

Cisco Aironet 350 Series Client Adapters



Wireless client adapters are the key to adding mobility and flexibility to an enterprise—increasing productivity by enabling users to have network and Internet access anywhere within a building without the limitation of wires. The Cisco Aironet[®] 350 Series Client Adapters are a complement to Aironet 350 Series infrastructure devices, providing an enterprise-ready solution that combines mobility with the performance, security, and manageability that people have come to expect from Cisco.

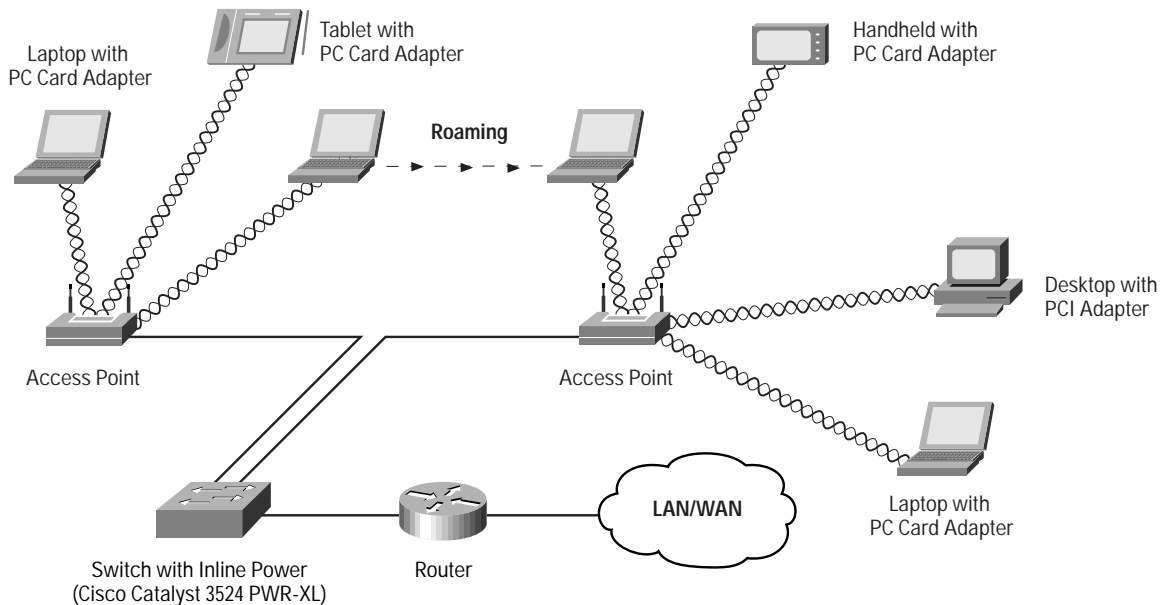
Wireless client adapters connect a variety of devices to a wireless network either in ad hoc peer-to-peer mode or in infrastructure mode with APs. Available in PC Card (PCMCIA) and Peripheral Component Interconnect (PCI) form factors, Cisco Aironet 350 Series Client Adapters quickly connect desktop and mobile computing devices wirelessly to all network resources. With this product, you can instantly add new employees to the network, support temporary workgroups, or enable Internet access in conference rooms or other meeting spaces (see Figure 1).



Features include:

- Superior range and throughput
- Secure network communications
- World mode for international roaming
- Full-featured utilities for easy configuration and management
- Compliance with the IEEE 802.11b high-rate standard
- Support for all popular operating systems

Figure 1 Client devices equipped with wireless client adapters can roam freely throughout a facility via communications with multiple APs.



Ethernet Speed and Improved Range

With a full 100 milliwatts (mW) of transmit power and the best receive sensitivity in the industry, the Cisco Aironet 350 Series Client Adapters provide the longest range and best reliability available for wireless clients. Advanced signal processing in the Cisco Aironet 350 Series helps manage the multipath propagation often found in office environments. Intelligent filtering addresses ambient noise and interference that can decrease network performance. Building upon Cisco leadership in wireless LAN (WLAN) performance, the Cisco Aironet 350 Series Client Adapters provide the greatest throughput available so users can enjoy virtually the same connectivity they gain from wire-line connections. Based on direct sequence spread spectrum (DSSS) technology and operating in the 2.4-GHz band, the Cisco Aironet 350 Series Client Adapters comply with the IEEE 802.11b standard—ensuring interoperability with all other compliant WLAN products.

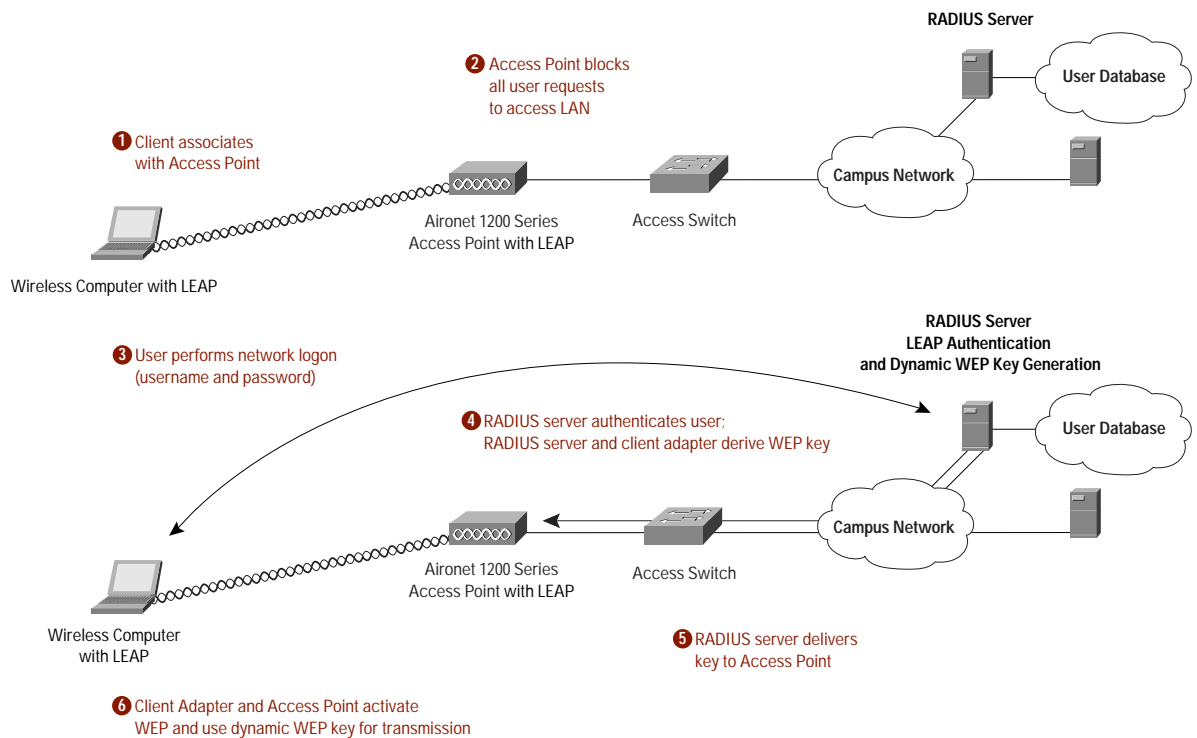


Enterprise-Class Wireless LAN Security

Wireless LAN security is a primary concern. Cisco Aironet products secure 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 2).

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. Enhanced features such as pre-standard Temporal Key Integrity Protocol (TKIP) per-packet key hashing, message integrity check (MIC) and broadcast key rotation are integral to the Cisco Wireless Security Suite.

Figure 2 The Cisco Wireless Security Suite is an Enterprise-Class Security System Based on the 802.1X Architecture





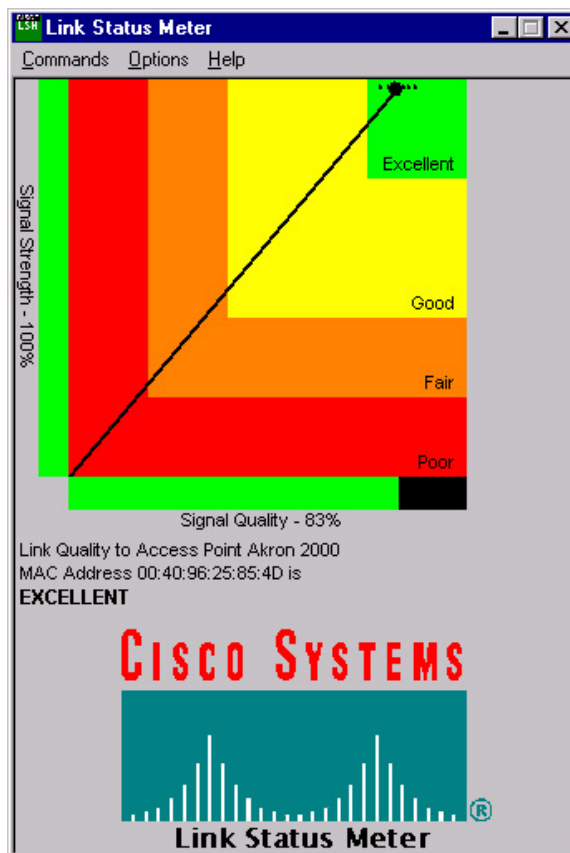
World Mode for International Roaming

Cisco simplifies deployment for international travelers and multinational corporations with a new client adapter setting called world mode. When placed in this mode, client adapters automatically inherit channel configuration properties directly from the Cisco Aironet AP to which they associate. This feature enables a user to use a client adapter around the world while still maintaining regulatory compliance.

Enhanced Client Network Management Features with Extended Client Support

All Cisco wireless client adapters include the Cisco Aironet Client Utility (ACU), a tool with an intuitive graphical user interface that makes it easy to configure, monitor, and manage an adapter (see Figure 3). The ACU includes site-survey tools that produce easy-to-understand, detailed graphical information, including signal strength, to assist in the correct placement of APs. The ACU now provides improved, quantifiable data, including signal-to-noise ratio measured in decibels (dB) and signal level and noise level measured in decibels per milliwatt (dBm). Using the ACU, a user can create a profile of settings for each environment, such as the office or home, making it simple for telecommuters and business travelers to reconfigure the adapter when moving from one environment to another. A user can now configure channel selection, service set identifier (SSID), WEP key, and authentication method for these different locations. A broad suite of device drivers provides support for all popular operating systems, including Windows 95, 98, NT 4.0, Windows 2000, Windows ME, Windows CE, Mac OS Version 9.x, and Linux.

Figure 3 Site survey tools included with the ACU assist in the correct placement of APs.





The Preferred Client Solution for Mobile Professionals

Cisco Aironet 350 Series Client Adapters deliver superior range, reliability, and performance for business users needing information access anytime, anywhere. Combined with Cisco Aironet unique security services, this product ensures that business-critical information is secure. Most importantly, the Cisco client solution is easy to use, making the benefits of wireless mobility completely transparent.

Table 1 Cisco Aironet 350 Series Client Adapter Specifications

Data Rates Supported	1, 2, 5.5, and 11 Mbps
Network Standard	IEEE 802.11b
System Interface	AIR-PCM35x: PC Card (PCMCIA) Type II AIR-PCI351x: peripheral component interconnect (PCI) Bus
Frequency Band	2.4 to 2.4897 GHz
Network Architecture Types	Infrastructure and ad hoc
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	North America: 11 ETSI: 13 Japan: 14
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
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.




Table 1 Cisco Aironet 350 Series Client Adapter Specifications (Continued)

Range (typical)	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
Compliance	Operates license free under FCC Part 15 and complies as a Class B device; complies with DOC regulations; complies with ETS 300.328, FTZ 2100, and MPT 1349 standards
Operating Systems Supported	Windows 95, 98, NT 4.0, 2000, ME, XP, CE 2.11, CE 3.0, Mac OS 9.x, Mac OS X, and Linux
Antenna	AIR-PCM35x: Integrated diversity dipoles AIR-LMC35x: Two MMCX connectors (antennas optional, none supplied with unit) AIR-PCI35x: External, removable 2.2 dBi Dipole with RP-TNC Connector
Encryption Key Length	128-bit
Security	Cisco Wireless Security Suite including: Authentication: <ul style="list-style-type: none"> • 802.1X support including LEAP, PEAP, EAP-TLS, EAP-TTLS, and EAP-SIM to yield mutual authentication and dynamic, per-user, per-session WEP keys • MAC address and by standard 802.11 authentication mechanisms Encryption: <ul style="list-style-type: none"> • 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 Indicators	Link Status and Link Activity
Dimensions	AIR-PCM35x: 2.13 in. (5.4 cm) wide x 4.37 in. (11.1 cm) deep x 0.1 in. (0.3 cm) high AIR-LMC35x: 2.13 in. (5.4 cm) wide x 3.31 in. (8.4 cm) deep x 0.1 in. (0.3 cm) high AIR-PCI35x: 6.6 in. (16.8 cm) wide by 3.9 in. (9.8 cm) x .5 in. (1.3 cm) high
Weight	AIR-PCM35x: 1.6 oz (45g) AIR-LMC35x: 1.4 oz (40g) AIR-PCI35x: 4.4 oz (125g)
Environmental	AIR-PCM35x and AIR-LMC35x: -22 to 118 F (-30 to 70 C) AIR-PCI35x: 32 to 118 F (0 to 55 C) 10 to 90% (noncondensing)
Input Power Requirements	+5 VDC +/- 5%
Typical Power Consumption (at 100 mW transmit power setting)	Transmit: 450 mA Receive: 270 mA Sleep mode: 15 mA
Warranty	Limited lifetime



Table 1 Cisco Aironet 350 Series Client Adapter Specifications (Continued)

Wi-Fi Certification	
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