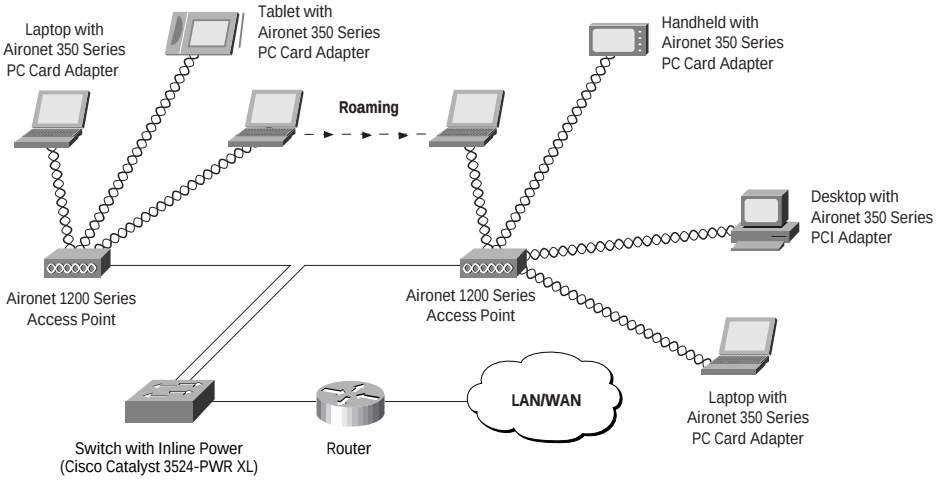
Data Sheet

Cisco Aironet 1200 Series Access Point

Product Overview

The Cisco Aironet® 1200 Series Access Point sets the enterprise standard for secure, manageable, and reliable wireless local-area networks (WLANs) while also providing investment protection and a smooth migration path to future high-speed wireless LAN technologies. The Cisco Aironet 1200 Series creates a wireless infrastructure that provides users with maximum mobility and flexibility, enabling constant connection to all network resources from virtually anywhere wireless access is deployed (refer to Figure 1).

Figure 1 An access point is the center point in an all-wireless network or serves as a connection point between a wired and wireless network. Multiple access points can be placed throughout a facility to give users with WLAN client adapters the ability to roam freely throughout an extended area while maintaining uninterrupted access to all network resources.



Modular Design for Superior Upgradability and Investment Protection

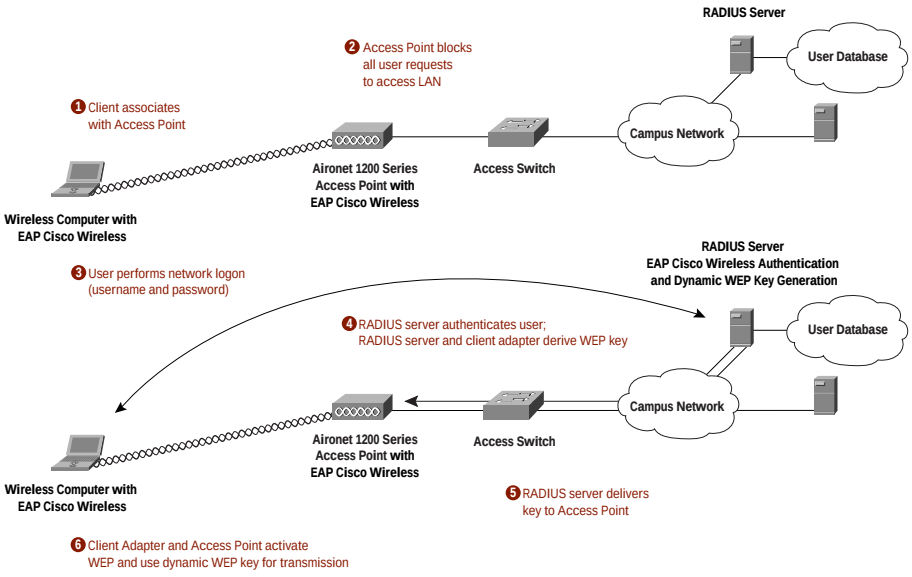
The Cisco Aironet 1200 Series protects both current and future network infrastructure investments. This Institute of Electrical and Electronic Engineers (IEEE) 802.11b-compliant access point supports data rates of up to 11 Mbps today and delivers a secure migration path to emerging IEEE 802.11a and future WLAN technologies. The modular design of the Cisco Aironet 1200 Series allows for both single- and dual-band configuration plus field upgradability to modify these configurations as user requirements change and the technology evolves. With the Cisco Aironet 1200 Series, a single access point can simultaneously accommodate one radio for 802.11b and another radio for high-speed 802.11a clients.

Enterprise-Class Security Solution

Wireless LAN security is a primary concern. The Cisco Aironet 1200 Series addresses this concern with the award-winning Cisco Wireless Security Suite based on the IEEE 802.1X standard and its Extensible Authentication Protocol (EAP) to provide an enterprise-class solution (refer to Figure 2). The Cisco Aironet 1200 Series supports all 802.1X authentication types, including EAP Cisco Wireless (LEAP), EAP-TLS, and types that take advantage of EAP-TLS. When coupled with a Remote Access Dial-In User Service (RADIUS) that supports the same authentication types, such as the Cisco Secure Access Control Server (ACS), the result is a scalable, centrally managed security solution that includes:

- Strong, mutual authentication to ensure that only legitimate clients associate with legitimate and authorized wireless access points—Dynamic per-user, per-session encryption keys can be set to automatically change on a regular basis to protect the privacy of transmitted data.
- Stronger WEP keys are provided by Temporal Key Integrity Protocol (TKIP) enhancements such as message integrity check (MIC) and per-packet keys via initialization vector hashing, and RADIUS accounting records for all authentication attempts.

Figure 2 The 802.1X architecture implemented by Cisco is an enterprise-ready security system for WLANs.



Investment Protection for Future-Proof Networks

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. It features more than four times the amount of storage required by the initial firmware load and the tools for IS professionals to centrally and automatically upgrade the firmware on remote Cisco Aironet 1200 Series access points across the enterprise. 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 (refer to Figure 3). The reliability of the solution also makes the Cisco Aironet 1200 Series a wise investment. The solution is field proven, shipping a Cisco Aironet fourth-generation 802.11b radio. The Cisco redundant hot-standby feature also aids in the overall reliability of the network by providing a backup access point in the rare case of failure.

Figure 3 Cisco Aironet 1200 Series Mounting Bracket

Installation Options Increase Flexibility

As the popularity of wireless LANs increases, access points are being installed in a growing variety of facilities, locations, and orientations. The Cisco Aironet 1200 Series is designed with this in mind. The cast aluminum-cased device with its broad operating temperature range provides the ruggedness required in factories and warehouse installations while still meeting the aesthetic requirements of a corporate lobby. The access point and integrated mounting system are designed for installation on walls, desktops, below ceilings and, with a plenum ratable metal case, above suspended ceilings. Support for both inline power over Ethernet as well as local power maximizes powering options. The Cisco Aironet 1200 Series radio leads the industry in receive sensitivity and provides transmit power that can be set from 1 to 100 milliwatts. This, coupled with the broadest selection of 2.4-GHz antennas in the industry, provides users with unparalleled flexibility in coverage cell size and pattern.

Integrated Management Tools for Rapid Configuration

Wireless LAN management is simplified with the Cisco Aironet 1200 Series because the same management tools and skills used for wired networks are utilized on the wireless network (refer to Figure 4). The series supports management via Simple Network Management Protocol (SNMP), Telnet, and a Web browser to aid in troubleshooting, monitoring, software download, and event logging. Table 1 provides product features and benefits, Table 2 provides product specifications, and Table 3 provides product system requirements for the Cisco Aironet 1200 Series.

Figure 4 The access point management system Express Setup screen provides all the settings required for basic configuration of the access point.

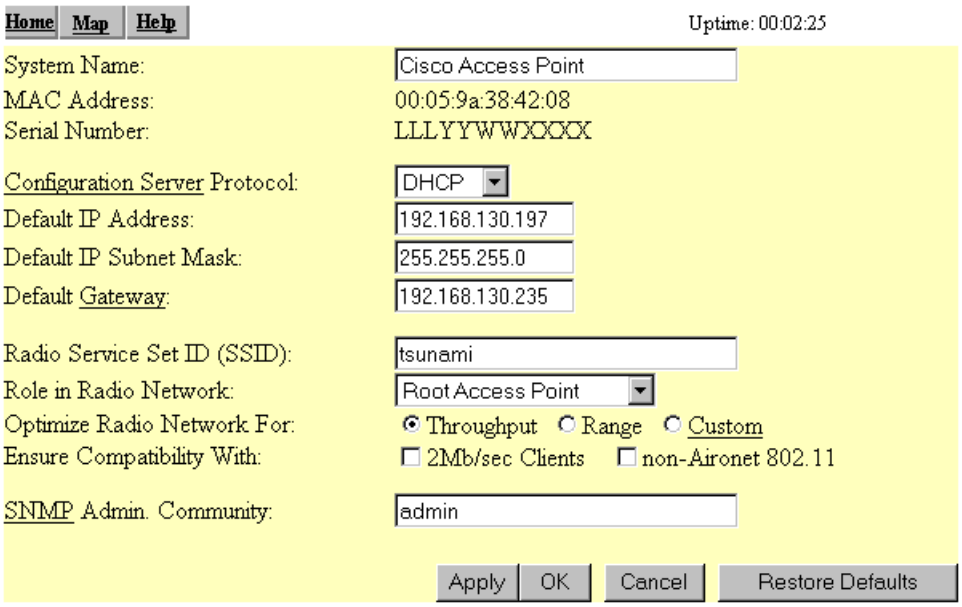


Table 1 Product Features and Benefits

Feature	Benefit
Modular platform for single or dual band operation	This flexible, dual-band design protects existing investments in 802.11b technology and provides an easy migration path for emerging technologies like 802.11a. Dual radios allow simultaneous operation of 2.4- and 5-GHz wireless networks offering the greatest number of available channels and, therefore, the greatest system capacity and scalability.
Field upgradable radios	The Cisco Aironet 1200 Series platform takes advantage of existing 802.11b wireless infrastructure and clients, and offers investment protection through field-upgradable card bus and mini-PCI radios. Standard 802.11b radios can be purchased to meet current needs, and then an 802.11a module can be added as bandwidth requirements grow.
Eight megabytes of Flash memory	Memory space for future firmware upgrades supports new 802.11 standards and advanced features.
Support for Cisco Discovery Protocol and Software Image Manager (SWIM)	This support allows centralized and automatic upgrade of firmware on remote access points across the enterprise.

Table 1 Product Features and Benefits (Continued)

Feature	Benefit
Standard 802.11b radio with 100-mW maximum transmit power and 85-dBm receive sensitivity at 11-Mbps data rate	The 2.4-GHz radio in the Cisco Aironet 1200 Series offers superior radio performance that results in industry-leading range. The greater the range of the access point, the fewer access points needed, resulting in lower total system cost.
Industry-leading security, network management, and software feature set	The Cisco Aironet 1200 Series software builds on the feature-rich, customer-driven Cisco Aironet software, including 802.1X support with mutual authentication and dynamic encryption keys and management through SNMP, Telnet, and Web browsers. The Cisco Aironet 1200 Series features are fully compatible with existing Cisco Aironet 340 and 350 Series products.
Two reverse-polarity threaded navel connectors (RP-TNC) for external antenna connection	These connectors provide diversity support for the 2.4-GHz radio to improve reliability in high-multipath environments. The RP-TNC connectors are compatible with the Cisco Aironet optional antennas, enabling WLAN architects to customize radio coverage for specific deployment scenarios.
Support for both line power over Ethernet and local power (refer to Figures 4, 5, and 6)	The Cisco Aironet 1200 Series may be powered over the Ethernet cable by Cisco line power-enabled switches, multiport midspan power panels, or single-port power injectors. In instances where AC power is available at the installation location, the Cisco Aironet 1200 Series can be simply plugged into the electrical outlet. These flexible powering options simplify installation and decrease total cost of ownership.
Aesthetically pleasing cast aluminum case, Underwriters Laboratories (UL) 2043 certification, and extended operating temperature (–20 to 55ºC or –4 to 131ºF)	The contemporary, yet rugged design of the Cisco Aironet 1200 Series provides flexibility for deployment in a variety of settings. The cast aluminum case meets the aesthetic requirements of enterprise companies. The rugged features support deployment in factories, warehouses, and the outdoors (in a NEMA enclosure). The broad operating temperature range and UL 2043 certification for plenum rating requirements set by local fire codes supports installation in environmental air spaces such as areas above suspended ceilings.
Multipurpose mounting bracket for wall, ceiling, and desktop installations	The flexibility provided by the multipurpose mounting bracket ensures IS professionals numerous deployment options for site-specific requirements. The included mounting bracket can be installed on a wide variety of building materials, including drywall, cinderblock, and suspended ceilings.
Two separate locking mechanisms for the access point and radio	Theft deterrence has become a requirement as wireless LANs proliferate into public areas. Additional investment protection is provided with built-in locking mechanisms. The customer's choice of off-the-shelf padlocks or laptop security cables ensures that the access point and radios are secure.

Figure 5 The Cisco Aironet 1200 can utilize a Cisco Catalyst® 3524-PWR XL for its power.

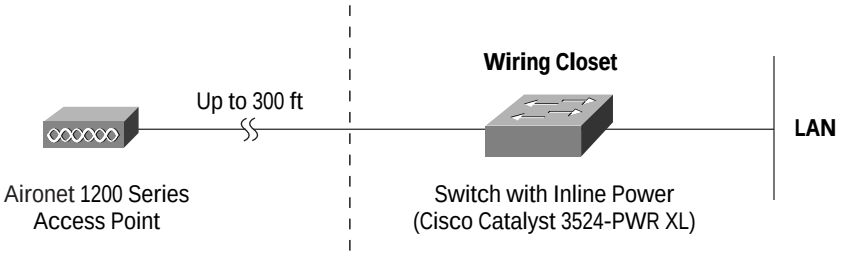


Figure 6 A Cisco Catalyst Inline Power Patch Panel may be used to power the access point.

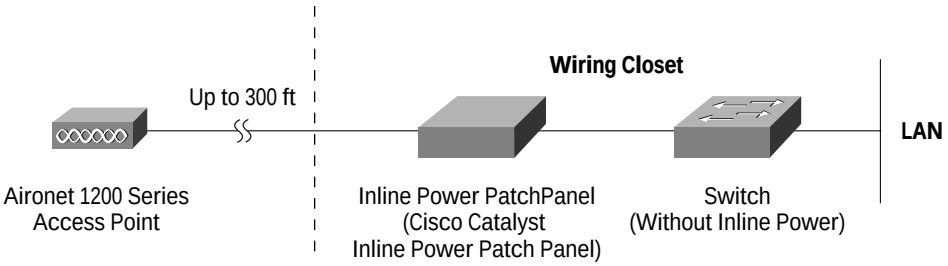


Figure 7 Cisco also offers a power injector to power the Cisco Aironet 1200.

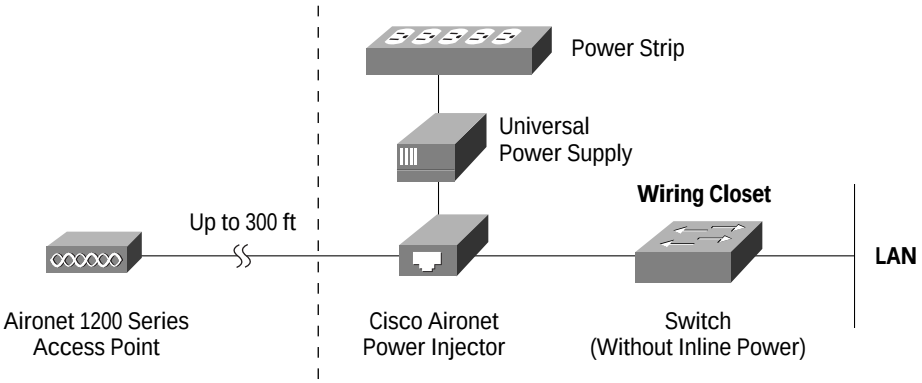


Table 2 Product Specifications

	With 802.11b radio installed	Platform only
Part number	Configurable: AIR-AP1200 and AIR-MP20B-x-K9 (x=Regulatory Domain) Pre-configured: AIR-AP1220B-x-K9 A=FCC C=MII (China) E=ETSI I=Israel J= TELEC (Japan) Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.	AIR-AP1200
Form factor	Mini-PCI	
Data rates supported	1, 2, 5.5, and 11 Mbps	
Network standard	802.11b	
Uplink	Autosensing 802.3 10/100BaseT Ethernet	Autosensing 802.3 10/100BaseT Ethernet
Frequency band	2.412 to 2.462 GHz (FCC) 2.412 to 2.472 GHz (ETSI) 2.412 to 2.484 GHz (TELEC) 2.412 to 2.462 GHz (MII) 2.422 to 2.452 GHz (Israel)	
Network architecture type	Infrastructure, star topology	Infrastructure, star topology
Wireless medium	Direct sequence spread spectrum (DSSS)	
Media Access Protocol	Carrier sense multiple access with collision avoidance (CSMA/CA)	
Modulation	DBPSK @ 1 Mbps DQPSK @ 2 Mbps CCK @ 5.5 and 11 Mbps	
Operating channels	ETSI: 13; Israel: 7; North America: 11; TELEC (Japan): 14; MII: 11	
Nonoverlapping channels	Three	
Receive sensitivity	1 Mbps: –94 dBm 2 Mbps: –91 dBm 5.5 Mbps: –89 dBm 11 Mbps: –85 dBm	
Delay spread	1 Mbps: 500 ns 2 Mbps: 400 ns 5.5 Mbps: 300 ns 11 Mbps: 140 ns	

Table 2 Product Specifications (Continued)

	With 802.11b radio installed	Platform only
Available transmit power settings	100 mW (20 dBm) 50 mW (17 dBm) 30 mW (15 dBm) 20 mW (13 dBm) 5 mW (7 dBm) 1 mW (0 dBm) Maximum power setting will vary according to individual country regulations.	
Range (typical @ maximum transmit power setting, 2.2 dBi gain diversity dipole antenna)	Indoor: 130 ft (40m) @ 11 Mbps 350 ft (107m) @ 1 Mbps Outdoor: 800 ft (244m) @ 11 Mbps 2000 ft (610m) @ 1 Mbps	
Compliance	• Standards: – UL 1950; CSA 22.2 No. 950-95; IEC 60950; EN 60950 • Radio approvals: – FCC Part 15.247; Canada RSS-139-1 & RSS-210; Japan Telec 33B; Europe – EN-330.328; FCC Bulletin OET-65C; and Industry RSS-102 • EMI and susceptibility: – 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; and EN 301.489-1 and -17 • Other: – IEEE 802.11 and 802.11b – Microsoft WHQL	• Standards: – UL 1950; CSA 22.2 No. 950-95; IEC 60950; EN 60950 – Operates license free under FCC Part 15 and complies as a Class B device – DOC regulations – UL 2043 • EMI and susceptibility: – 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; and EN 301.489-1 and -17
SNMP compliance	MIB[1] I and MIB II	MIB I and MIB
Antenna	Two RP-TNC connectors (antennas optional, none supplied with unit)	Two RP-TNC connectors (antennas optional, none supplied with unit)

Table 2 Product Specifications (Continued)

	With 802.11b radio installed	Platform only
Security architecture client authentication	802.1X support, including LEAP and EAP-TLS, to yield mutual authentication and dynamic, per-user, per-session WEP[2] keys Authentication by MAC[3] address and by standard 802.11 authentication mechanisms Encryption: Support for static and dynamic IEEE 802.11 WEP keys of 40 bits and 128 bits; support for WEP enhancements such as key hashing (per-packet keying) and MIC	
Status LEDs	Three indicators on the top panel report association status, operation, error/ warning, firmware upgrade, and configuration, network/modem, and radio status.	Three indicators on the top panel report association status, operation, error/ warning, firmware upgrade, and configuration, network/modem, and radio status.
Automatic configuration support	CiscoWorks RME[4], CiscoWorks SWIM[5], BOOTP, and DHCP[6]	CiscoWorks RME, CiscoWorks SWIM, BOOTP, and DHCP
Remote configuration support	Telnet, HTTP, FTP,[7] TFTP,[8] and SNMP	Telnet, HTTP, FTP, TFTP, and SNMP
Local configuration	Direct console port (RJ-45 interface)	Direct console port (RJ-45 interface)
Dimensions	6.562 in. (16.67 cm) wide; 7.232 in. (18.37 cm) deep; 1.660 in. (4.22 cm) high Mounting bracket adds 0.517 in. (1.31 cm) to the height	6.562 in. (16.67 cm) wide; 7.232 in. (18.37 cm) deep; 1.660 in. (4.22 cm) high Mounting bracket adds 0.517 in. (1.31 cm) to the height
Weight	25.6 oz (724g) add 6.4 oz (181g) for mounting bracket	24 oz (680g) add 6.4 oz (181g) for mounting bracket
Environmental	–4º to 131ºF (–20º to 55ºC), 10 to 90% humidity (noncondensing)	–4º to 131ºF (–20º to 55ºC), 10 to 90% humidity (noncondensing)
Input power requirements	48 VDC +/- 10%; 6 watts RMS	48 VDC +/- 10%; 6 watts RMS A 110-220V power supply ships with the AIR-AP1200.
Warranty	One year	One year

1. Management Information Base
2. Wired Equivalent Privacy
3. Media Access Control
4. Resource Manager Essentials (to be supported in mid-2002)
5. Software Image Manager (to be supported in mid-2002)
6. Dynamic Host Configuration Protocol
7. File Transfer Protocol
8. Trivial File Transfer Protocol

Table 3 Product System Requirements

Feature	System requirement
Standard 802.1X-compliant user-level authentication and dynamic encryption keying	One of the following RADIUS servers: • Cisco Secure Access Control Server Version 3.0 or greater • Cisco Access Registrar Version 1.7 or greater • Funk Software Steel Belted RADIUS Server Version 3.0 or greater • Interlink Networks RAD-Series RADIUS Server Version 5.1 or greater
CiscoWorks RME/SWIM	CiscoWorks LMS[1] or RWAN[2]
Line power over Ethernet support (2.4-GHz radio only)	Cisco AIR-PSINJSYS1200= single-port power injector Cisco Catalyst 3524-PWR XL Switch Cisco Catalyst 4006 and 6500 Series Switches with inline power Cisco WS-PWR-PANEL Midspan Power Patch Panel

1. LAN Management Solution
2. Routed WAN Management Solution

Cisco SMARTnet Support and SMARTnet Onsite Support

Operational technical support service for maximizing network availability is offered through Cisco *SMARTnet™ support* and *SMARTnet Onsite support*. Cisco SMARTnet support augments the resources of your operations staff; it provides them access to a wealth of expertise, both online and via telephone; the ability to refresh their system software at will; and a range of hardware advance-replacement options. Cisco SMARTnet Onsite support provides all SMARTnet services and complements the hardware advance-replacement feature by adding the services of a field engineer, which can be critical for those locations where staffing is insufficient or unavailable to perform parts replacement activities. To learn more about service and support for the Cisco Aironet 1200 Series, visit www.cisco.com/warp/public/cc/serv/mkt/sup/ent/snet/

Cisco Total Implementation Solutions

Deployment assistance is available through Cisco Total Implementation Solutions (TIS). Delivered through Cisco and the Cisco ecosystem of best-in-class service partners, Cisco TIS offers services ranging from site surveys to design review and installation. Cisco TIS configuration design and deployment services for Layer 3 services such as QoS and multi-cast protect your network investment by ensuring functionality meets needs. For more information about Cisco TIS, visit www.cisco.com/warp/public/cc/serv/mkt/sup/ent/tis/.

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