Cisco 5500 Series Wireless Controllers

Maximum Performance and Scalability

- Support for up to 250 access points and 7000 clients.
- 802.11n optimized for up to nine times the performance of 802.11a/g networks.
- Enhanced uptime with the ability to simultaneously configure and manage 250 access points per controller

Improved Mobility and Services

- Larger mobility domain for more simultaneous client associations.
- Faster RRM updates for uninterrupted network access when roaming.
- Intelligent RF control plane for self-configuration, self-healing, and self-optimization.
- Efficient roaming improves application performance such as toll quality, voice, and consistent streaming video and data backup.

Licensing Flexibility and Investment Protection

- Additional access point and feature licenses may be added over time.
- Optional WPLUS software supports a variety of business mobility scenarios:
  - OfficeExtend solution for mobile teleworkers with full hardware encryption for added security across remote WAN/LAN links
  - Enterprise Wireless Mesh

OfficeExtend Solution

- Secure, simple, cost-effective mobile teleworker solution.
- Up to 250 remote access points per controller.
- Supports Unified Communications wireless phones for reduced cell phone charges.

Comprehensive Wired/Wireless Security

- Full CAPWAP access point to controller encryption with WPLUS license.
- Supports rogue access point detection and denial-of-service attacks.
- Management frame protection detects malicious users and alerts network administrators.

Enterprise Wireless Mesh

- Dynamic wireless mesh networks support indoor and outdoor connectivity for areas that are difficult to wire.

Environmentally Responsible

- Support for adaptive power management to turn off access point radios during off-peak hours to reduce power consumption.
- OfficeExtend solution reduces costs and supports green best practices by reducing commuting time and saving on gas, vehicle mileage, and insurance costs.

The Cisco® 5500 Series Wireless Controller is a highly scalable and flexible platform that enables systemwide services for mission-critical wireless in medium to large-sized enterprises and campus environments. Designed for 802.11n performance and maximum scalability, the 5500 Series offers enhanced uptime with the ability to simultaneously manage 250 access points; superior performance for reliable streaming video and toll quality voice; and improved fault recovery for a consistent mobility experience in the most demanding environments.

Features

Optimized for next-generation wireless networking, the 5500 Series offers improved mobility and prepares the business for the next wave of mobile devices and applications. The 5500 Series supports a higher density of clients and delivers more efficient roaming, with at least nine times the throughput of existing 802.11a/g networks.

The 5500 Series automates wireless configuration and management functions and allows network managers to have the visibility and control needed to cost-effectively manage and secure their wireless networks. As a component of the Cisco Unified Wireless Network, this controller provides real-time communication between Cisco Aironet® access points, the Cisco Wireless Control System (WCS), and the Cisco Mobility Services Engine to deliver centralized security policies, wireless intrusion prevention system (IPS) capabilities, award-winning RF management, and quality of service (QoS).

Software Licensing Flexibility

Base access point licensing offers flexibility to add additional access points as business needs grow. Optional WPLUS software supports a variety of business mobility needs, including the OfficeExtend solution for secure, mobile teleworking and Enterprise Wireless Mesh, which allows access points to dynamically establish wireless connections in locations where it may be difficult or impossible to physically connect to the wired network.

Table 1 lists the features of the Cisco 5500 Series Wireless LAN Controllers.

Table 1. Cisco 5500 Series Wireless LAN Controller Features

Feature	Benefits
Scalability	• Supports 12, 25, 50,100 or 250 access points for business-critical wireless services at locations of all sizes.
High Performance	• Wire speed, non-blocking performance for 802.11n networks.
OfficeExtend	• Optional WPLUS license supports corporate wireless service for mobile and remote workers with secure wired tunnels to the Cisco Aironet® 1130 or 1140 Series Access Points. • Extends the corporate network to remote locations with minimal set up and maintenance requirements (zero-touch deployment). • Improves productivity and collaboration at remote site locations. • Separate SSID tunnels allow both corporate and personal Internet access. • Reduced CO2 emissions from decrease in commuting. • Higher employee job satisfaction from ability to work at home. • Improves business resiliency by providing continuous, secure connectivity in the event of disasters, pandemics, or inclement weather.
Comprehensive End-to-End Security	• Optional WPLUS license offers Control and Provisioning of Wireless Access Points (CAPWAP) encryption to ensure full-line-rate encrytpion between access points and controllers across remote WAN/LAN links.
Enterprise Wireless Mesh	• Allows access points to dynamically establish wireless connections without the need for a physical connection to the wired network. • Available on select Cisco Aironet access points, Enterprise Wireless Mesh is ideal for warehouses, manufacturing floors, shopping centers and any other location where extending a wired connection may prove difficult or aesthetically unappealing.
End-to-end Voice	• Supports Unified Communications for improved collaboration through messaging, presence, and conferencing. • Supports all Cisco Unified Communications Wireless IP Phones for cost-effective, real-time voice services.
High Availability	• An optional redundant power supply helps to ensure maximum availability.
Environmentally Responsible	• Organizations may choose to turn off access point radios to reduce power consumption during off peak hours.

Table 2 lists the product specifications for Cisco 5500 Series Wireless Controllers.

Table 2. Product Specifications for Cisco 5500 Series Wireless Controllers

Item	Specifications
Part Number	• Cisco 5500 Series Wireless Controllers • AIR-CT5508-12-K9, for up to 12 Cisco access points • AIR-CT5508-25-K9, for up to 25 Cisco access points • AIR-CT5508-50-K9, for up to 50 Cisco access points • AIR-CT5508-100-K9, for up to 100 Cisco access points • AIR-CT5508-250-K9, for up to 250 Cisco access points • For more details and licensing options please visit the Cisco 5500 Series Wireless Controller Ordering Guide: http://www.cisco.com/en/US/prod/collateral/wireless/ps6302/ps8322/ps10315/ordering_guide_c07-522736.html • SMARTnet Support 8 x 5 x NBD • CON-SNT-CT0812 • CON-SNT-CT0825

Item	Specifications
	• CON-SNT-CT0850 • CON-SNT-CT08100 • CON-SNT-CT08250 • Cisco WLAN Advance Services Consulting • AS-WLAN-CNSLT
Wireless	IEEE 802.11a, 802.11b, 802.11g, 802.11d, WMM/802.11e, 802.11h, 802.11n
Wired/Switching/ Routing	IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX specification, 1000BASE-T. 1000BASE-SX, 1000-BASE-LH, IEEE 802.1Q Vtagging, IEEE 802.1D Spanning Tree Protocol, and IEEE 802.1AX Link Aggregation.
Data Request For Comments (RFC)	• RFC 768 UDP • RFC 791 IP • RFC 2460 IPv6 (pass through Bridging mode only) • RFC 792 ICMP • RFC 793 TCP • RFC 826 ARP • RFC 1122 Requirements for Internet Hosts • RFC 1519 CIDR • RFC 1542 BOOTP • RFC 2131 DHCP • CAPWAP RFC
Security Standards	• WPA • IEEE 802.11i (WPA2, RSN) • RFC 1321 MD5 Message-Digest Algorithm • RFC 1851 The ESP Triple DES Transform • RFC 2104 HMAC: Keyed Hashing for Message Authentication • RFC 2246 TLS Protocol Version 1.0 • RFC 2401 Security Architecture for the Internet Protocol • RFC 2403 HMAC-MD5-96 within ESP and AH • RFC 2404 HMAC-SHA-1-96 within ESP and AH • RFC 2405 ESP DES-CBC Cipher Algorithm with Explicit IV • RFC 2406 IPsec • RFC 2407 Interpretation for ISAKMP • RFC 2408 ISAKMP • RFC 2409 IKE • RFC 2451 ESP CBC-Mode Cipher Algorithms • RFC 3280 Internet X.509 PKI Certificate and CRL Profile • RFC 3602 The AES-CBC Cipher Algorithm and Its Use with IPsec • RFC 3686 Using AES Counter Mode with IPsec ESP • RFC 4347 Datagram Transport Layer Security • RFC 4346 TLS Protocol Version 1.1
Encryption	• WEP and TKIP-MIC: RC4 40, 104 and 128 bits (both static and shared keys) • SSL and TLS: RC4 128-bit and RSA 1024- and 2048-bit • AES: CCM, CCMP • IPSec: DES-CBC, 3DES, AES-CBC
Authentication, Authorization, and Accounting (AAA)	• IEEE 802.1X • RFC 2548 Microsoft Vendor-Specific RADIUS Attributes • RFC 2716 PPP EAP-TLS • RFC 2865 RADIUS Authentication • RFC 2866 RADIUS Accounting • RFC 2867 RADIUS Tunnel Accounting • RFC 2869 RADIUS Extensions • RFC 3576 Dynamic Authorization Extensions to RADIUS • RFC 3579 RADIUS Support for EAP • RFC 3580 IEEE 802.1X RADIUS Guidelines • RFC 3748 Extensible Authentication Protocol • Web-based authentication • TACACS support for management users

Item	Specifications
Management	• SNMP v1, v2c, v3 • RFC 854 Telnet • RFC 1155 Management Information for TCP/IP-Based Internets • RFC 1156 MIB • RFC 1157 SNMP • RFC 1213 SNMP MIB II • RFC 1350 TFTP • RFC 1643 Ethernet MIB • RFC 2030 SNTP • RFC 2616 HTTP • RFC 2665 Ethernet-Like Interface types MIB • RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and Virtual Extensions • RFC 2819 RMON MIB • RFC 2863 Interfaces Group MIB • RFC 3164 Syslog • RFC 3414 User-Based Security Model (USM) for SNMPv3 • RFC 3418 MIB for SNMP • RFC 3636 Definitions of Managed Objects for IEEE 802.3 MAUs • Cisco private MIBs
Management Interfaces	• Web-based: HTTP/HTTPS • Command-line interface: Telnet, Secure Shell (SSH) Protocol, serial port • Cisco Wireless Control System (WCS)
Interfaces and Indicators	• Uplink: 8 (5508) 1000BaseT, 1000Base-SX and 1000Base-LH transceiver slots • Small Form-Factor Pluggable (SFP) options (only Cisco SFPs supported): GLC-T, GLC-SX-MM, GLC-LH-SM • LED indicators: link • Service Port: 10/100/1000 Mbps Ethernet (RJ45). • Service Port : 10/100/1000 Mbps Ethernet (RJ45) For High Availability for future use • LED indicators: link, • Utility Port: 10/100/1000 Mbps Ethernet (RJ45) • LED indicators: link • Expansion Slots: 1 (5508) • Console Port: RS232 (DB-9 male/RJ-45 connector included), mini-USB • Other Indicators: Sys, ACT, Power Supply 1, Power Supply 2
Physical and Environmental	• Dimensions (WxDxH): 17.30 x 21.20 x 1.75 in. (440 x 539 x 44.5 mm) • Weight: 20 lbs (9.1 kg) with 2 power supplies • Temperature: Operating temperature: 32 to 104°F (0 to 40°C); Storage temperature: –13 to 158°F (–25 to 70°C) • Humidity: Operating humidity: 10 95%, noncondensing; Storage humidity: up to 95% • Input power: 100 to 240 VAC; 50/60 Hz; 1.05 A at 110 VAC, 115 W Maximum; 0.523 A at 220 VAC, 115 W Maximum; Test Conditions: Redundant Power Supplies, 40C, Full Traffic. • Heat Dissipation: 392 BTU/hour at 110/220 VAC Maximum
Regulatory Compliance	• CE Mark • Safety: • UL 60950-1:2003 • EN 60950:2000 • EMI and susceptibility (Class A): • U.S.: FCC Part 15.107 and 15.109 • Canada: ICES-003 • Japan: VCCI • Europe: EN 55022, EN 55024

Summary

The Cisco 5500 Series Wireless Controller is designed for 802.11n performance and offers maximum scalability for enterprise and service provider wireless deployments. It simplifies deployment and operation of wireless networks, helping to ensure smooth performance, enhance security, and maximize network availability. The Cisco 5500 Series Wireless Controller manages all of the Cisco access points within campus environments and branch locations, eliminating complexity and providing network administrators with visibility and control of their wireless LANs.

Service and Support

Cisco and our specialized partners offer a broad portfolio of end-to-end services to help you improve your organization's productivity and collaboration by assisting with the readiness, deployment, and optimization of your wireless network and mobility services. Our services help you successfully deploy the Cisco® 5500 Series Wireless Controller and integrate mobility solutions effectively to lower the total cost of ownership and secure your wireless network.

To learn more about Cisco Wireless LAN Service offers, visit http://www.cisco.com/go/wirelesslanservices.

For More Information

For more information about Cisco wireless controllers, contact your local account representative or visit http://www.cisco.com/en/US/products/ps6366/index.html.

For more information about the Cisco Unified Wireless Network framework, visit http://www.cisco.com/go/unifiedwireless.

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