

Cisco 521 Wireless Express Access Point

The Cisco® 521 Wireless Express Access Point is a single-band 802.11g access point that features business-class management, security, and scalability. This access point offers high-performance wireless connectivity in offices and similar environments.

The Cisco Mobility Express Solution brings together the Cisco 521 access point and the Cisco 500 Series Wireless Express Mobility Controller to provide a flexible, cost-effective wireless solution specifically designed to meet the needs of small and medium-sized businesses (SMBs). The Mobility Express Solution is part of the Cisco Smart Business Communications System (SBCS) – a unified communications solution for SMBs that provides voice, data, video, security, and wireless capabilities while integrating with existing desktop applications like calendar, e-mail, and customer relationship management (CRM) to provide a complete solution.

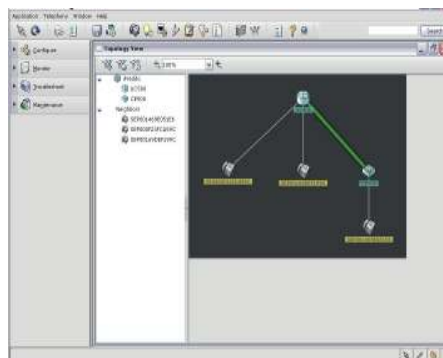
As part of this solution, the Cisco 521 access point uniquely addresses the diverse requirements of SMBs by offering the versatility of operating either in standalone mode, or in controller-based mode with the Cisco 500 Series Wireless Express Controller.

- Standalone mode: Access points are directly connected to the wired infrastructure through an Ethernet switch and provide reliable high-speed wireless connectivity to users in the area they cover. Configuration and management are performed locally at the individual access point level.
- Controller-based mode: Access points are directly connected to the wired infrastructure through an Ethernet switch and associated with a Cisco 500 Series Wireless Express Mobility Controller. The controller streamlines and manages the configuration of all connected access points through a single interface, and provides a platform for mobility services such as secure guest access and voice over Wi-Fi.

The Cisco 521 access point delivers optimal value for offices, classrooms, small warehouses, and similar environments. Built-in antennas provide omni-directional coverage specifically designed for today's open workspaces. A multipurpose mounting bracket easily secures Cisco 521 access points to ceilings and walls. With an unobtrusive design, the access points are aesthetically appealing and blend into their surrounding environment. For maximum concealment, the access point's UL 2043 rating allows it to be placed above ceilings in plenum areas regulated by municipal fire codes. Managed by the Cisco Configuration Assistant, and optimized for easy installation and operation, the Cisco 521 access point helps organizations attain a lower total cost of ownership. See Figure 1.

Figure 1. Cisco 521 Wireless Express Access Point and Cisco Configuration Assistant

Cisco 521 Wireless Express Access Point: Business-class access with integrated antennas for easy deployment in offices and similar RF environments



Cisco Configuration Assistant: A simplified management tool used to configure the SBCS portfolio including Cisco Wireless Express Access Points and Mobility Controllers

Applications

In offices and similarly open environments, Cisco 521 Wireless Express Access Points may be installed on the ceiling to provide users with continuous coverage as they roam throughout a facility. In school buildings and similar facilities, the access points may be installed on the ceiling of each room and hallway to provide users with full coverage and high network availability. In areas where a ceiling installation may not be practical, such as retail hotspots or similar small facilities, the access points can be mounted simply and securely on walls for complete coverage with minimal installation cost.

Features and Benefits

Table 1. Features and Benefits of the Cisco 521 Wireless Express Access Point

Feature	Benefit
802.11g radio	<ul style="list-style-type: none"> Provides 54 Mbps of capacity and compatibility with older 802.11b clients.
Industry-leading radio design	<ul style="list-style-type: none"> Provides robust signals to long distances. Mitigates the effects of multi-path signal propagation for more consistent coverage.
Variable transmit power settings	<ul style="list-style-type: none"> Allows access point coverage to be tuned for differing coverage requirements. Low output power setting supports closer spacing of access points in high-density deployments.
Integrated antennas	<ul style="list-style-type: none"> Complete system is deployable "out of the box" without external antennas. Provides omni-directional coverage for offices and similar RF environments.
Hardware-assisted Advanced Encryption Standard (AES) encryption	<ul style="list-style-type: none"> Provides high security without performance degradation.
IEEE 802.11i-compliant; WPA2 and WPA-certified	<ul style="list-style-type: none"> Helps to ensure interoperable security with a broad range of wireless LAN client devices.
Low-profile design	<ul style="list-style-type: none"> Unobtrusive design blends into environment.
Multipurpose and lockable mounting bracket	<ul style="list-style-type: none"> Provides greater flexibility and ease of installation to walls, ceilings, and suspended ceiling railways. Accommodates standard padlock for theft deterrence.
Power over Ethernet (IEEE 802.3af and Cisco Inline Power)	<ul style="list-style-type: none"> Provides an interoperable alternative to AC power. Simplifies deployment by allowing power to be supplied over an Ethernet cable. Compatible with 802.3af-compliant power sources.


Field-upgradeable from standalone to controller mode	<ul style="list-style-type: none"> • Cisco Configuration Assistant provides a simple upgrade tool to migrate standalone Cisco 521 access points to controller-based mode to support mobility services and centralized management.
Includes Cisco Configuration Assistant management software	<ul style="list-style-type: none"> • Cisco Configuration Assistant simplifies the task of configuring and managing the Mobility Express solution as well as the entire Cisco Smart Business Communication System. Cisco Configuration Assistant supports up to 3 standalone access points and up to 12 controller-based access points with an integrated Web GUI.

Product Specifications

Table 2. Product Specifications for the Cisco 521 Wireless Express Access Point

Item	Specification		
Part number	<ul style="list-style-type: none"> • AIR-AP521G-x-K9 (Standalone mode; Cisco IOS® Software) • AIR-LAP521G-x-K9 (Controller mode; requires the Wireless Express Mobility Controller) <ul style="list-style-type: none"> • 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 		
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 10/100BASE-T Ethernet		
Frequency band and operating channels	Americas (FCC)—A: 2.412 to 2.462 GHz; 11 channels Europe (ETSI)—E: 2.412 to 2.472 GHz; 13 channels Japan-P (TELEC 2 [Japan2] Cnfg) 2.412 to 2.472 GHz; 13 channels Orthogonal Frequency Division Multiplexing (OFDM)		
Nonoverlapping channels	802.11b/g: 3		
Receive sensitivity (typical)	802.11g: <ul style="list-style-type: none"> • 1 Mbps: -93 dBm • 2 Mbps: -91 dBm • 5.5 Mbps: -88 dBm • 6 Mbps: -86 dBm • 9 Mbps: -85 dBm • 11 Mbps: -85 dBm • 12 Mbps: -84 dBm • 18 Mbps: -83 dBm • 24 Mbps: -79 dBm • 36 Mbps: -77 dBm • 48 Mbps: -72 dBm • 54 Mbps: -70 dBm 		
Available transmit power settings (maximum power setting will vary by channel and according to individual country regulations)	<table border="0"> <tr> <td style="vertical-align: top;"> 802.11b: Complementary Code Keying (CCK): <ul style="list-style-type: none"> • 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) • -1 dBm (1 mW) </td> <td style="vertical-align: top; padding-left: 20px;"> 802.11g: OFDM: <ul style="list-style-type: none"> • 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> </table>	802.11b: Complementary Code Keying (CCK): <ul style="list-style-type: none"> • 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) • -1 dBm (1 mW) 	802.11g: OFDM: <ul style="list-style-type: none"> • 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)
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Item	Specification	
Range	Indoor (distance across open office environment) 802.11g: <ul style="list-style-type: none"> • 100 ft (30 m) at 54 Mbps • 175 ft (53 m) at 48 Mbps • 250 ft (76 m) at 36 Mbps • 275 ft (84 m) at 24 Mbps • 325 ft (100 m) at 18 Mbps • 350 ft (107 m) at 12 Mbps • 360 ft (110 m) at 11 Mbps • 375 ft (114 m) at 9 Mbps • 400 ft (122 m) at 6 Mbps • 420 ft (128 m) at 5.5 Mbps • 440 ft (134 m) at 2 Mbps • 450 ft (137 m) at 1 Mbps 	Outdoor 802.11g: <ul style="list-style-type: none"> • 120 ft (37 m) at 54 Mbps • 350 ft (107 m) at 48 Mbps • 550 ft (168 m) at 36 Mbps • 650 ft (198 m) at 24 Mbps • 750 ft (229 m) at 18 Mbps • 800 ft (244 m) at 12 Mbps • 820 ft (250 m) at 11 Mbps • 875 ft (267 m) at 9 Mbps • 900 ft (274 m) at 6 Mbps • 910 ft (277 m) at 5.5 Mbps • 940 ft (287 m) at 2 Mbps • 950 ft (290 m) at 1 Mbps
	Ranges and actual throughput vary based upon numerous environmental factors so individual performance may differ.	
Compliance	Safety: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • FCC Part 15.247, 15.407 • RSS-210 (Canada) • EN 300.328, EN 301.893 (Europe) • ARIB-STD 33 (Japan) • ARIB-STD 66 (Japan) • AS/NZS 4268.2003 (Australia and New Zealand) EMI and Susceptibility (Class B): <ul style="list-style-type: none"> • FCC Part 15.107 and 15.109 • ICES-003 (Canada) • VCCI (Japan) • EN 301.489-1 and -17 (Europe) Security: <ul style="list-style-type: none"> • 802.11i, WPA2, WPA • 802.1X • AES, TKIP • FIPS 140-2 Pre-Validation List • Common Criteria (when running Cisco IOS Software) Other: <ul style="list-style-type: none"> • IEEE 802.11g • FCC Bulletin OET-65C • RSS-102 	
Antennas	<ul style="list-style-type: none"> • 2.4 GHz • Gain: 3.0o dBi • Horizontal beam width: 360° 	

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Security	Standalone Access Point																														
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Status LEDs	<p>External: Status LED indicates operating state, association status, error/warning condition, boot sequence, and maintenance status</p> <p>Internal: Ethernet LED indicates activity over the Ethernet status, Radio LED indicates activity over the radios status</p>																														
Dimensions (H x W x D)	7.5 x 7.5 x 1.3 in. (19.1 x 19.1 x 3.3 cm)																														
Weight	1.5 lb (0.67 kg)																														
Environmental	<ul style="list-style-type: none"> • 32 to 104°F (0 to 40°C) • 10 to 90% humidity (noncondensing) 																														
System memory	<ul style="list-style-type: none"> • 32 MB RAM • 16 MB flash 																														
Input power requirements	<ul style="list-style-type: none"> • 100 to 240 VAC; 50 to 60 Hz (power supply) • 36 to 57 VDC (device) 																														
Power draw	9.9W maximum																														
Warranty	1 year																														
Wi-Fi certification																															

System Requirements

Table 3. System Requirements for the Cisco 521 Wireless Express Access Point

Access Utilizing	Description
Browser	Using the Web browser management GUI requires a computer running Internet Explorer Version 6.0 or newer, or Netscape Navigator Version 7.0 or newer.
Power over Ethernet (PoE)	Power-sourcing equipment (PSE) compliant with Cisco Inline Power or IEEE 802.3af, and providing at least 10W at 48 VDC.

Ordering Information

Table 4 provides ordering information for the Cisco 521 Wireless Express Access Point and the Cisco 526 Wireless Express Mobility Controller. To find a reseller near you visit:

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

Or to purchase through a Cisco online partner visit: <http://www.cisco.com/go/online>

Table 4. Ordering Information for the Cisco 521 Wireless Express Access Point and the Cisco 526 Wireless Express Mobility Controller

Part Number	Product Name
AIR-AP521G-x-K9	Cisco 521 Wireless Express Access Point (standalone)
AIR-LAP521G-x-K9	Cisco 521 Wireless Express Access Point (Controller mode)
AIR-WLC526-K9	Cisco 526 Wireless Express Mobility Controller

Note: The Cisco 521 Wireless Express Access Point may be ordered to operate as a standalone access point, or with a Cisco 526 Wireless Express Mobility Controller.

Service and Support

Cisco offers a wide range of services programs to accelerate customer success. Cisco SMARTnet[®] Service for the Smart Business Communications System (SBCS) provides direct access anytime to Cisco network experts and award-winning resources to help rapidly resolve problems and protect customer investment. Cisco SMARTnet Service delivers rapid issue resolution and complete, solutions-level technical support for the SBCS. 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 SMARTnet services, visit <http://www.cisco.com/go/smartnet>

For More Information

For more information about Cisco wireless LAN controllers or the Cisco Mobility Express Solution, contact your local account representative or visit: <http://www.cisco.com/go/wireless>



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