscriber Identity Module (EAP-SIM) to yield mutual authentication and dynamic, per-user, per-session encryption keys (WPA and WPA2)</li> <li>MAC address and standard 802.11 authentication mechanisms</li> </ul> <p><b>Encryption</b></p> <ul style="list-style-type: none"> <li>AES-CCMP encryption (WPA2)</li> <li>TKIP encryption enhancements: key hashing (per-packet keying), message integrity check (MIC) and broadcast key rotation via Cisco TKIP or WPA TKIP</li> <li>Support for static and dynamic IEEE 802.11 WEP keys of 40 bits and 128 bits</li> </ul>
<b>Rugged Metal Housing</b>	Supports deployment in factories, warehouses, the outdoors (in a NEMA enclosure), and other industrial environments.
<b>UL 2043 Plenum Rating and Extended Operating Temperature</b>	Supports installation in environmental air spaces, such as areas above suspended ceilings.
<b>Multipurpose and Lockable Mounting Bracket</b>	Provides greater flexibility in installation options for site-specific options, as well as theft deterrence.
<b>Both Local and Inline Power Support</b>	Power can be supplied using the Ethernet cable, eliminating the need for costly electrical power line runs to remotely installed access points. Can be powered by Cisco inline power switches, single port power injectors, or local power.
<b>Hardware-Assisted AES Encryption</b>	Provides high security without performance degradation.
<b>IEEE 802.11i-Compliant; WPA2-Certified and WPA-Certified</b>	Helps to ensure interoperable security with wireless LAN client devices from other manufacturers.
<b>Cisco IOS Software</b>	Delivers enterprise-class features for connectivity, scalability, and high availability.

## SUMMARY/CONCLUSION

Cisco Aironet 1200 Series modular access points feature antenna connectors for greater range or coverage versatility using a broad selection of available Cisco antennas, as well as a rugged, metal housing for operation over extended temperature ranges typical of demanding environments. The 802.11g radio delivers industry-leading range and throughput, meeting the performance requirements of industrial and enterprise applications, while hardware-assisted AES encryption provides uncompromised support for interoperable IEEE 802.11i and WPA2 security. While the 802.11g-configured Cisco Aironet 1200 Series meets the needs of many industrial applications, its modular design allows dual radio configuration and field upgradeability so administrators can deploy a wireless network optimized for their evolving requirements. The Cisco Aironet 1200 Series supports Cisco IOS Software and is a component of the Cisco SWAN framework, a comprehensive framework that delivers an integrated, end-to-end wired and wireless network.

## PRODUCT SPECIFICATIONS


Table 2 lists product specifications for Cisco Aironet 1200 Series access points.

**Table 2.** Product Specifications for Cisco Aironet 1200 Series

Item	Specification	
<b>Part Number</b>	<ul style="list-style-type: none"> <li>AIR-AP1231G-x-K9</li> <li>Regulatory Domains: (x = Regulatory Domain)</li> <li>A = FCC</li> <li>E = ETSI</li> <li>I = Israel</li> <li>J = TELEC (Japan)</li> </ul> <p>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:  <a href="http://www.cisco.com/go/aironet/compliance">http://www.cisco.com/go/aironet/compliance</a></p> <p>Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.</p>	
<b>Software</b>	Cisco IOS Software	
<b>Data Rates Supported</b>	802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps	
<b>Network Standard</b>	IEEE 802.11b and IEEE 802.11g	
<b>Uplink</b>	Autosensing 802.3 10/100BASE-T Ethernet	
<b>Radio Module Form Factor</b>	<ul style="list-style-type: none"> <li>802.11a: CardBus (32-bit)</li> </ul>	<ul style="list-style-type: none"> <li>802.11b or 802.11g: Mini-PCI (32-bit)</li> </ul>
<b>Frequency Band and Operating Channels</b>	<p><b>Americas (FCC)</b> 2.412 to 2.462 GHz; 11 channels</p> <p><b>ETSI</b> 2.412 to 2.472 GHz; 13 channels</p> <p><b>Israel</b> 2.432 to 2.472 GHz; 9 channels</p>	<p><b>Japan (TELEC)</b> 2.412 to 2.472 GHz; 13 channels Orthogonal Frequency Division Multiplexing (OFDM)</p> <p>2.412 to 2.484 GHz; 14 channels Complementary Code Keying (CCK)</p>

Item	Specification	
<b>Nonoverlapping Channels</b>	802.11g: 3	
<b>Wireless Modulation</b>	802.11g: Direct sequence spread spectrum (DSSS); OFDM	
<b>Receive Sensitivity</b> (Typical)	<b>802.11g:</b> 6 Mbps: -90 dBm 9 Mbps: -84 dBm 12 Mbps: -82 dBm 18 Mbps: -80 dBm 24 Mbps: -77 dBm 36 Mbps: -73 dBm 48 Mbps: -72 dBm 54 Mbps: -72 dBm	
<b>Available Transmit Power Settings</b> (Maximum power setting will vary according to individual country regulations)	<b>802.11g:</b> <i>CCK:</i> 100 mW (20 dBm) 50 mW (17 dBm) 30 mW (15 dBm) 20 mW (13 dBm) 10 mW (10 dBm) 5 mW (7 dBm) 1 mW (0 dBm)	
<b>Range</b>	<b>802.11g: Outdoor</b> 110 ft (34m) @ 54 Mbps 200 ft (61 m) @ 48 Mbps 225 ft (69 m) @ 36 Mbps 325 ft (99 m) @ 24 Mbps 400 ft (122 m) @ 18 Mbps 475 ft (145 m) @ 12 Mbps 490 ft (149 m) @ 11 Mbps 550 ft (168 m) @ 9 Mbps 650 ft (198 m) @ 6 Mbps 660 ft (201 m) @ 5.5 Mbps 690 ft (210 m) @ 2 Mbps 700 ft (213 m) @ 1 Mbps	<b>802.11g: Indoor</b> 90 ft (27 m) @ 54 Mbps 95 ft (29 m) @ 48 Mbps 100 ft (30 m) @ 36 Mbps 140 ft (43 m) @ 24 Mbps 180 ft (55 m) @ 18 Mbps 210 ft (64 m) @ 12 Mbps 220 ft (67 m) @ 11 Mbps 250 ft (76 m) @ 9 Mbps 300 ft (91 m) @ 6 Mbps 310 ft (94 m) @ 5.5 Mbps 350 ft (107 m) @ 2 Mbps 410 ft (125 m) @ 1 Mbps
	Ranges and actual throughput vary based upon numerous environmental factors so individual performance may differ.	

Item	Specification
<b>Compliance</b>	<p><b>Standards</b></p> <p>Safety</p> <ul style="list-style-type: none"> <li>• UL 60950</li> <li>• CAN/CSA C22.2 No. 60950</li> <li>• IEC 60950</li> <li>• UL 2043</li> </ul> <p>Radio Approvals</p> <ul style="list-style-type: none"> <li>• FCC Part 15.247</li> <li>• RSS-210 (Canada)</li> <li>• EN 300.328</li> <li>• ARIB-STD 33 (Japan)</li> <li>• ARIB-STD 66 (Japan)</li> <li>• AS/NZS 4771 (Australia and New Zealand)</li> </ul> <p>EMI and Susceptibility (Class B)</p> <ul style="list-style-type: none"> <li>• FCC Part 15.107 and 15.109</li> <li>• ICES-003 (Canada)</li> <li>• VCCI (Japan)</li> <li>• EN 301.489-1 and -17 (Europe)</li> <li>• AS/NZS 3548</li> </ul> <p>Security</p> <ul style="list-style-type: none"> <li>• 802.11i, WPA2, WPA</li> <li>• 802.1X</li> <li>• AES, TKIP</li> </ul> <p>Other</p> <ul style="list-style-type: none"> <li>• IEEE 802.11g</li> <li>• FCC Bulletin OET-65C</li> <li>• RSS-102</li> </ul>
<b>Antenna</b>	<p>2.4 GHz Radio:</p> <ul style="list-style-type: none"> <li>• Two RP-TNC connectors; 802.11g approved with: <ul style="list-style-type: none"> <li>– AIR-ANT1728, AIR-ANT1729, AIR-ANT2012, AIR-ANT2506, AIR-ANT3213, AIR-ANT3549, AIR-ANT4941, AIR-ANT5959, and AIR-ANT2410Y-R</li> </ul> </li> </ul>
<b>Network Management</b>	<p>BootP, Secure Shell (SSH) Protocol, Secure HTTP (HTTPS), Trivial File Transfer Protocol (TFTP), FTP, Telnet, console port, Simple Network Management Protocol (SNMP) MIB I and MIB II, CiscoWorks Resource Manager Essentials (RME), CiscoWorks Software Image Manager (SWIM), CiscoWorks Campus Manager, CiscoWorks CiscoView, and CiscoWorks WLSE</p>
<b>LEDs</b>	<p>Three indicators on the top panel report Ethernet activity and status, device operating status, and radio activity and status.</p>

Item	Specification
<b>Housing</b>	Die-cast aluminum
<b>Dimensions (H x W x D)</b>	1.660 x 6.562 x 7.232 in. (4.22 x 16.67 x 18.37 cm); add 0.517 in. (1.31 cm) height for mounting bracket
<b>Weight</b>	1.725 lb (0.783 kg); add 0.4 lb (0.181 kg) for mounting bracket
<b>Environmental</b>	-4 to 122°F (-20 to 50°C), 10 to 90 percent humidity (noncondensing)
<b>Memory and Processor</b>	IBM PowerPC405 (200 MHz) 16 MB RAM; 8 MB Flash memory
<b>Input Power Requirements</b>	90 to 240 VAC ±10 percent (power supply) 48 VDC ±10 percent
<b>Power Draw</b>	6W maximum
<b>Warranty</b>	One year
<b>Wi-Fi Certification</b>	

## ORDERING INFORMATION

Table 3 lists ordering information for Cisco Aironet 1200 Series access points. To place an order, visit the [Cisco Ordering Home Page](#).

**Table 3.** Ordering Information

Part Number	Product Name
AIR-AP1231G-A-K9	Cisco Aironet 1200 Series 802.11g Access Point, FCC Configuration
AIR-AP1231G-E-K9	Cisco Aironet 1200 Series 802.11g Access Point, ETSI Configuration
AIR-AP1231G-I-K9	Cisco Aironet 1200 Series 802.11g Access Point, Israel Configuration
AIR-AP1231G-J-K9	Cisco Aironet 1200 Series 802.11g Access Point, Japan Configuration

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 lease, 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.

## TO DOWNLOAD THE SOFTWARE

Visit the [Cisco Software Center](#) to download Cisco IOS Software.

## 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 to 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, see [Cisco Technical Support Services](#) or [Cisco Advanced Services](#).

## FOR MORE INFORMATION

For more information about Cisco 1200 Series access points, contact your local account representative or visit:

<http://www.cisco.com/go/aironet>



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