

# Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup

## Secure and Easy to Deploy Wireless-N Networking with Gigabit Ethernet Connectivity

### Highlights

- Provides selectable-band high-bandwidth 802.11n wireless connectivity for maximum performance
- Supports high-speed connections with Gigabit Ethernet LAN interface for demanding applications
- Single Point Setup simplifies the deployment of multiple wireless access points
- Bridges wired LANs together wirelessly to reduce cabling and installation costs
- Easy to set up and manage by using the configuration wizard
- Safeguards business information with enhanced security, including advanced encryption, secure authentication, and rogue access point detection

### Product Overview

As business applications become more powerful and sophisticated, organizations are looking for new ways to extend the performance and reach of their office networks. Delivering secure, high-speed wireless connectivity to employees, partners, and guests anywhere in the office is key. The Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup makes it easy to deliver advanced 802.11n wireless networking with business-class features – at an affordable price. This flexible solution is perfect for connecting up to 20 employees on a single WAP321. With Single Point Setup, the wireless LAN can scale up to a total of eight WAP321 devices to provide broader coverage and to support additional users as business needs change.

Built specifically for small businesses, the Cisco WAP321 offers selectable-band 802.11n wireless technology to deliver high throughput and extended range throughout your office. Advanced quality-of-service (QoS) features let you prioritize traffic to support bandwidth-sensitive applications. This sophisticated control enables you to take advantage of voice over WLAN (VoWLAN) to place or receive calls over the wireless LAN infrastructure.

Designed for growing organizations, the Cisco WAP321 offers the ability to smoothly scale your network by bridging wired LANs together wirelessly, to reduce cabling and installation costs. It supports multiple Service Set Identifiers (SSIDs) to enable you to segregate traffic for different departments, users, and communication devices.

For companies that need to provide secure wireless guest access, the Cisco WAP321 offers captive portal support that lets you create a wireless hotspot with visitor authentication.

The Cisco WAP321 is simple to set up and use, with intuitive wizard-based configuration to get you up and running in minutes. A sleek, compact design with flexible mounting options enables the access point to smoothly blend into any small business environment. Power over Ethernet (PoE) support makes the device easy to install without the need for separate power plugs or expensive new wiring.

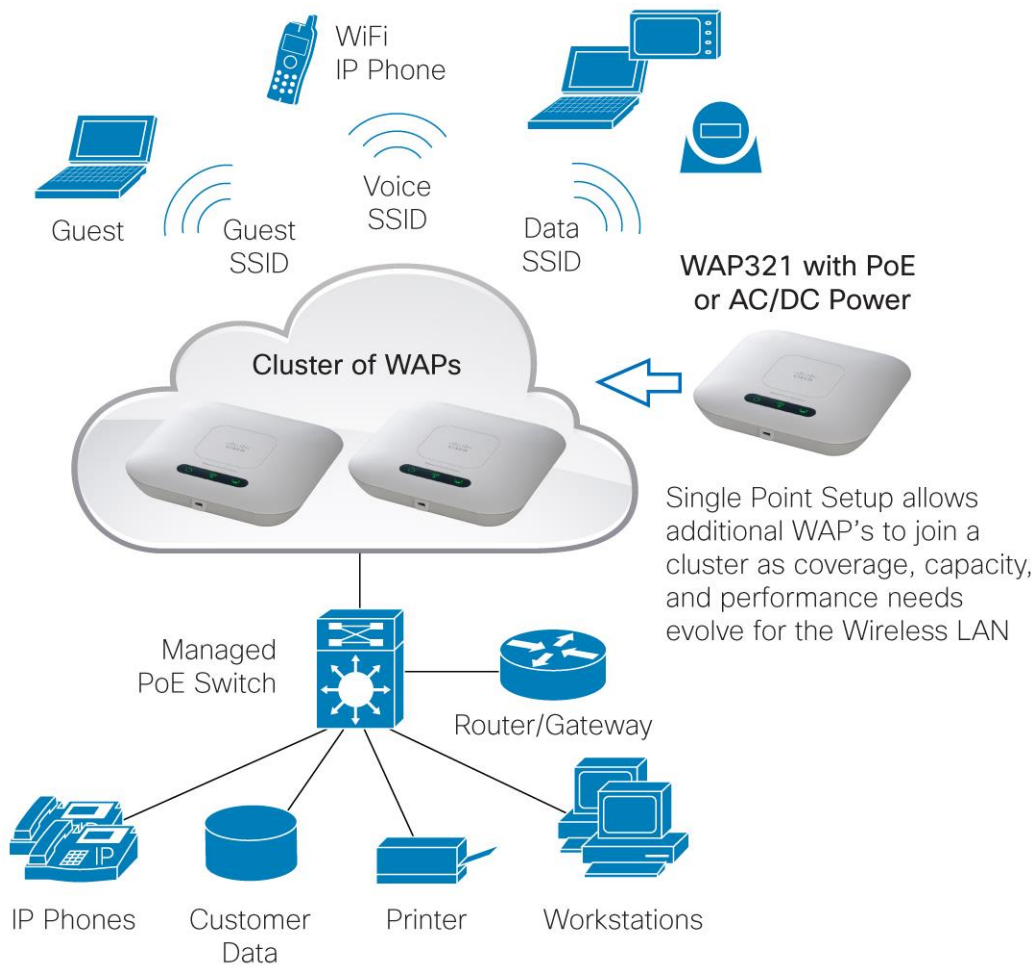
To enhance reliability and safeguard sensitive business information data, the Cisco WAP321 supports WiFi Protected Access (WPA2), encoding all your wireless transmissions with powerful encryption. 802.1X RADIUS authentication helps keep unauthorized users out. Single Point Setup is a controllerless multi-access point deployment technology that allows you to deploy and manage multiple access points in a simple and cost-effective way across your premises.

Single Point Setup provides a unique centralized method to administer and control wireless services across multiple devices. Via one access point on the LAN, you have a single view of the whole WLAN to replicate configuration, security, and management across all access points.

With the Cisco WAP321, you can build on your existing network to deliver high-performance wireless access with the scalability you need as your business grows and evolves.

Figure 1 shows a typical configuration using this wireless access point. Figures 2 and 3 show the front and back, respectively, of the Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup.

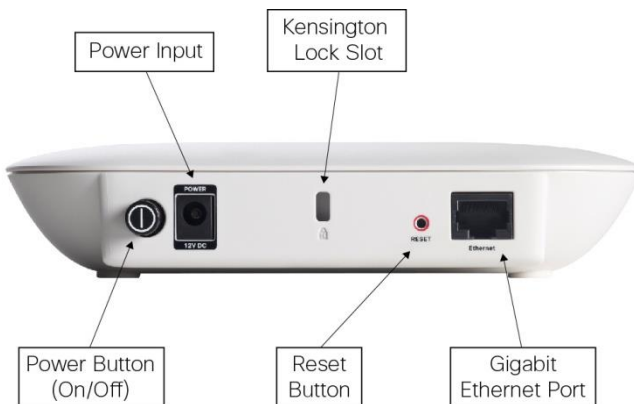
**Figure 1.** Typical Configuration



**Figure 2.** Front Panel of the Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup



**Figure 3.** Back Panel of the Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup



## Features

- Highly secure, high-speed 802.11n wireless networking delivers enhanced throughput and extended range for bandwidth-intensive applications.
- Wizard-based setup and configuration enables fast, simple deployment.
- Single Point Setup controllerless multi-access point deployment and management technology makes configuration simple.
- Gigabit Ethernet LAN interface provides high-speed connectivity for faster downloads and demanding applications.
- Selectable-band wireless access lets you switch bands to minimize interference from other office devices and improve performance.
- Robust security, including WPA2, 802.1X with RADIUS secure authentication, and rogue access point detection, helps protect sensitive business information.
- Support for PoE enables easy installation without the expense of additional wiring.
- Workgroup Bridge mode lets you expand your network by wirelessly connecting to a second Ethernet network.

- Elegant, compact design with internal antennas and versatile mounting kit enables installation on a ceiling, wall, or desktop.
- Intelligent QoS prioritizes network traffic to keep critical network applications running at top performance.
- Power-saving sleep mode and port control features help maximize energy efficiency.
- Highly secure guest access enables safe wireless connectivity for visitors.
- Support for IPv6 lets you deploy future networking applications and operating systems without costly upgrades.

## Specifications

Table 1 lists the specifications, package contents, and minimum requirements for the Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup.

**Table 1.** Specifications

Specifications	Description
Standards	IEEE 802.11n, 802.11g, 802.11b, 802.3, 802.3u, 802.1X (security authentication), 802.1Q (VLAN), 802.11i (WPA2 security), 802.11e (wireless QoS), IPv4 (RFC 791), IPv6 (RFC 2460)
Ports	Ethernet, Power
Switch	Power button (on/off)
Buttons	Reset
Cabling type	Category 5e or better
LEDs	Power, Wireless, LAN
Operating system	Linux
<b>Physical Interfaces</b>	
Ports	Gigabit Ethernet, 12V DC power with support for 802.3af PoE
Power supply	Not included with access point, but supports external power 12V DC power jack (Energy Star 2.0 compliant with Efficiency Level 5) and 802.3af PoE
Buttons	Power (on/off) push button; Reset button
Lock slot	Slot for Kensington lock
LED	Power, Wireless, Ethernet
<b>Physical Specifications</b>	
Physical dimensions (W x D x H)	6.66 x 6.67 x 1.38 in. (169.08 x 169.42 x 35 mm)
Weight	0.606 lb or 275g
<b>PoE</b>	
PoE	802.3af
Peak PoE power	10.6W
<b>Network Capabilities</b>	
Network protocols	IEEE 802.11n, 802.11g, 802.11b, 802.3, 802.3u, 802.1X (security authentication), 802.1Q (VLAN), 802.11i (WPA2 security), 802.11e (wireless QoS), IPv4 (RFC 791), IPv6 (RFC 2460), RADIUS, syslog, HTTP/HTTPS, Simple Network Management Protocol (SNMP)
VLAN support	Yes
Number of VLANs	1 management VLAN plus 8 VLANs for SSID
Multiple SSIDs	8
802.1X supplicant	Yes
802.11d	No
SSID to VLAN mapping	Yes
Auto channel selection	Yes

Specifications	Description
Spanning tree	Yes
Load balancing	Yes
IPv6	Yes <ul style="list-style-type: none"> <li>• IPv6 host support</li> <li>• IPv6 RADIUS, syslog, Network Time Protocol (NTP), etc.</li> </ul>
Layer 2	802.1Q-based VLANS, 8 active VLANS plus 1 management VLAN
<b>Security</b>	
WEP/WPA/WPA2	Yes, including Enterprise authentication
Access control	Yes, management access control list (ACL) plus MAC ACL
Secure management	HTTPS
Wi-Fi Protected Setup (WPS)	Yes (soft WPS, no hardware push button)
SSID broadcast	Yes
Rogue access point detection	Yes
<b>Mounting and Physical Security</b>	
Multiple mounting options	Desktop installation; mounting bracket included for easy ceiling or wall mounting
Physical security lock	Kensington lock slot
<b>Quality of Service</b>	
Quality of service (QoS)	Wi-Fi Multimedia Traffic Specification (WMM TSPEC)
<b>Performance</b>	
Wireless throughput	Data rate =300 Mbps; actual client throughput will vary.
Recommended user support	Up to 32 connective users, 20 active users
<b>Configuration</b>	
Web user interface	Built-in web user interface for easy browser-based configuration (HTTP/HTTPS)
<b>Multi-Access Point Management</b>	
Single Point Setup	Yes
Maximum access points per cluster	8
Active clients per cluster	80
<b>Management</b>	
Management protocols	Web browser, SNMP v3, Bonjour
Remote management	Yes
Event logging	Local, remote syslog, email alerts
Network diagnostics	Logging and packet capture
Web firmware upgrade	Firmware upgradable through web browser, imported/exported configuration file
Dynamic Host Configuration Protocol (DHCP)	DHCP client
IPv6 host	Yes
HTTP redirect	Yes, and captive portal
<b>Wireless</b>	
Frequency	Selectable-band 2.4 GHz or 5 GHz (not concurrent)
Radio and modulation type	Single radio, orthogonal frequency division multiplexing (OFDM)
WLAN	802.11n
Operating channels	1 to 13 (depending on country)
Wireless isolation	Wireless isolation between clients
External antennas	None

Specifications	Description
Internal antennas	Internal fixed PIFA antenna
Antenna gain in dBi	2 dBi each antenna
Transmitted output power	<ul style="list-style-type: none"> <li>• 802.11b @ 11 Mbps: 17 dBm</li> <li>• 802.11g @ 54 Mbps: 13 dBm</li> <li>• 802.11n @ HT20HT40, MCS15: 13 dBm</li> </ul>
Receiver sensitivity	<ul style="list-style-type: none"> <li>• 802.11b: 11 Mbps @ -86 dBm</li> <li>• 802.11g: 54 Mbps @ -71 dBm</li> <li>• 802.11n: 300 Mbps @ -64 dBm</li> </ul>
Wireless Distribution System (WDS)	Yes
Roaming	Yes
Fast roaming	802.11i preauthentication
Active WLAN clients	Same as number of users: 32 max connected users, 20 active users recommended
Multiple SSIDs	8
Wireless VLAN map	Yes
WLAN security	Yes
Wi-Fi Multimedia (WMM)	Yes, with automatic power save, and Voice profile
<b>Operating Modes</b>	
Access point	Access Point mode, WDS bridging, Workgroup Bridge mode
<b>Environmental</b>	
Power	12V 1A DC input, and IEEE 802.3af compliant PoE
Certifications	FCC class B, CE, IC, Wi-Fi
Operating temperature	0° to 40°C (32° to 104°F)
Storage temperature	-20° to 70°C (-4° to 158°F)
Operating humidity	10% to 85% noncondensing
Storage humidity	5% to 90% noncondensing
Mean time between failures (MTBF)	492281 hours
<b>Package Contents</b>	
<ul style="list-style-type: none"> <li>• Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup</li> <li>• Ceiling/wall mounting kit</li> <li>• User guide on CD-ROM</li> <li>• Quick-start guide</li> <li>• Ethernet network cable</li> </ul>	
<b>Minimum Requirements</b>	
<ul style="list-style-type: none"> <li>• 802.11b, 802.11g, 802.11n wireless adapter with TCP/IP protocol installed per PC</li> <li>• Switch/router with PoE support or PoE injector when used with PoE</li> <li>• Web-based configuration: Java-enabled web browser</li> </ul>	
<b>Warranty</b>	
Access point	Limited lifetime

## Ordering Information

Table 2 gives ordering information for the Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup.

**Table 2.** Ordering Information

Part Number	Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup
WAP321-A-K9	Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup (U.S./Canada, Australia, New Zealand, India, Argentina, Brazil, Hong Kong, Singapore)
WAP321-E-K9	Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup (Europe, Japan, Korea, Russia)
WAP321-C-K9	Cisco WAP321 Wireless-N Selectable-Band Access Point with Single Point Setup (China, Malaysia, Taiwan)
Part Number	Cisco Small Business Power over Ethernet Injector
SB-PWR-INJ1-AU	Cisco Small Business Power over Ethernet Injector (Australia, New Zealand)
SB-PWR-INJ1-UK	Cisco Small Business Power over Ethernet Injector (United Kingdom)
SB-PWR-INJ1-NA	Cisco Small Business Power over Ethernet Injector (North America)
SB-PWR-INJ1-JP	Cisco Small Business Power over Ethernet Injector (Japan)
SB-PWR-INJ1-CN	Cisco Small Business Power over Ethernet Injector (China, Hong Kong)
SB-PWR-INJ1-EU	Cisco Small Business Power over Ethernet Injector (Europe)
SB-PWR-INJ1-IN	Cisco Small Business Power over Ethernet Injector (India)
Part Number	Cisco Small Business 12V Power Adapter
SB-PWR-12V-AU	Cisco Small Business 12V Power Adapter (Australia, New Zealand)
SB-PWR-12V-UK	Cisco Small Business 12V Power Adapter (United Kingdom)
SB-PWR-12V-NA	Cisco Small Business 12V Power Adapter (North America)
SB-PWR-12V-JP	Cisco Small Business 12V Power Adapter (Japan)
SB-PWR-12V-CN	Cisco Small Business 12V Power Adapter (China, Hong Kong)
SB-PWR-12V-EU	Cisco Small Business 12V Power Adapter (Europe)
SB-PWR-12V-KR	Cisco Small Business 12V Power Adapter (Korea)
SB-PWR-12V-AR	Cisco Small Business 12V Power Adapter (Argentina)
SB-PWR-12V-BR	Cisco Small Business 12V Power Adapter (Brazil)

## Cisco Limited Lifetime Warranty for Cisco Small Business Series Products

This Cisco Small Business product comes with a limited lifetime hardware warranty for complete peace of mind. Product warranty terms and other information applicable to Cisco products are available at [www.cisco.com/go/warranty](http://www.cisco.com/go/warranty).

## Cisco Small Business Support Service

This optional service offers affordable, 3-year peace-of-mind coverage. This subscription-based, device-level service helps you protect your investment and derive maximum value from Cisco Small Business products. Delivered by Cisco and backed by your trusted partner, this comprehensive service includes software updates, extended access to the Cisco Small Business Support Center, and expedited hardware replacement, should it be required.

## For More Information

For more information on Cisco Small Business products and solutions, visit [www.cisco.com/smallbusiness](http://www.cisco.com/smallbusiness).



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