

CISCO SBCS 1.0 Solution Fundamentals

Wireless in the Solution



Overview of Wireless Capabilities

Why mobility?

Reasons to Invest	Description
Technology maturity	Wireless networking is a mature, secure, and safe technology that companies are deploying for many business benefits.
Cost effectiveness	
Quality of work life	
Increased accuracy	



Overview of Wireless Capabilities – Why mobility?

Overview of Wireless Capabilities

Why mobility?

Reasons to Invest	Description
Technology maturity	Mobility is cost effective. Out of 184 companies surveyed, ROI exceeded initial estimates by three times. TCO calculations estimate less than 16 cents per employee for WLAN over three years.
Cost effectiveness	
Quality of work life	
Increased accuracy	



Overview of Wireless Capabilities – Why mobility?

Overview of Wireless Capabilities

Why mobility?

Reasons to Invest	Description
Technology maturity	Eighty-seven percent of end users surveyed agree that WLAN improves the quality of work life.
Cost effectiveness	
Quality of work life	
Increased accuracy	



Overview of Wireless Capabilities – Why mobility?

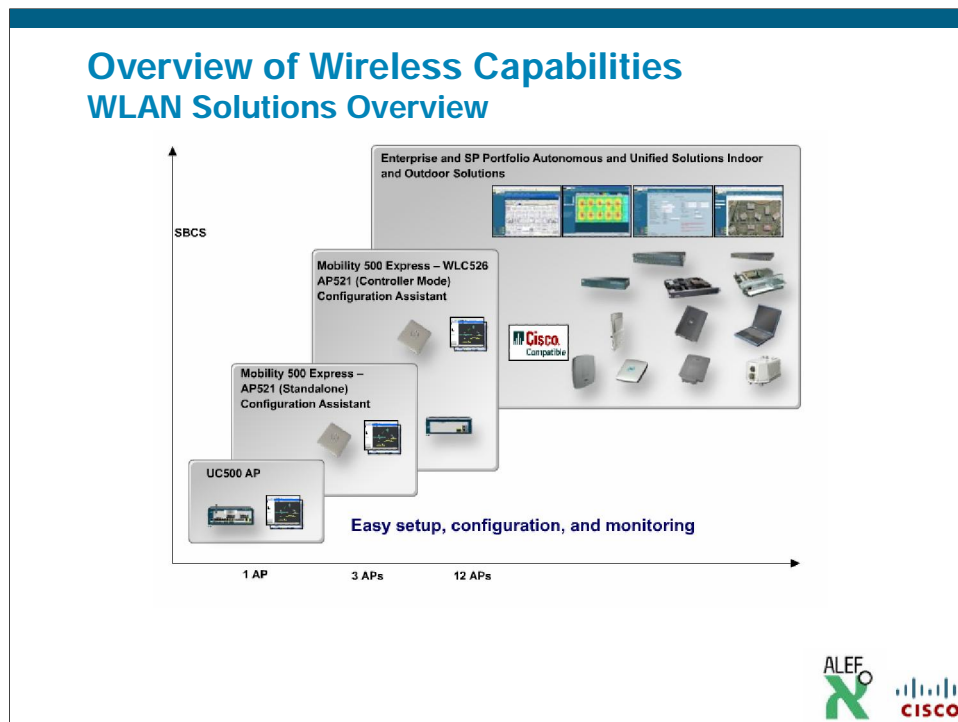
Overview of Wireless Capabilities

Why mobility?

Reasons to Invest	Description
Technology maturity	Over 60 percent of users surveyed agree that WLAN-enabled devices increase accuracy of everyday tasks, particularly in healthcare and manufacturing.
Cost effectiveness	
Quality of work life	
Increased accuracy	



Overview of Wireless Capabilities – Why mobility?




Overview of Wireless Capabilities – WLAN Solutions Overview

SBCS provides several wireless network options, depending on business size, number of users, and desired mobility services. The UC520 includes an optional, integrated wireless access point. This enables customers to easily install a wireless network for a small office. Customers with larger facilities, needing more wireless coverage or support for more users will want to install the Cisco Mobility Express Solution.

Cisco Mobility Express includes WLAN access points and mobility controllers for deploying Wi-Fi networks in businesses with up to 250 employees. This solution delivers advanced features such as secure guest access, Radio Resource Management for optimal wireless coverage, and centralized AP control for streamlined configuration and management. This is a cost-effective solution that scales as your customers' network coverage and mobility needs expand, offering excellent investment protection.

Cisco Mobility Express is fully integrated with the Smart Business Communications System for seamless integration with voice and wired infrastructures and Cisco Configuration Assistant, the SBCS management platform.


Overview of Wireless Capabilities Cisco SBCS Mobility Portfolio

SBCS Mobility Products	Description
Integrated UC520 AP	 <p>The UC520 is a Unified Communications solution for small businesses that provides voice, data, voice mail, Automated Attendant, video, security, and wireless capabilities while integrating with existing desktop applications such as calendar, e-mail, and CRM programs. This easy-to-manage platform uses business-class, proven Unified Communications technologies to their full advantage and supports flexible deployment models based on your needs.</p> <p>Highlights include:</p> <ul style="list-style-type: none">• Integrated single AP.• 802.11b/g.• Range of Encr/Auth.• Uses Cisco Configuration Assistant.• SKU: depends on configuration.
AP521 Express	
WLC526 Express	



Overview of Wireless Capabilities – Cisco SBCS Mobility Portfolio

Overview of Wireless Capabilities Cisco SBCS Mobility Portfolio

SBCS Mobility Products	Description
Integrated UC520 AP	 <p>As part of the Cisco Mobility Express Solution, the 521 Access Point cost-effectively offers the versatility of operating either in standalone or controller-based mode with the Cisco 500 Series Wireless Express Controller.</p> <p>The Cisco 521 Wireless Express Access Point provides:</p> <ul style="list-style-type: none">• Standards-based, enterprise-class security.• Exceptional range and productivity.• Simultaneous air monitoring and traffic delivery.• Simplified management with Cisco Configuration Assistant.• 802.11b/g standalone or with WLC526.• SKU: AIR-AP521G-x-K9 (standalone).• AIR-LAP521G-x-K9 (with WLC).
AP521 Express	
WLC526 Express	



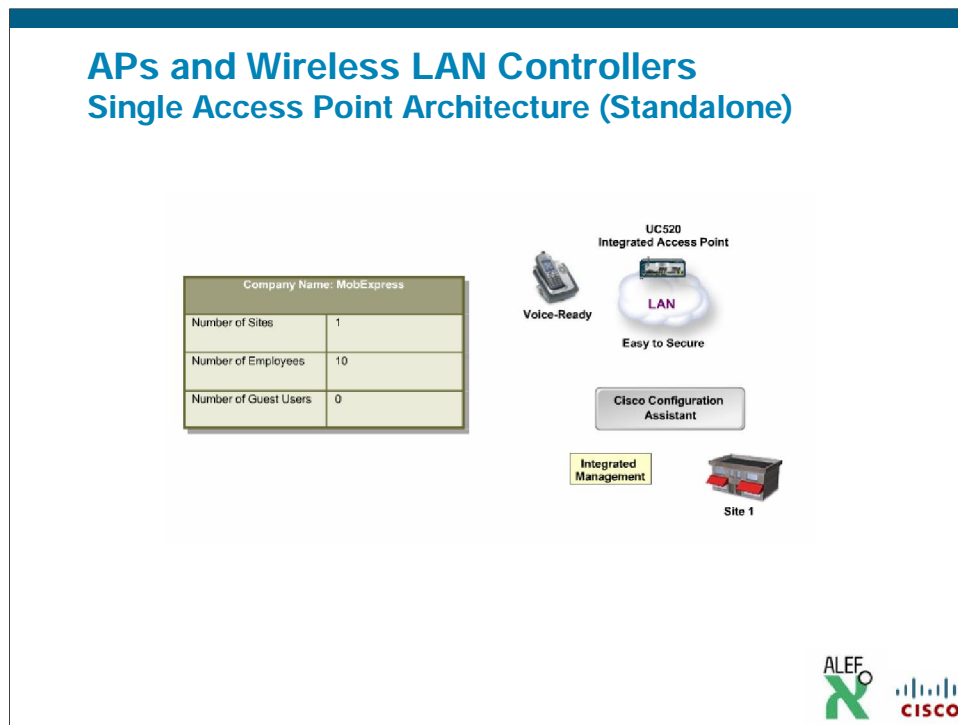
Overview of Wireless Capabilities – Cisco SBCS Mobility Portfolio

Overview of Wireless Capabilities Cisco SBCS Mobility Portfolio

SBCS Mobility Products	Description
Integrated UC520 AP	 <p>The Cisco 526 Wireless Express Mobility Controller can be used with six access points per controller and two controllers per network. It harnesses the power of Cisco Lightweight Access Point Protocol (LWAPP) technology, best-in-class automatic radio optimization, mobility performance, and multi-access-point management at the capacity, simplicity, and price point appropriate for the SMB. On top of the basic transport layer, this controller supports Cisco Secure Guest Access and voice-over-WLAN advanced mobility services. Along with other products in the Smart Business Communications System, this controller uses Cisco Configuration Assistant software rather than a command-line interface, accelerating deployment and decreasing the cost of ongoing maintenance.</p> <p>Highlights include:</p> <ul style="list-style-type: none">• Six AP controllers, two per network.• Radio Resource Management.• SKU: AIR-WLC526-K9.
AP521 Express	
WLC526 Express	



Overview of Wireless Capabilities – Cisco SBCS Mobility Portfolio

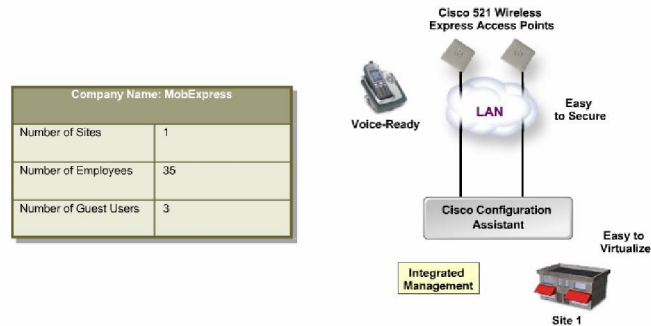


APs and Wireless LAN Controllers – Single Access Point Architecture (Standalone)

As an example, single access point architecture represents a phased approach that is designed to evolve with customer needs. For optimal coverage the UC520 with an integrated wireless AP in the UC520 needs to be placed in a location that offers the best client connectivity. The standalone architecture provides a foundation for simpler and faster mobile adoption with a path for increased coverage.

APs and Wireless LAN Controllers

1-3 Access Point Architecture (Standalone)

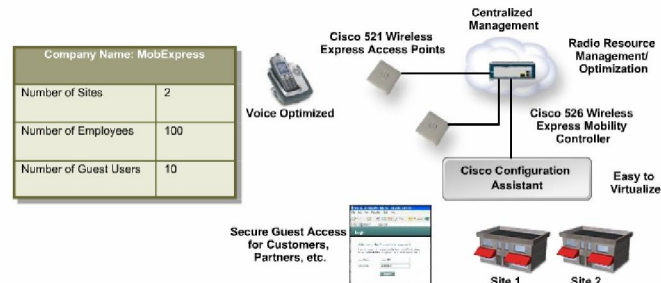


APs and Wireless LAN Controllers – 1-3 Access Point Architecture (Standalone)

If wireless coverage is needed beyond the range of the UC520, additional access points can be added. Adding wireless to a wired infrastructure can also be a cost-effective and simple way to offer network and Internet access to areas that did not have it in the past. In order to expand the reach of wireless network coverage, the SBCS system includes the Cisco Mobility Express Solution.

APs and Wireless LAN Controllers

1-6 or 2-12 Access Point (Single or Dual Controller-based)



APs and Wireless LAN Controllers – 1-6 or 2-12 Access Point (Single or Dual Controller-based)

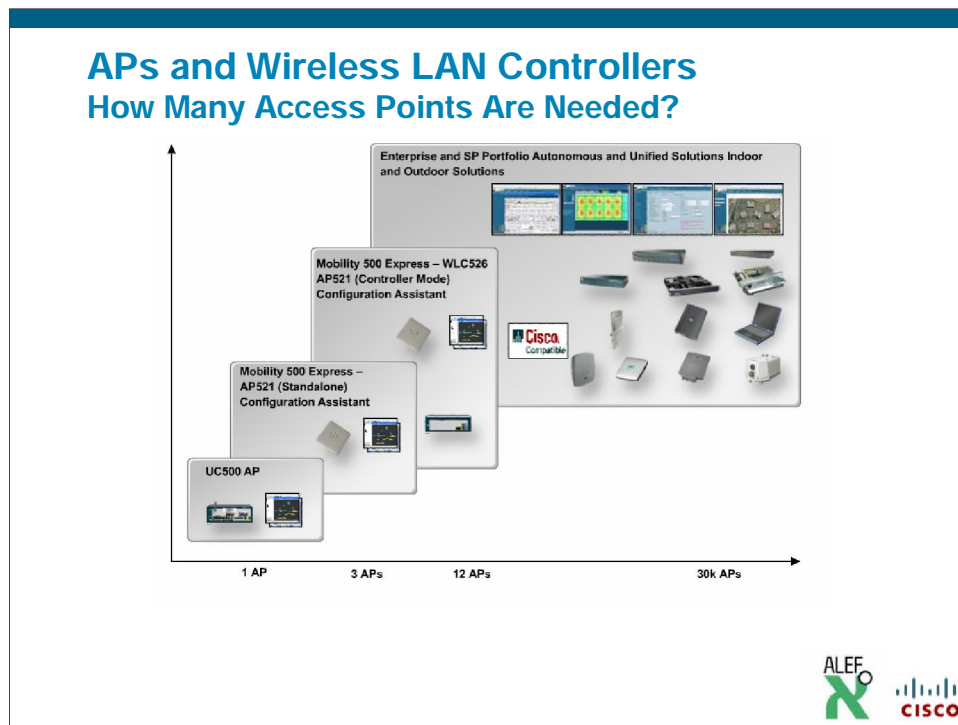
With more wireless users and coverage required, this company is now in need of more APs and centralized management with the Cisco 526 Wireless Express Mobility Controller. This solution is built to simplify management and automatically optimize performance while adding advanced mobility services.

APs and Wireless LAN Controllers Advanced Mobility Services

The diagram illustrates the WLC526 Express controller's capabilities. On the left is a vertical white panel labeled 'WLC526 Express' with a small image of the device. A large white arrow points from this panel to the right. On the right, there are two items: a screenshot of a 'Secure Guest Access' login page with fields for 'New Guest' and 'Password', and a mobile phone labeled 'Voice over WiFi Optimizations'. In the bottom right corner, there are logos for 'ALEF' and 'CISCO'.

APs and Wireless LAN Controllers – Advanced Mobility Services

The WLC526 offers advanced mobility services beyond basic access with controller architectures. By providing secure guest access, the data from your customers, partners, vendors, or tenants can be kept separate from yours. With Voice over WiFi optimizations, the WLC526 offers a package of features to optimize quality-of-service, quality-of-coverage, and quality-of-handoff as the user roams from AP to AP.



APs and Wireless LAN Controllers – How Many Access Points Are Needed?

Optimal radio planning can require radio expertise, site surveys, and experience. Cisco provides advanced training courses in these areas.

With SBCS and Mobility Express, radio planning and wireless deployment is easier. Understanding a few general guidelines and radio principals will help you achieve better wireless coverage. Mounting the AP to the ceiling greatly improves wireless coverage.

Radio signals penetrate 1 to 2 thin walls, or 1 medium to thick wall before you need to add another AP. Signals cannot get across metal, such as elevator shafts or heavy machinery, or glass walls.

APs and Wireless LAN Controllers Feature-Level Differentiation

Feature-level Differences	Description
Management	<p>Express management is designed for the SMB ecosystem, Consumer/SOHO with:</p> <ul style="list-style-type: none">• Each AP is independent.• Consumer-grade web GUI. <p>Express (SBOS) with:</p> <ul style="list-style-type: none">• Cisco Configuration Assistant for multitechnology configuration• Express-grade web GUI (optional).• WLC one-touch management to all APs.• Troubleshooting CLI (show/debug).
Capacity	
Radio/mobility infrastructure	
Internal IP services	
Authentication/security	
Advanced mobility services	



APs and Wireless LAN Controllers – Feature-Level Differentiation

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Feature-level Differences	Description
Management	<p>Capacity is designed for less than 12 access point builds. Consumer/SOHO:</p> <ul style="list-style-type: none">• Designed to be single AP system with one room coverage <p>Express (SBCS) utilizes:</p> <ul style="list-style-type: none">• 1 to 3 APs per network (standalone mode).• 1 to 12 APs per network (controller mode).• 6 APs per controller, two controllers per network.
Capacity	
Radio/mobility infrastructure	
Internal IP services	
Authentication/security	
Advanced mobility services	



APs and Wireless LAN Controllers – Feature-Level Differentiation

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Feature-level Differences	Description
Management	<p>Wide diversity of devices supported, scaled for SMB, Consumer/SOHO:</p> <ul style="list-style-type: none">• Consumer-power radio• No AP-AP handover <p>Express (SBCS):</p> <ul style="list-style-type: none">• Enterprise-power radio• Designed for wide range of mobile and embedded devices such as COX and WMM.• Inter-AP Mobility, Inter-WLC Handover.
Capacity	
Radio/mobility infrastructure	
Internal IP services	
Authentication/security	
Advanced mobility services	



APs and Wireless LAN Controllers – Feature-Level Differentiation

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Feature-level Differences	Description
Management	<p>Internal IP services are designed for a business network. Consumer/SOHO:</p> <ul style="list-style-type: none">• Internet-only DHCP server• No RADIUS server support <p>Express (SBCS):</p> <ul style="list-style-type: none">• Integrates with external DHCP server• Integrates with external RADIUS server
Capacity	
Radio/mobility infrastructure	
Internal IP services	
Authentication/security	
Advanced mobility services	



APs and Wireless LAN Controllers – Feature-Level Differentiation

APs and Wireless LAN Controllers Feature-Level Differentiation

Feature-level Differences	Description
Management	<p>The entire base feature set is needed in an SMB, Consumer/SOHO:</p> <ul style="list-style-type: none">• Intended for one to two devices, low security needs, all with the same authentication or encryption• None, WEP, or MAC authentication or encryption
Capacity	
Radio/mobility infrastructure	
Internal IP services	
Authentication/security	
Advanced mobility services	



APs and Wireless LAN Controllers – Feature-Level Differentiation

APs and Wireless LAN Controllers Feature-Level Differentiation

Feature-level Differences	Description
Management	Advanced mobility services that are tuned for SMB consist of: <ul style="list-style-type: none">• Consumer/SOHO: Not applicable Express (SBGS) guest access secures guest SSID/VLAN, configurable guest portal web page, and VoWLAN optimizationsAdvanced Security: Rogue client/AP detection, intrusion prevention, and location services.
Capacity	
Radio/mobility infrastructure	
Internal IP services	
Authentication/security	
Advanced mobility services	



APs and Wireless LAN Controllers – Feature-Level Differentiation

