

Cisco Wireless Controllers



Cisco® Wireless Controllers help reduce overall operational expenses by simplifying network deployment, operations, and management. Extending the same Cisco Borderless Networks policy and security from the wired network core to the wireless edge, Cisco Wireless Controllers deliver the industry's most scalable and highest-performing controller solution. These controllers provide unique network security and optimization for IPv6-enabled mobile clients, and next-generation hotspot functionality from branch offices, to small enterprises, to main campuses.

Cisco Wireless Controllers support systemwide functions to deliver:

- Flexibility to configure wireless policy, management, or security settings at any time through centralized provisioning and management
- Faster response to business needs by centrally managing wireless networks
- Standardized access point configuration for software versioning
- Wireless intrusion prevention system (wIPS) capabilities
- Networkwide quality of service (QoS) for voice and video across wired and wireless networks
- Networkwide centralized security policies across wired and wireless networks
- Industry-leading mobility, security, and management for IPv6 and dual-stack clients, equipping administrators for IPv6 troubleshooting, planning, and client traceability from a common wired and wireless management system

Cisco options for wireless integrated switches and routers provide cost-effective support for converged networks that integrate wireless connectivity. Integrated platforms lower hardware costs, simplify remote management, and offer flexible configurations that can reduce the total cost of operations and ownership.

Cisco Advanced Technology Services

To help ensure an exceptional end-user experience on the wireless network, Cisco Wireless Controllers provide a variety of capabilities, including:

- Integrated Cisco [CleanAir™ technology](#), which protects 802.11n performance by creating a self-healing and self-optimizing wireless network
- Cisco [ClientLink](#) technology specifically for on mixed-client networks, optimizing overall network capacity by helping to ensure that 802.11a/g and 802.11n clients operate at the best possible rates

- Single-point of policy across wired and wireless networks with Cisco Identity Services Engine (ISE). Cisco ISE enables enterprises to adapt to the exponential growth in mobile smartphones, tablets, and laptops. Cisco ISE meets the varied demands for BYOD (bring your own device) with secure, relevant access for employees, guests, and contractors through a single, centralized point of management

Cisco Wireless Controllers for Mid-Sized and Large, Single-Site Enterprises

You can cost-effectively manage and secure your wireless networks with the high-performance Cisco 5500 Series Wireless Controller and Cisco Wireless Service Module 2 (WiSM2) Controller on Cisco Catalyst® 6500 Series Switches.

As the industry's most deployed controller, the Cisco 5500 Series Wireless Controller provides the highest performance, security, and scalability to support business communications today and in the future. Benefits include:



- **Seamless, high-quality mobile experience:** Efficient roaming capabilities help ensure consistent experience on any smart mobile device with voice and video applications
- **Reliability:** Cisco 5500 Series Wireless Controllers provide industry-leading IPv6 roaming with secure access
- **Flexibility to pay as you grow:** The Cisco 5500 Series offers software license flexibility to add additional access points as business requirements change
- **Versatility:** Supports advanced services for any network use case—campus or branch, including Cisco [OfficeExtend](#) solutions for secure mobile teleworking and Cisco Enterprise Wireless Mesh solutions, which allow access points to dynamically establish wireless connections in hard-to-connect locations

Integrate Mission-Critical Enterprise Wireless with Catalyst 6500 Wireless Service Module 2 (WiSM2). Deploy the Cisco Wireless Service Module 2 (WiSM2) Controller on the Catalyst 6500 Series Switches to help enable systemwide wireless functions in medium-sized to large enterprise environments. The Cisco Catalyst 6500 Series WiSM2 is a highly scalable, integrated blade switch that extends the same policies and security from the wired network core to the wireless edge. It lowers hardware costs and offers flexible configuration options that can reduce the total cost of operations and ownership for wireless networks.



Table 1 summarizes the features of Cisco controller products for mid-sized and large, single-site enterprises.

Table 1. Cisco Wireless Controllers for Mid-Sized and Large, Single-Site Enterprises

 <p>Cisco 5500 Series Wireless Controller</p>	<ul style="list-style-type: none"> • Support for up to 500 access points and 7000 clients • 8-Gbps throughput, eight 1 Gigabit Ethernet ports, with Link Aggregation Group (LAG) support • Standalone, rack-mountable appliance
 <p>Cisco Catalyst 6500 Series Wireless Services Module2 (WiSM2)</p>	<ul style="list-style-type: none"> • Support for up to 1000 access points and 15,000 clients • 20-Gbps throughput • Integrated switch blade for Cisco Catalyst 6500 Series chassis • Supports up to seven Cisco WiSM2 blades per chassis for added scalability

Cisco Wireless Controllers for Branch Environments and Multisite Deployments

Consolidate your wireless branch network with the Cisco Flex 7500 Series Wireless Controllers to help network managers cost-effectively manage branch networks. Its robust scalability significantly lowers operating expenses by providing the visibility and control needed to manage thousands of wireless branches from a single location. The Cisco Flex 7500 Series is ideally suited for supporting smaller, leaner branch environments (see Table 2). The Cisco 7500 Series is:

- A cost-effective solution that does not require a local controller at each branch location
- A consolidated, remote management system that allows scaled and consistent control over thousands of branches
- A way to provide secure, centralized policy management of distributed guest and employee access

- A solution that helps ensure business continuity in each local branch by providing resiliency in WAN failures
- A solution that provides efficient networking with local switching of data traffic, allowing WAN optimization and QoS policies without requiring tunneling across the WAN

Table 2. Cisco Wireless Controllers for Multisite Deployments

 <p>Cisco Flex 7500 Series Cloud Controller</p>	<ul style="list-style-type: none"> • Private cloud deployment extends wireless services to distributed branches • Supports up to 1000 branch offices with up to 50 access points per branch • Configure, manage and troubleshoot up to 3000 access points and 30,000 clients from the data center • Designed specifically for wireless branches with local survivability features
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Cisco Wireless Controllers for Small Enterprises

Cisco 2500 Series Wireless Controllers and the Wireless Controller Module for Cisco Integrated Services Router Generation 2 (ISR G2) (Table 3) provide small, single-site enterprise WLAN deployments with entry-level wireless for data. They are ideal for improved mobility with laptops, providing guest access for vendors or customers, or offering limited hotspot coverage. Now you can enhance the productivity of your growing mobile workforce, and scale and add services over time. Other benefits include:

- 802.11n performance and scalability at an attractive entry-level price
- Support for award-winning Cisco CleanAir technology for RF management
- Support for scanners and kiosks for Payment Card Industry (PCI) certified customers
- Support for highly secure guest access, voice, location services, and other collaboration applications



Table 3. Cisco Wireless Controllers for Small Enterprises



 <p>Cisco 2500 Series Wireless Controllers</p>	<ul style="list-style-type: none"> • Support up to 50 access points and 500 clients • 500-Mbps throughput, four 1 Gigabit Ethernet ports (two support Power over Ethernet [PoE]) • Standalone, small form-factor appliance
 <p>Cisco Wireless Controller Module for ISR G2</p>	<ul style="list-style-type: none"> • Supports up to 50 access points and 500 clients <ul style="list-style-type: none"> - Integrated Services Module 300 (ISM- 300) supports up to 10 access points - Services Module 700/710 (SM-700)/ SM-900/910 supports up to 50 access points • PCI functionality for scanner and kiosk support • Supported on the Cisco 1941 and Cisco 2900 and 3900 Series Integrated Services Routers Generation 2 (ISR G2) Routers • Integrated ISR G2 module (supports one wireless module per ISR G2)

Table 4 provides a quick comparison of the different products in the Cisco Wireless Controller portfolio.

Table 4. Cisco Wireless Controller Comparison Chart

	Small Enterprises		Mid-Sized and Large, Single-Site Enterprise		Cisco FlexConnect Branch
	2500 Series	Controller for ISR G2	5500 Series	WiSM2	Flex 7500 Series
Target	Small or Medium-Sized Business	Small or Medium-Sized Business	Mid-Sized to Large Enterprise	Mid-Sized to Large Enterprise	Large Number of Branches
Deployment Model	Local Mode FlexConnect	Local Mode FlexConnect	Local Mode FlexConnect	Local Mode FlexConnect	FlexConnect
Form Factor	Desktop	Integrated Services Module/Services Module (ISM/SM) for ISR G2 1941/2900/3900	One rack unit (1-RU) Appliance	Blade for Cisco Catalyst 6500 Series Switches (CAT6K) (up to 7 per chassis)	1 RU Appliance
Interfaces or Network I/O	4 x 1 Gigabit Ethernet (GE)	ISR G2 Backplane	8 x GE	CAT6K Backplane	2 x 10 Gigabit Ethernet
Power Consumption	80W	Refer to Cisco Service-Ready Engine	125W	220W	675W
Onsite Controller	■	■	■	■	
Centralized Management	■	■	■	■	■
Centralized Data Policy Enforcement	■	■	■	■	
Cisco OfficeExtend Teleworker Solution	■		■	■	Yes



	Small Enterprises		Mid-Sized and Large, Single-Site Enterprise		Cisco FlexConnect Branch
	2500 Series	Controller for ISR G2	5500 Series	WiSM2	Flex 7500 Series
Wireless Mesh	■	■	■	■	
Workgroup Bridge	■	■	■	■	
Access Points Managed	5 to 50	ISM 5 to 10, SM 5 to 50	12 to 500	100 to 1000	300 to 3000
Client Support	500	500	7000	15,000	30,000
Tag Support	500	500	5,000	5,000	
Throughput	500 Mbps	500 Mbps	8 Gbps	20 Gbps	1 Gbps
# of Access Point Groups	30	30	500	500	1000
Access Points per Group	25	25	25	25	50
WLANs	16	16	512	512	512
Link Aggregation Group (LAG)			■		
Mobility	Layer 2/Layer 3	Layer 2/Layer 3	Layer 2/Layer 3	Layer 2/Layer 3	Layer 2
Radio Resource Management (RRM)	■	■	■	■	■
Cisco Network Access Control (NAC)	■	■	■	■	Yes
Datagram Transfer Layer Security (DTLS)	■		■	■	Yes
Cisco Compatible Extensions Call Admission Control (CAC) Wi-Fi Multimedia (WMM)	■	■	■	■	
Multicast	■	■	■	■	
Cisco VideoStream	■	■	■	■	
Guest Services (Wireless)	■	■	■	■	■
Guest Services (Wired)			■	■	
Guest Anchor			■	■	
Access Control Lists (ACLs)	■	■	■	■	Yes (Cisco FlexConnect Access Point)



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.

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>.