Data Sheet

Cisco Aironet 1200 Series Access Point

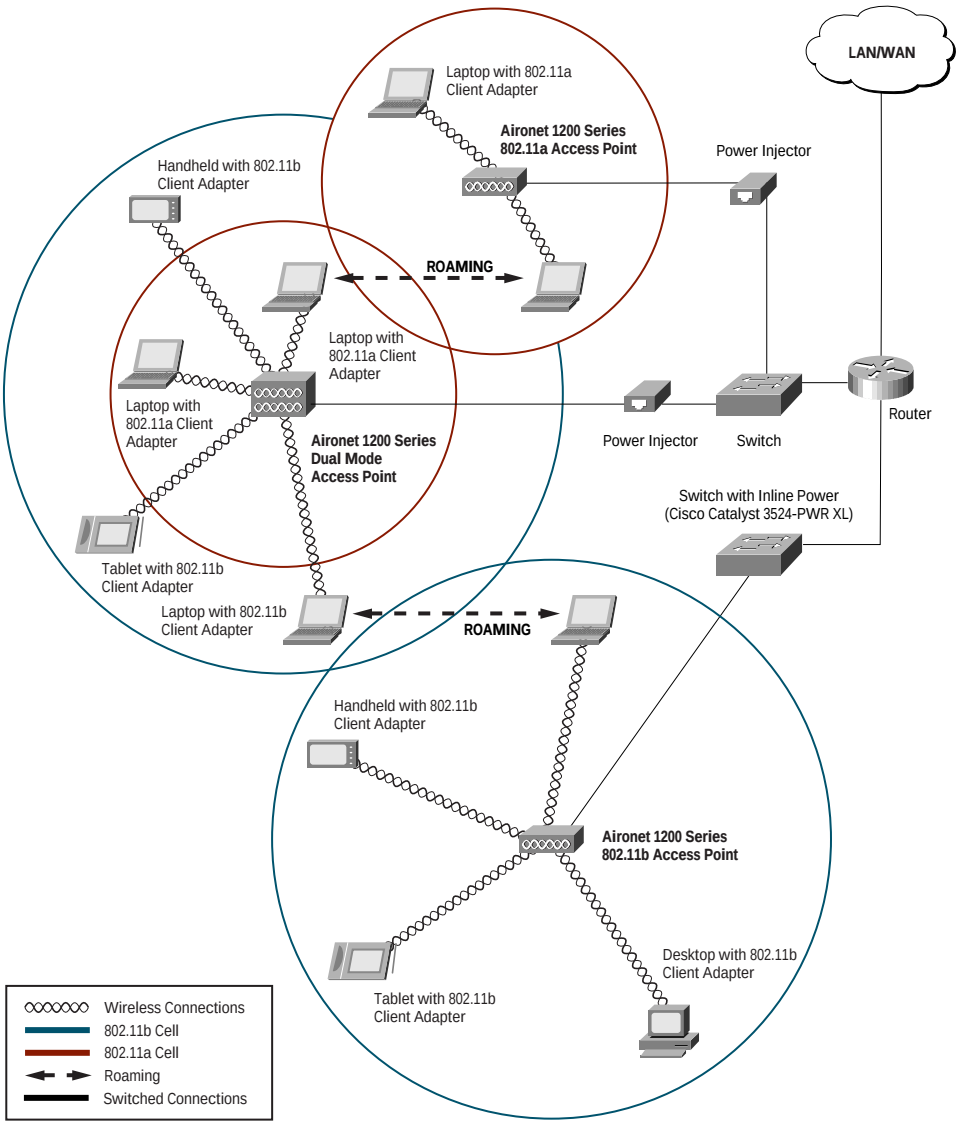
Product Overview

The Cisco Aironet® 1200 Series Access Point sets the enterprise standard for next-generation high performance, secure, manageable, and reliable wireless local-area networks (WLANs), while also providing investment protection because of its upgrade capability and compatibility with current standards. The modular design of the Cisco Aironet 1200 supports Institute of Electrical and Electronic Engineers (IEEE) 802.11a and 802.11b technologies in both single- and dual-mode operation. Taking advantage of Cisco IOS® Software for ease-of-use and familiarity, the Cisco Aironet 1200 Series can be configured to meet customer-specific requirements at the time of purchase and then reconfigured and upgraded in the field as these requirements evolve. In addition, the Cisco Aironet 1200 Series creates a wireless infrastructure that provides customers with maximum mobility and flexibility, enabling constant connection to all network resources from virtually anywhere wireless access is deployed (Figure 1).

Modular Design for Customer-Specific Functionality and Upgrade Capability for Investment Protection

The Cisco Aironet 1200 Series protects current and future network infrastructure investments. Compliant with IEEE 802.11a and 802.11b standards, 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 your requirements and technology evolve. The 802.11a radio supports data rates of up to 54 Mbps and eight non-overlapping channels that offer high performance as well as maximum capacity and scalability. The 802.11b radio provides data rates up to 11 Mbps and three non-overlapping channels to support widely deployed 802.11b clients. The Mini-PCI form factor of the 802.11b radio allows for upgrade to higher-speed 2.4 GHz technologies such as the draft IEEE 802.11g standard.

Figure 1 Configure the Cisco Aironet 1200 to support 802.11b, 802.11a, or both technologies in a single device. Legacy, current, and future clients can roam between access points while maintaining reliable and uninterrupted access to all network resources.

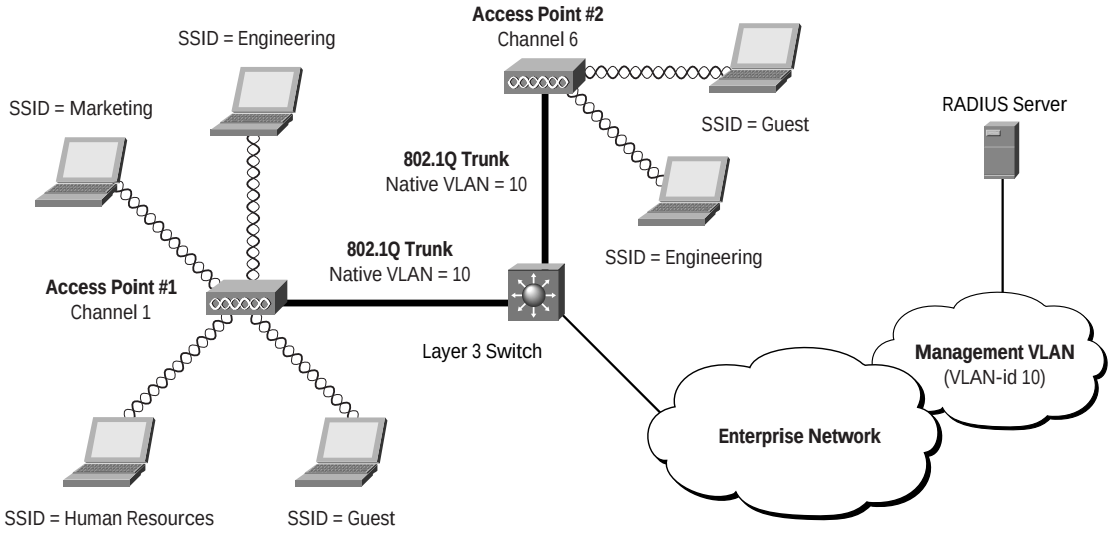


Intelligent Networking Features for a Scalable, Manageable Solution

The Cisco Aironet 1200 Series extends end-to-end intelligent networking to the wireless access point. Cisco command-line interface (CLI) allows customers to quickly and consistently implement the extended capabilities available in Cisco IOS Software. Customers can manage and standardize their networks using tools they have developed internally for their Cisco routers and switches.

An ideal choice for enterprise installations, the Cisco Aironet 1200 Series supports enterprise-class virtual LANs (VLANs), quality of service (QoS) and proxy mobile Internet Protocol (IP). The Cisco Aironet 1200 Series can manage up to 16 VLANs (Figure 2), which allows customers to differentiate LAN policies and services, such as security and QoS, for different users. For example, enterprise customers can use different VLANs to segregate employee traffic from guest traffic, and further segregate those traffic groups from high-priority voice traffic. Traffic to and from wireless clients with varying security capabilities can be segregated into VLANs with varying security policies. For example, VLANs allow educational institutions to secure faculty and administrator traffic from student traffic traveling over the same infrastructure. Implementing VLAN segmentation increases wireless LAN manageability and security.

Figure 2 Indoor Wireless VLAN Deployment



With support for 802.1p QoS, the Cisco Aironet 1200 Series provides traffic prioritization for packets traveling to and from the access point over Ethernet. Delay-sensitive traffic, such as voice and video, can be prioritized over data traffic for improved user experience and optimal network utilization. Software and radio firmware upgrades provide the capability to upgrade to future QoS standards such as 802.11e. Supporting the voice prioritization schemes for 802.11b mobile phones, the Aironet 1200 Series further enables quality voice-over-wireless-LAN solutions.

With proxy mobile IP, users can maintain seamless network connectivity as they roam across subnets. The proxy mobile IP feature creates a tunnel between routers on the remote network and the user's home network. This allows users to consistently maintain their home IP address and access to their home network applications as they roam beyond their home subnet. Proxy mobile IP also enhances a mobile IP-enabled network by enabling subnet roaming capabilities on IEEE 802.11 clients so that these devices do not need specialized mobile IP client software. Because specialized mobile IP client software does not need to be purchased or installed, additional cost-savings are realized. These proxy mobile IP features enable IT professionals to use their existing IP addressing scheme to cost-effectively architect the wireless LAN in a manner more consistent with the wired LAN, while still maintaining user mobility.

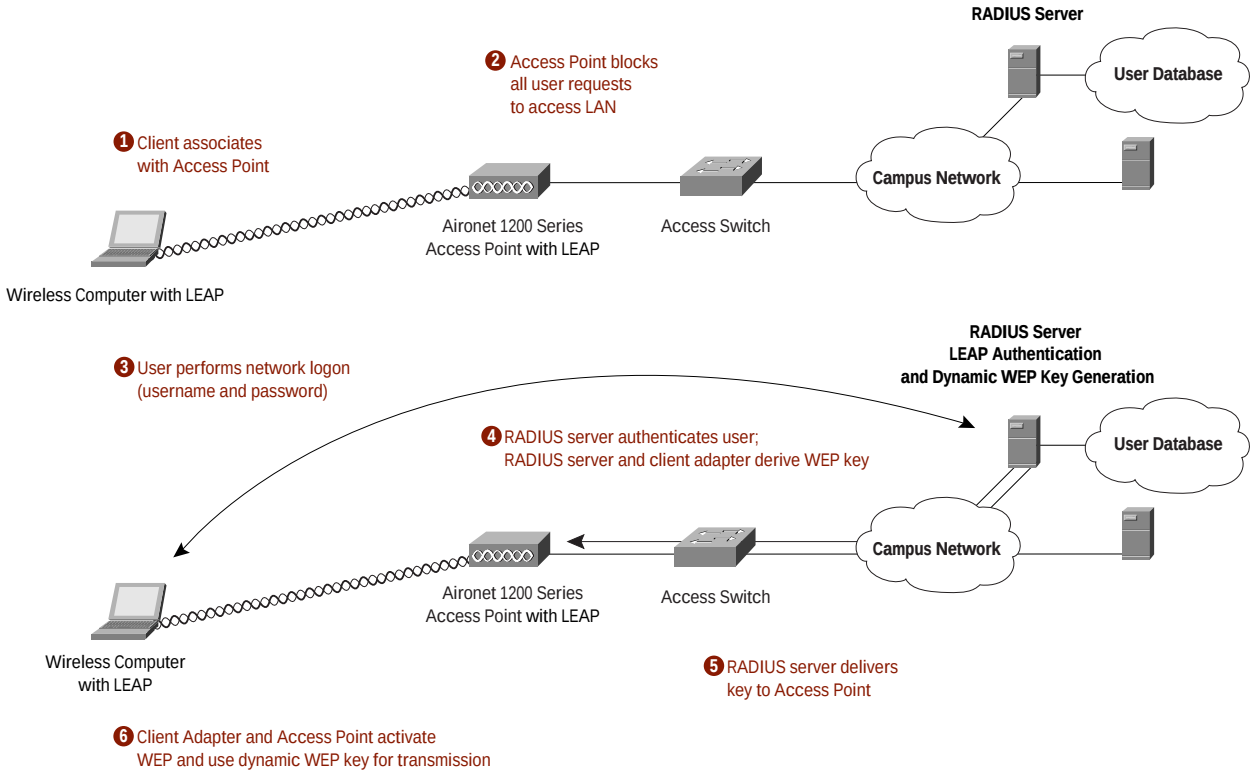
Enterprise-Class Security Solution

Wireless LAN security is a primary concern. The Cisco Aironet 1200 Series secures the enterprise network with a scalable and manageable system featuring the award-winning Cisco Wireless Security Suite. Based on the 802.1X standard for port-based network access, the Cisco Wireless Security Suite takes advantage of the Extensible Authentication Protocol (EAP) framework for user-based authentication. (Figure 3).

The Cisco Wireless Security Suite interoperates with a range of client devices. It supports all 802.1X authentication types, including EAP Cisco Wireless (LEAP), Extensible Authentication Protocol-Transport Layer Security (EAP-TLS) and types that operate over EAP-TLS, such as Protected Extensible Authentication Protocol (PEAP), EAP-Tunneled TLS (EAP-TTLS) and EAP-Subscriber Identity Module (EAP-SIM). A wide selection of Remote Access Dial-In User Service (RADIUS) servers, such as the Cisco Secure Access Control Server (ACS), can be used for enterprise-class centralized user management that includes:

- Strong, mutual authentication to ensure that only legitimate clients associate with legitimate and authorized network RADIUS servers
- Dynamic per-user, per-session encryption keys that automatically change on a configurable basis to protect the privacy of transmitted data
- Stronger WEP keys provided by Temporal Key Integrity Protocol (TKIP) enhancements such as message integrity check (MIC), per-packet keys via initialization vector hashing, and broadcast key rotation
- RADIUS accounting records for all authentication attempts

Figure 3 The Cisco Wireless Security Suite is an Enterprise-Class Security System Based on the 802.1X Architecture



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 firmware on often remote 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 (Figure 4). The reliability of the 2.4 GHz solution also makes the Cisco Aironet 1200 Series a wise investment. It provides field-proven reliability, featuring a Cisco Aironet fourth-generation 802.11b radio. The 5 GHz radio maximizes capacity and performance, delivering up to 54 Mbps data rates on all eight 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 add capacity to support new users by simultaneously operating one radio for high-speed 802.11a networked clients while maintaining another radio for 802.11b clients. The redundant hot-standby feature also aids in the overall reliability of the network by providing a backup access point in the rare case of a failure.

Figure 4 Cisco Aironet 1200 Series Mounting Bracket

Installation Options Increase Flexibility

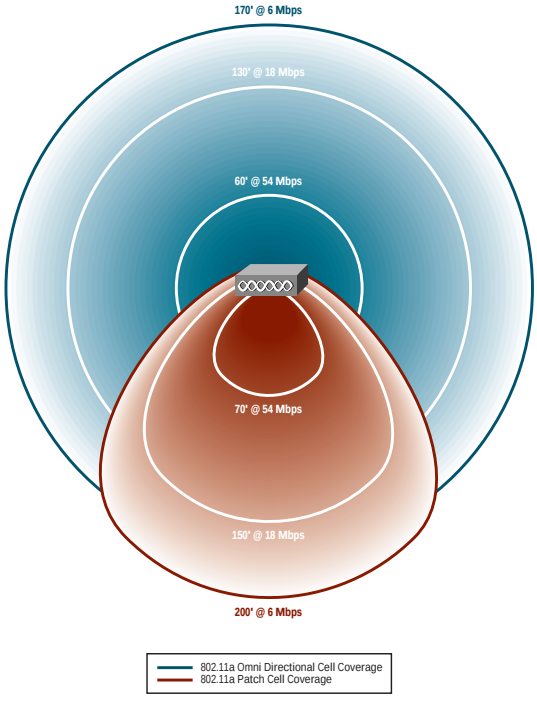
As the popularity of wireless LANs increases, enterprises are installing access points in a growing variety of facilities, locations, and orientations. The Cisco Aironet 1200 Series is designed with this in mind. The cast aluminum-cased device with its broad operating temperature range provides the ruggedness required in factories and warehouse installations while still meeting the aesthetic requirements of the enterprise. Support for both inline power over Ethernet, as well as local power, maximizes powering options. 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. Both 802.11a and 802.11b radios provide a variety of transmit power settings to adjust coverage area size. This, coupled with the broadest selection of 2.4 GHz and integrated 5 GHz antennas in the industry, provides users with unparalleled flexibility in cell size and coverage patterns.

Unique 802.11a 5 GHz Antenna Design for Optimal Coverage

To extend the flexibility of deployments, the 802.11a radio module incorporates an articulating antenna paddle that contains both omni directional and patch antennas (Figure 5). For ceiling, desktop, or other horizontal installations, the omni directional antenna provides 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 (Figure 6). Both the omni directional and patch antennas provide diversity for maximum reliability even in high multipath environments such as offices and other indoor environments. Cisco provides this level of 5 GHz antenna flexibility and reliability to suit all installation scenarios.

Figure 5 The design of the 802.11a radio module features an integrated omni directional and patch antenna.

Figure 6 Cisco's innovative antenna module provides two distinct coverage patterns to address different access point installation orientations.



Integrated Management Tools for Rapid Configuration

The Cisco Aironet 1200 Series simplifies wireless LAN management because many of the same management tools and capabilities available in wired networks are used on the wireless network (Figure 7). The 1200 Series supports network management through Cisco IOS Software CLI, which is familiar to IT professionals and makes use of their existing skills. It also supports Simple Network Management Protocol (SNMP), Telnet, and a Web browser to aid in troubleshooting, monitoring, software download, and event logging. The CiscoWorks™ Wireless LAN Solution Engine is also available as a management tool for the AIR-AP1200 platform. 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 7 The access point management system Express Setup screen provides all the settings required for basic configuration of the access point.

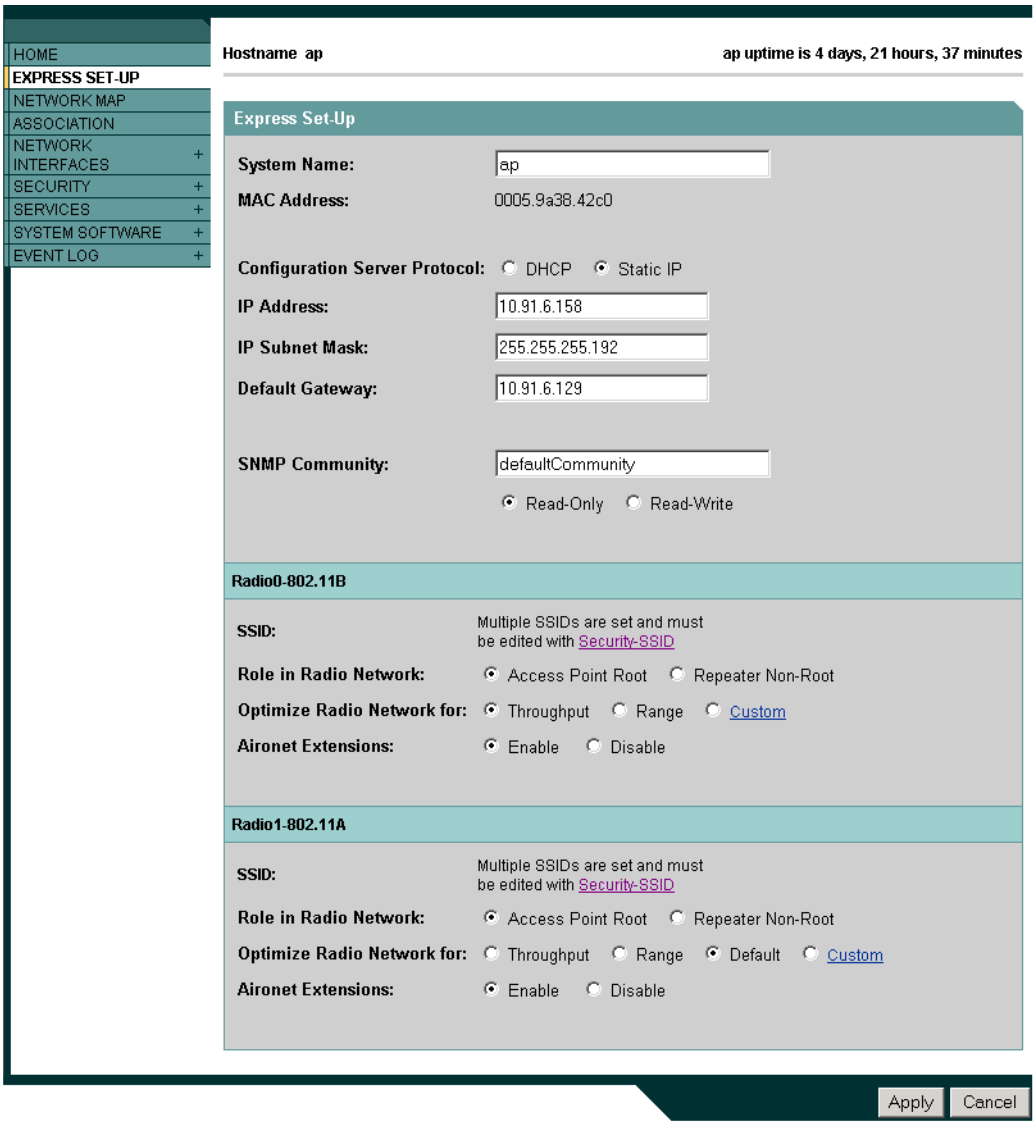


Table 1 Product Features and Benefits

Feature	Benefit
Modular platform for single or dual band operation	The access point can be configured for either 802.11b only, 802.11a only, or for simultaneous support of 802.11b and 802.11a to provide the maximum number of channels and maximum available data rates in a single device.
Field upgradable radios	Flexibility and investment protection is provided through field-upgradable card bus and mini-PCI radios. CardBus-based 802.11a modules can easily be fitted into installed Cisco Aironet 1200 Series access points.
5 GHz integrated antennas	Unique articulating antenna paddle incorporates high-gain omni directional and hemispherical patch antennas to deliver two distinct coverage patterns.
2.4- and 5 GHz Diversity Antennas	Diversity antennas for both the 2.4- and 5 GHz radios ensures optimum performance in high-multipath environments such as offices, warehouses, and other indoor installations.
Cisco IOS Software	Provides end-to-end solution support for Intelligent Network Services. Produces predictable and consistent network behavior with uniform applications and services.
Virtual LAN (VLAN) support	Allows segmentation of up to 16 user groups creating increased system flexibility by allowing differentiation of LAN policies and services, such as security and QoS, for different users.
Quality of Service (QoS) support	Prioritization of traffic for different application requirements to improve the voice and video user-experience.
Proxy Mobile IP	Provides seamless roaming between subnets and enhances mobility of voice over 802.11 wireless.
Two reverse-polarity threaded naval connectors (RP-TNC) for external 2.4 GHz antenna connection	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.
Eight Mbytes Flash memory	Provides memory space for future firmware upgrades and supports new 802.11 standards and advanced features.
Support for Cisco Discovery Protocol and Software Image Manager (SWIM) within CiscoWorks Resource Essentials (RME)	Allows centralized and automatic firmware upgrades on remote access points across the enterprise.
Standard 802.11b radio with 100-mW maximum transmit power and 85-dBm receive sensitivity at 11 Mbps data rate	2.4 GHz radio 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.
802.11a radio module provides 40-mW maximum transmit power for UNII 1 and UNII2 bands and –68 dBm (typical) receive sensitivity at 54 Mbps data rate	Superior 5 GHz radio design provides industry-leading performance and receive sensitivity and maximum capacity through eight non-overlapping channels in the UNII1 and UNII 2 bands.
Support for both line power over Ethernet and local power (see Figures 8, 9, and 10)	To decrease the cost and complexity of installation, the Cisco Aironet 1200 Series can be powered over an Ethernet cable, eliminating the need to run expensive AC power to remote access-point installation locations. Depending upon radio configuration, the Cisco 1200 Series can be powered via 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 power supply for the Cisco Aironet 1200 Series can be plugged into an electrical outlet.

Table 1 Product Features and Benefits (Continued)

Feature	Benefit
Aesthetically pleasing cast aluminum case, Underwriters Laboratories (UL) 2043 certification, and extended operating temperature (-20 to 55ºC or -4 to 131ºF)	The product design meets the aesthetic requirements of the enterprise and 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	Flexibility of the multipurpose mounting bracket gives numerous deployment options for site-specific requirements.
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.

Figure 8 With the 802.11a, or with both the 802.11a and 802.11b radios installed, the Cisco Aironet 1200 Series can be powered over Ethernet with the optional inline power injector or the Cisco Catalyst® 3550 Series Switch.

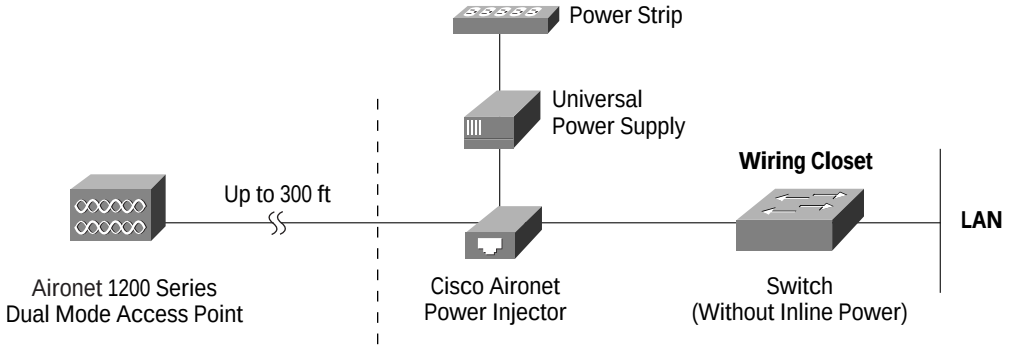


Figure 9 With only the 802.11b radio installed, the Cisco Aironet 1200 can use a Cisco Catalyst 3550-24 PWR switch, Catalyst 3524-PWR XL switch, or Catalyst 4500 or 6500 Series switch with inline power for its power over Ethernet.

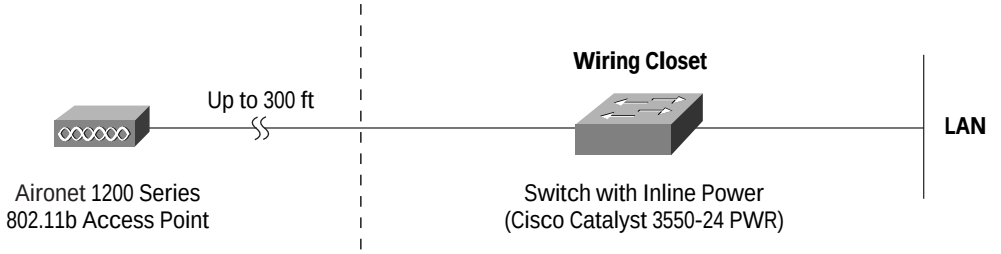


Figure 10 With only the 802.11b radio installed, a Cisco Catalyst Inline Power Patch Panel can be used to power the access point over Ethernet.

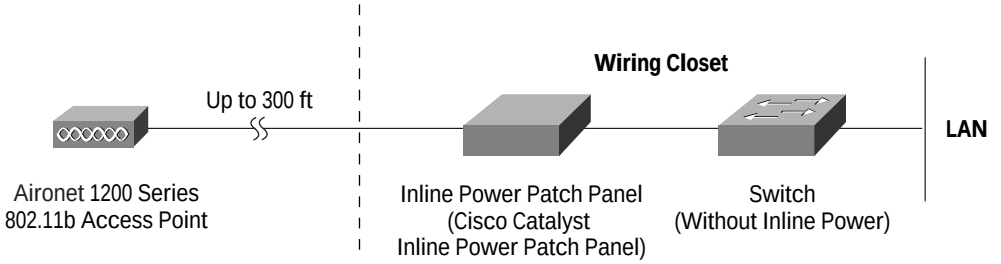


Table 2 Product Specifications

	With 802.11a radio installed	With 802.11b radio installed	With both 802.11a and 802.11b radio installed
Part number	**Configurable:** • Cisco IOS Software: AIR-AP1210 and AIR-RM20A-x-K9 • VxWorks Software: AIR-AP1200 and AIR-RM20A-x-K9 **Pre-Configured:** • Cisco IOS Software: AIR-AP1230A-x-K9 • VxWorks Software: AIR-AP1220A-x-K9 **Regulatory Domains:** (x=Regulatory Domain) • A=Americas, parts of Asia and Europe • S=Singapore • T=Taiwan • J=TELEC (Japan) Customers are responsible for verifying approval for use in their country. Please see http://www.cisco.com/go/aironet/compliance to verify approval and to identify the regulatory domain that corresponds to a particular country. Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.	**Configurable:** • Cisco IOS Software: AIR-AP1210 and AIR-MP20B-x-K9 • VxWorks Software: AIR-AP1200 and AIR-MP20B-x-K9 **Pre-Configured:** • Cisco IOS Software: AIR-AP1230B-x-K9 • VxWorks Software: AIR-AP1220B-x-K9 **Regulatory Domains:** (x=Regulatory Domain) • A=Americas, parts of Asia and Europe • C=MII (China) • E=ETSI • I=Israel • J= TELEC (Japan) Customers are responsible for verifying approval for use in their country. Please see http://www.cisco.com/go/aironet/compliance to verify approval and to identify the regulatory domain that corresponds to a particular country. Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.	**Configurable:** • Cisco IOS Software: AIR-AP1210, AIR-RM20A-x-K9 and AIR-MP20B-x-K9 • VxWorks Software: AIR-AP1200, AIR-RM20A-x-K9 and AIR-MP20B-x-K9 **Pre-Configured:** • Cisco IOS Software: AIR-AP1230B-x-K9 and AIR-RM20A-x-K9 • VxWorks Software: AIR-AP1220B-x-K9 and AIR-RM20A-x-K9 **Regulatory Domains:** (x=Regulatory Domain) • A=Americas, parts of Asia and Europe • C=MII (China) • E=ETSI • I=Israel • J= TELEC (Japan) • S=Singapore • T=Taiwan Customers are responsible for verifying approval for use in their country. Please see http://www.cisco.com/go/aironet/compliance to verify approval and to identify the regulatory domain that corresponds to a particular country. Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.
Radio module form factor	• CardBus (32-bit)	• Mini-PCI (32-bit)	• 802.11a: CardBus (32-bit) • 802.11b: Mini-PCI (32-bit)
Data rates supported	• 6, 9, 12, 18, 24, 36, 48, 54 Mbps	• 1, 2, 5.5, and 11 Mbps	• 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11b: 1, 2, 5.5, and 11 Mbps
Network standard	• IEEE 802.11a	• IEEE 802.11b	• IEEE 802.11a • IEEE 802.11b
Uplink	• Autosensing 802.3 10/100BASE-T Ethernet	• Autosensing 802.3 10/100BASE-T Ethernet	• Autosensing 802.3 10/100BASE-T Ethernet

Table 2 Product Specifications (Continued)

	With 802.11a radio installed	With 802.11b radio installed	With both 802.11a and 802.11b radio installed
Frequency band	• 5.15 to 5.35 GHz (FCC UNII 1 and UNII 2) • 5.15 to 5.25 GHz (TELEC) • 5.15 to 5.25 GHz (Singapore) • 5.25 to 5.35 GHz (Taiwan)	• 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)	• 5.15 to 5.35 GHz (FCC UNII 1 and UNII 2) • 5.15 to 5.25 GHz (TELEC) • 5.15 to 5.25 GHz (Singapore) • 5.25 to 5.35 GHz (Taiwan) • 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	• Infrastructure, star topology
Wireless medium	• Orthogonal Frequency Division Multiplexing (OFDM)	• Direct sequence spread spectrum (DSSS)	• 802.11a: Orthogonal Frequency Division Multiplexing (OFDM) • 802.11b: Direct sequence spread spectrum (DSSS)
Media Access Protocol	• Carrier sense multiple access with collision avoidance (CSMA/CA)	• Carrier sense multiple access with collision avoidance (CSMA/CA)	• Carrier sense multiple access with collision avoidance (CSMA/CA)
Modulation	• (OFDM subcarrier) • BPSK @ 6 and 9 Mbps • QPSK @ 12 and 18 Mbps • 16-QAM @ 24 and 36 Mbps • 64-QAM @ 48 and 54 Mbps	• DBPSK @ 1 Mbps • DQPSK @ 2 Mbps • CCK @ 5.5 and 11 Mbps	OFDM: • BPSK @ 6 and 9 Mbps • QPSK @ 12 and 18 Mbps • 16-QAM @ 24 and 36 Mbps • 64-QAM @ 48 and 54 Mbps DSSS: • DBPSK @ 1 Mbps • DQPSK @ 2 Mbps • CCK @ 5.5 and 11 Mbps
Operating channels	• FCC: 8 • TELEC (Japan): 4 • Singapore: 4 • Taiwan: 4	• ETSI: 13; Israel: 7; North America: 11; TELEC (Japan): 14; MII: 11	5 GHz Band: • FCC: 8 • TELEC (Japan): 4 • Singapore: 4 • Taiwan: 4 2.4 GHz Band: • ETSI: 13; Israel: 7; North America: 11; TELEC (Japan): 14; MII: 11
Nonoverlapping channels	• Eight (FCC only) • Four (Japan, Singapore, Taiwan)	• Three	• Eleven

Table 2 Product Specifications (Continued)

	With 802.11a radio installed	With 802.11b radio installed	With both 802.11a and 802.11b radio installed
Receive sensitivity	• 6 Mbps: -85 dBm • 9 Mbps: -84 dBm • 12 Mbps: -82 dBm • 18 Mbps: -80 dBm • 24 Mbps: -77 dBm • 36 Mbps: -73 dBm • 48 Mbps: -69 dBm • 54 Mbps: -68 dBm	• 1 Mbps: -94 dBm • 2 Mbps: -91 dBm • 5.5 Mbps: -89 dBm • 11 Mbps: -85 dBm	• 1 Mbps: -94 dBm • 2 Mbps: -91 dBm • 5.5 Mbps: -89 dBm • 6 Mbps: -85 dBm • 9 Mbps: -84 dBm • 11 Mbps: -85 dBm • 12 Mbps: -82 dBm • 18 Mbps: -80 dBm • 24 Mbps: -77 dBm • 36 Mbps: -73 dBm • 48 Mbps: -69 dBm • 54 Mbps: -68 dBm
Available transmit power settings	• 40 mW (16 dBm) • 20 mW (13 dBm) • 10 mW (10 dBm) • 5 mW (7 dBm) Maximum power setting will vary according to individual country regulations.	• 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.	802.11a: • 40 mW (16 dBm) • 20 mW (13 dBm) • 10 mW (10 dBm) • 5 mW (7 dBm) 802.11b: • 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.

Table 2 Product Specifications (Continued)

	With 802.11a radio installed	With 802.11b radio installed	With both 802.11a and 802.11b radio installed
Range (typical at maximum transmit power setting, 2.2 dBi gain diversity dipole antenna for 2.4 GHz; 6 dBi gain patch and 5 dBi omni antenna for 5 GHz)	Omni directional Antenna: • Indoor: – 60 ft (18m)@ 54 Mbps – 130 ft (40m) @ 18 Mbps – 170 ft (52m) @ 6 Mbps • Outdoor: – 100 ft (30m) @ 54 Mbps – 600 ft (183m) @ 18 Mbps – 1000 (304m) ft @ 6 Mbps Patch Antenna: • Indoor: – 70 ft (21m) @ 54 Mbps – 150 ft (45m) @ 18 Mbps – 200 ft (61m) @ 6 Mbps • Outdoor: – 120 ft (36m) @ 54 Mbps – 700 ft (213m) @ 18 Mbps – 1200 ft (355m) @ 6 Mbps	Indoor: • 130 ft (40m) @ 11 Mbps • 350 ft (107m) @ 1 Mbps Outdoor: • 800 ft (244m) @ 11 Mbps • 2000 ft (610m) @ 1 Mbps	802.11a Omni directional Antenna: • Indoor: – 60 ft (18m) @ 54 Mbps – 130 ft (40m) @ 18 Mbps – 170 ft (52m)@ 6 Mbps • Outdoor: – 100 ft (30m) @ 54 Mbps – 600 ft (183m) @ 18 Mbps – 1000 ft (304m) @ 6 Mbps 802.11a Patch Antenna: • Indoor: – 70 ft (21m) @ 54 Mbps – 150 ft (45m) @ 18 Mbps – 200 ft (61m) @ 6 Mbps • Outdoor: – 120 ft (36m) @ 54 Mbps – 700 ft (213m) @ 18 Mbps – 1200 ft (355m) @ 6 Mbps 802.11b Omni directional Antenna: • Indoor: – 130 ft (40 m) @ 11 Mbps – 350 ft (107 m) @ 1 Mbps • Outdoor: – 800 ft (244 m) @ 11 Mbps – 2000 ft (610 m) @ 1 Mbps

Table 2 Product Specifications (Continued)

	With 802.11a radio installed	With 802.11b radio installed	With both 802.11a and 802.11b radio installed
Compliance	**Standards:** • *Safety:* – UL 1950 – CSA 22.2 No. 950-95 – IEC 60950 – EN 60950 • *Radio Approvals:* – FCC Part 15.401-15.407 – RSS-210 (Canada) – EN 301.893 (Europe) – ARIB STD-T71 (Japan) – AS 4268.2 (Australia) • *EMI and Susceptibility (Class B):* – FCC Part 15.107 and 15.109 – ICES-003 (Canada) – VCCI (Japan) – EN 301.489-1 and -17 (Europe) • *Other:* – IEEE 802.11a – FCC Bulletin OET-65C – RSS-102	**Standards:** • *Safety:* – UL 1950 – CSA 22.2 No. 950-95 – IEC 60950 – EN 60950 • *Radio Approvals:* – FCC Part 15.247 – RSS-139-1, RSS-210 (Canada) – EN 300.328 (Europe) – Telec 33B (Japan) – AS/NZS 3548 (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) • *Other:* – IEEE 802.11b – FCC Bulletin OET-65C – RSS-102	**Standards:** • *Safety:* – UL 1950 – CSA 22.2 No. 950-95 – IEC 60950 – EN 60950 • *Radio Approvals:* – FCC Part 15.401-15.407 – RSS-210 (Canada) – EN 301.893 (Europe) – ARIB STD-T71 (Japan) – AS 4268.2 (Australia) – FCC Part 15.247 – RSS-139-1, RSS-210 (Canada) – EN 300.328 (Europe) – Telec 33B (Japan) – AS/NZS 3548 (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) • *Other:* – IEEE 802.11a – IEEE 802.11b – FCC Bulletin OET-65C – RSS-102
SNMP compliance	• MIB[1] I and MIB II	• MIB I and MIB II	• MIB I and MIB II
Antenna	• Integrated 6 dBi diversity patch (55 degree horizontal, 55 degree vertical beamwidths, 5 dBi diversity omnidirectional with 360 degree horizontal and 40 degree vertical beamwidths	• Two RP-TNC connectors (antennas optional, none supplied with unit)	5 GHz: • Integrated 6 dBi diversity patch (55 degree horizontal, 55 degree vertical beamwidths, 5 dBi diversity omnidirectional with 360 degree horizontal and 40 vertical beamwidths 2.4 GHz: • Two RP-TNC connectors (antennas optional, none supplied with unit)

Table 2 Product Specifications (Continued)

	With 802.11a radio installed	With 802.11b radio installed	With both 802.11a and 802.11b radio installed
Security architecture client authentication	Cisco Wireless Security Suite including: **Authentication:** • 802.1X support including LEAP, PEAP, EAP-TLS, EAP-TTLS, and EAP-SIM to yield mutual authentication and dynamic, per-user, per-session encryption keys • MAC 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 • Pre-standard TKIP WEP enhancements: key hashing (per-packet keying), message integrity check (MIC) and broadcast key rotation	Cisco Wireless Security Suite including: **Authentication:** • 802.1X support including LEAP, PEAP, EAP-TLS, EAP-TTLS, and EAP-SIM to yield mutual authentication and dynamic, per-user, per-session encryption keys • MAC 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 • Pre-standard TKIP WEP enhancements: key hashing (per-packet keying), message integrity check (MIC) and broadcast key rotation	Cisco Wireless Security Suite including: **Authentication:** • 802.1X support including LEAP, PEAP, EAP-TLS, EAP-TTLS, and EAP-SIM to yield mutual authentication and dynamic, per-user, per-session encryption keys • MAC 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 • Pre-standard TKIP WEP enhancements: key hashing (per-packet keying), message integrity check (MIC) and broadcast key rotation
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.	• Three indicators on the top panel report association status, operation, error/warning, firmware upgrade, and configuration, network/modem, and radio status.
Software Image Network and Inventory support	• CiscoWorks RME[2], CiscoWorks SWIM[3]	• CiscoWorks RME, CiscoWorks SWIM	• CiscoWorks RME, CiscoWorks SWIM
Remote configuration support	• BOOTP, DHCP[4], Telnet, HTTP, FTP,[5] TFTP,[6] and SNMP	• BOOTP, DHCP, Telnet, HTTP, FTP, TFTP, and SNMP	• BOOTP, DHCP, Telnet, HTTP, FTP, TFTP, and SNMP
Local configuration	• Direct console port (RJ-45 interface)	• 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	• 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	• 26 oz (737g) add 6.4 oz (181g) for mounting bracket	• 25.6 oz (724g) add 6.4 oz (181g) for mounting bracket	• 27.6 oz (783g) add 6.4 oz (181g) for mounting bracket
Environmental	• -4º to 122ºF (-20º to 50ºC), 10 to 90% humidity (noncondensing)	• -4º to 131ºF (-20º to 55ºC), 10 to 90% humidity (noncondensing)	• -4º to 122ºF (-20º to 50ºC), 10 to 90% humidity (noncondensing)
Processor	• IBM PowerPC405 200 MHz	• IBM PowerPC405 200 MHz	• IBM PowerPC405 200 MHz

Table 2 Product Specifications (Continued)

	With 802.11a radio installed	With 802.11b radio installed	With both 802.11a and 802.11b radio installed
System Memory	• 16 Mbytes RAM • 8 Mbytes FLASH	• 16 Mbytes RAM • 8 Mbytes FLASH	• 16 Mbytes RAM • 8 Mbytes FLASH
Input power requirements	• 90 to 240 VAC +/- 10% (power supply) • 48 VDC +/- 10%(device)	• 90 to 240 VAC +/- 10% (power supply) • 48 VDC +/- 10%(device)	• 90 to 240 VAC +/- 10% (power supply) • 48 VDC +/- 10%(device)
Power Draw	• 8 watts, RMS	• 6 watts, RMS	• 11 watts, RMS
Warranty	• One year	• One year	• One year
Wi-Fi Certification	Wi Fi CERTIFIED Certified Interoperability for: 2.4 GHz Band ☐ 11 Mbps 5 GHz Band ☑ 54 Mbps www.wi-fi.org	Wi Fi CERTIFIED Certified Interoperability for: 2.4 GHz Band ☑ 11 Mbps 5 GHz Band ☐ 54 Mbps www.wi-fi.org	Wi Fi CERTIFIED Certified Interoperability for: 2.4 GHz Band ☑ 11 Mbps 5 GHz Band ☑ 54 Mbps www.wi-fi.org

1. Management Information Base
2. CiscoWorks Resource Manager Essentials
3. Software Image Manager
4. Dynamic Host Configuration Protocol
5. File Transfer Protocol
6. Trivial File Transfer Protocol

Wi Fi CERTIFIED

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-PWRINJ2= Aironet 1100 and 1200 Series Power Injector • Cisco Catalyst 3550-24 PWR Switch and Cisco Catalyst 3524-PWR XL Switch • Cisco Catalyst 4500 and 6500 Series switches with inline power • Cisco WS-PWR-PANEL Midspan Power Patch Panel
Line power over Ethernet support (both 5 GHz and 2.4 GHz radio)	• Cisco AIR-PWRINJ2= Aironet 1100 and 1200 Series Power Injector • Cisco Catalyst 3550-24 PWR Switch
Line power over Ethernet support (5 GHz radio only)	• Cisco AIR-PWRINJ2= Aironet 1100 and 1200 Series Power Injector • Cisco Catalyst 3550-24 PWR Switch

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
http://www.cisco.com/warp/public/cc/serv/mkt/sup/tsssv/opmsup/smton/index.shtml

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Cisco Systems has more than 200 offices in the following countries and regions. Addresses, phone numbers, and fax numbers are listed on the

Cisco Web site at www.cisco.com/go/offices

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica • Croatia
Czech Republic • Denmark • Dubai, UAE • Finland • France • Germany • Greece • Hong Kong SAR • Hungary • India • Indonesia • Ireland
Israel • Italy • Japan • Korea • Luxembourg • Malaysia • Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland
Portugal • Puerto Rico • Romania • Russia • Saudi Arabia • Scotland • Singapore • Slovakia • Slovenia • South Africa • Spain • Sweden
Switzerland • Taiwan • Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela • Vietnam • Zimbabwe

04.03 BW9083