



## Q&A

# Cisco Catalyst 3750G Integrated Wireless LAN Controller

## OVERVIEW

**Q.** What is the Cisco® Catalyst® 3750G Integrated Wireless LAN Controller?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller is a Cisco 4400 Series Wireless LAN (WLAN) Controller integrated into the Cisco Catalyst 3750G switch. It works in conjunction with Cisco Aironet® Series lightweight access points, the Cisco Wireless Control System (WCS), and the Cisco Wireless Location Appliance to deliver a highly secure and unified wireless solution that supports mission-critical wireless data, voice, and video applications.

**Q.** Is the Cisco Catalyst 3750G Integrated Wireless LAN Controller part of the Cisco Wireless LAN Controller product line?

**A.** Yes. The Cisco Wireless LAN Controller product line also includes Cisco 2000, and 4400 series wireless LAN controllers as well as the Cisco Wireless LAN Controller Module for Cisco Integrated Services Routers and Wireless Services Module for Cisco Catalyst 6500 Series Switches.

**Q.** Does the Cisco Catalyst 3750G Integrated Wireless LAN Controller support the Cisco Unified Wireless Network?

**A.** Yes. The Cisco Catalyst 3750G Integrated Wireless LAN Controller is a component of the Cisco Unified Wireless Network.

The [Cisco Unified Wireless Network](#) is the industry's first unified wired and wireless solution to cost-effectively address the WLAN security, deployment, management, and control issues facing enterprises. This powerful solution combines the best elements of wireless and wired networking to deliver scalable, manageable, and highly secure WLANs with a low total cost of ownership. It includes innovative RF capabilities that enable real-time access to core business applications and provides proven enterprise-class highly secure connectivity. The Cisco Unified Wireless Network delivers for wireless LANs the level of security, scalability, reliability, ease of deployment, and management that organizations expect from their wired LANs.

## FEATURES AND BENEFITS

**Q.** What features are supported by the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller supports the following features:

- Integrates WLAN controller functions into the highest resiliency stackable Cisco Catalyst 3750G Switch delivering improved operating efficiency, unparalleled WLAN security, intelligent protection switching (IPS), RF management, quality of service (QoS), and Layer 3 fast secure roaming
- Intelligent, adaptive real-time RF management for self-configuration, self-healing, and self-optimization
- Enterprise reliability for automated recovery from failures and mission-critical wireless networks
- Enterprise scalability for business-critical wireless services for deployments of all sizes
- Enterprise-class security with support for Wi-Fi security standards and flexible security policies that are adaptable to changing corporate security needs
- Intrusion detection, location, and containment to preserve the integrity of wireless networks and sensitive corporate information
- Mobility management that allows users to roam between access points and across bridged and routed subnets without requiring changes to the underlying infrastructure
- Simplified deployment and management with zero-configuration deployment and intuitive management interfaces that provide better visibility and control of the air space for reduced operating costs
- High performance to support real-time applications such as voice

**Q.** What are the benefits of the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller provides the control and reliability that IT managers need to build highly secure, business-class indoor and outdoor 802.11 wireless networks. From voice and data services and location tracking to wireless mesh networks, the Cisco Catalyst 3750G Integrated Wireless LAN Controller enables medium-sized organizations and enterprise branch offices to create and enforce policies that support business-critical applications.

**Q.** What is the scalability of the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller scales to support up to 200 lightweight access points in one logical unit.

**Q.** Does the Cisco Catalyst 3750G Integrated Wireless LAN Controller support the same features as the Cisco 4400 Series Wireless LAN Controller?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller supports the same features as the Cisco 4400 Series Wireless LAN Controller with the exception of the optional VPN module.

**Q.** How many Cisco Catalyst 3750G Integrated Wireless LAN Controllers are supported in a stack?

**A.** Up to four controllers are supported in one stack. Up to nine switches can be joined together to create a single switching unit with a virtual 32-Gbps stack interconnect.

**Q.** What is the advantage of deploying the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** Advantages of deploying the Cisco Catalyst 3750G Integrated Wireless LAN Controller include investment protection for existing users of Cisco 3750G switches with their high availability, high security and QoS ability, and additional capability of new unified wireless deployments of up to 200 Cisco Aironet lightweight access points with fewer controller nodes to manage in the network. Lastly, the Cisco Catalyst 3750G Integrated Wireless LAN Controller supports a tighter wired and wireless integration.

## **PRODUCT SPECIFICATIONS**

**Q.** What operating system is used by the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller uses the Linux operating system.

**Q.** What access points are supported by the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller supports Cisco Aironet access points running Lightweight Access Point Protocol (LWAPP).

**Q.** Does WCS automatically discover the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** No, they have to be manually in the WCS application

**Q.** Does the Cisco Catalyst 3750G Integrated Wireless LAN Controller work with Cisco Aironet access points that are not LWAPP-enabled?

**A.** No. The Cisco Catalyst 3750G Integrated Wireless LAN Controller only works with Cisco Aironet access points running LWAPP or lightweight access point protocol.

**Q.** Does the Cisco Catalyst 3750G Integrated Wireless LAN Controller have a Fast Ethernet service port?

**A.** A Fast Ethernet service port like the one on the Cisco 4400 series WLAN controllers is available on the Cisco Catalyst 3750G Integrated Wireless LAN Controller.

**Q.** What physical interfaces connect the Cisco Catalyst 3750G Integrated Wireless LAN Controller to the infrastructure?

**A.** The following interfaces are available:

- 24 Ethernet 10/100/1000 ports with IEEE 802.3af and Cisco pre-standard power over Ethernet (PoE)
- 2 SFP-based Gigabit Ethernet ports
- 32-Gbps high-speed stacking bus
- **Console port:** RS-232 (DB-9 male, DTE interface)
- **Service port:** RJ-45 (wireless controller configuration console port)
- **Per-port status LEDs:** link integrity, disabled, activity, speed, and full-duplex indications
- **System-status LEDs:** system, RPS, and bandwidth-utilization indications

**Q.** What is the available data throughput for the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller has a 2-Gbps interface to the switch.

**Q.** What is the SKU for the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** The SKUs for the Cisco Catalyst 3750G Integrated Wireless LAN Controller are WS-C3750G-24WS-S25 and WS-C3750G-24WS-S50.

**Q.** Where can the Cisco Catalyst 3750G Integrated Wireless LAN Controller be deployed?

**A.** The Cisco Catalyst 3750G Integrated Wireless LAN Controller provides maximum flexibility to deploy anywhere in the network from access, to distribution, to collapsed core based upon customer business requirements. Typically, it would be deployed in the campus wiring closet.

## SECURITY

**Q.** Where are the access-point-to-controller communication certificates located on the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** The certificates for access-point-to-controller communication are burned into the Cisco Catalyst 3750G Integrated Wireless LAN Controller during the manufacturing process and include both the Cisco and Airespace root certificates.

**Q.** What enterprise security features does the Cisco Catalyst 3750G Integrated Wireless LAN Controller support?

**A.** As part of the Cisco Wireless LAN Controller product line, the Cisco Catalyst 3750G Integrated Wireless LAN Controller supports the following enterprise-class security standards and capabilities:

- Cisco Network Admission Control (NAC)
- 802.11i, Wi-Fi Protected Access (WPA), WPA2, and Wired Equivalent Privacy (WEP)
- 802.1X using multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP-Transport Layer Security (EAP-TLS), EAP-Tunneled TLS (EAP-TTLS), and Cisco LEAP
- Rogue access point detection and containment
- Wireless Intrusion Prevention System (IPS)
- Consistent security policy enforcement across an entire wireless network

**Q.** Is control traffic from the Cisco Catalyst 3750G Integrated Wireless LAN Controller encrypted with Advanced Encryption Standard (AES)?

**A.** Yes. Similar to the other Cisco wireless LAN controllers, the Cisco Catalyst 3750G Integrated Wireless LAN Controller encrypts control traffic with AES; data traffic is not encrypted in LWAPP.

**Q.** What fast secure roaming protocol is supported by the Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** Cisco Catalyst 3750G Integrated Wireless LAN Controller supports Proactive Key Caching (PKC), an extension to the 802.11i standard and precursor to the 802.11r standard that facilitates secure roaming with AES encryption and RADIUS authentication.

**Q.** Does Cisco Catalyst 3750G Integrated Wireless LAN Controller support peer-to-peer blocking?

**A.** Yes. Peer-to-peer blocking is supported by the Cisco Catalyst 3750G Integrated Wireless LAN Controller, along with all the other software features of Cisco 4400 Series Wireless LAN Controllers.

## MANAGEMENT

**Q.** Can the Cisco Catalyst 3750G Integrated Wireless LAN Controller be managed by the Cisco WCS?

**A.** Yes. One or more Cisco Catalyst 3750G Integrated Wireless LAN Controller's can be managed by the Cisco WCS. Each controller has a unique object identifier (OID) that allows the Cisco WCS to recognize and distinguish Cisco Catalyst 3750G Integrated Wireless LAN Controller's from each other and from other Cisco wireless LAN controllers.

**Q.** Does the Cisco Catalyst 3750G Integrated Wireless LAN Controller support embedded RF management?

**A.** Yes. Radio Resource Management (RRM) algorithms in the Cisco Catalyst 3750G Integrated Wireless LAN Controller and all Cisco wireless LAN controllers provide embedded RF management that detects and adapts to changes in the air space in real time—creating a self-configuring, self-optimizing, and self-correcting wireless LAN environment. These RF adjustments create the optimal topology for wireless networking in much the same way that routing protocols compute the best possible topology for IP networks.

## REDUNDANCY

**Q.** What happens if a Cisco Catalyst 3750G Integrated Wireless LAN Controller fails?

**A.** Similar to a cluster of Cisco wireless LAN controllers, if the first controller on the Cisco Catalyst 3750G Integrated Wireless LAN Controller fails, the access points will fail over to the second Cisco Catalyst 3750G Integrated Wireless LAN Controller, or a secondary or tertiary controller, either in the same stack or a separate controller not part of the logical group, depending on the redundancy architecture defined by the IT staff.

**Q.** Can the Cisco Catalyst 3750G Integrated Wireless LAN Controller be automatically rebooted upon failure?

**A.** Yes it can.

**Q.** Does the Cisco Catalyst 3750G Integrated Wireless LAN Controller support access point redundancy?

**A.** Yes, the Cisco Catalyst 3750G Integrated Wireless LAN Controller supports access point redundancy. If an access point fails, the Cisco Catalyst 3750G Integrated Wireless LAN Controller automatically increases power on the neighboring access points to compensate and provide coverage.

## DEPLOYMENT

**Q.** What are the steps required to deploy a Cisco Catalyst 3750G Integrated Wireless LAN Controller?

**A.** For detailed steps required to deploy the Cisco Catalyst 3750G Integrated Wireless LAN Controller, please refer to the Cisco Catalyst 3750G Integrated Wireless LAN Controller quick start guide.

**Q.** Do all wireless LAN controllers configured on the network need to run the same software code?

**A.** With regard to IOS, it is not possible to have different IOS software code running on the Cisco Catalyst 3750G Integrated Wireless LAN Controller. With regard to the controller software, controllers in the same mobility group must be running the same software.

**Q.** How many VLANs can be tied to a single service set identifier (SSID)?

**A.** One default VLAN can be tied to a single SSID. If using site-specific VLANs or Identity-Based Networking Services (IBNS), up to 512 VLANs can be used on a single SSID.

**Q.** How does the RADIUS server assign users to different VLANs?

**A.** Vendor-specific attributes (VSAs) that are returned in the RADIUS 802.1X exchange specify which interface to use for each user.

## FOR MORE INFORMATION

For more information about the Cisco Catalyst 3750G Integrated Wireless LAN Controller, contact your Cisco representative or visit:

<http://www.cisco.com/en/US/products/hw/switches/ps5023/index.html>

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



### Corporate Headquarters

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
[www.cisco.com](http://www.cisco.com)  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 526-4100

### European Headquarters

Cisco Systems International BV  
Haarlerbergpark  
Haarlerbergweg 13-19  
1101 CH Amsterdam  
The Netherlands  
[www-europe.cisco.com](http://www-europe.cisco.com)  
Tel: 31 0 20 357 1000  
Fax: 31 0 20 357 1100

### Americas Headquarters

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
[www.cisco.com](http://www.cisco.com)  
Tel: 408 526-7660  
Fax: 408 527-0883

### Asia Pacific Headquarters

Cisco Systems, Inc.  
168 Robinson Road  
#28-01 Capital Tower  
Singapore 068912  
[www.cisco.com](http://www.cisco.com)  
Tel: +65 6317 7777  
Fax: +65 6317 7799

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