AC-224AP Wireless LAN Controller Datasheet

Wireless LAN Controller with 224 AP License

Overview

The AC-224AP Wireless Controller is a centralized wireless LAN manager developed specifically for campuses, branch offices, and businesses. It can manage up to 224 access points, achieving integrated access for wired and wireless users and can be used to construct campus networks, enterprise office networks, wireless Metropolitan Area Networks (MANs), and hotspot coverage networks.

This controller can realize the seamless roaming of wireless users in the process of crossing different areas of the entire network, meet the security and session integrity in mobile roaming, and fully meet the data interaction and smooth voice of Wi-Fi voice communication.

Benefits

• Manage up to 224 Wireless APs

• Manage up to 7168 Clients

• Layer 2 or Layer 3 Network

• Wireless Intrusion Detection System (WIDS)

• Rogue AP Detection & Classification

• 802.1x Authentication

• Web, SNMPv1/v2c/v3, Telent

• Support Bypass and Bridge Network Modes

Key Features

Smart Wireless Experience

• Intelligent Identification of Smart Devices

The Wireless Controller with built-in portal server intelligently identifies the type of smart device. The intelligent identification of smart devices eliminates the trouble of screen size adjustment and offers better wireless user experience.

• Fair Scheduling

The Wireless Controller supports equal access time for smart devices no matter they are running 802.11g, 802.11n, 802.11ac, 802.11ax standards. The feature eliminates high latency, slow network speed and poor AP performance problems.

• Intelligent Load Balancing

On a high-density wireless LAN, the Wireless Controller Series intelligently distributes users among different APs according to the number of users and data traffic in real time. This feature balances the load pressure on each AP and improves the average bandwidth and Quality of Service (QoS), offering higher network availability.

High Performance and Reliability

• Centralized or Distributed Intelligent Switching

The Wireless Controller Series can be deployed at Layer 2 or Layer 3 level without modifying the original network architecture. Forming an integrated switching framework with the APs, the controllers handle all the AP data exchange management with ease.

• Intelligent RF Management

The Wireless Controller enables an AP to perform on-demand RF scanning in the wireless environment. By scanning the wireless frequency bands and channels, both rogue APs and networks can be identified easily.

• Seamless Roaming Experience

The advanced clustering technology enables real-time synchronization of online information and roaming records of all users among multiple Wireless Controllers. Simply put, user and authentication data are shared in the cluster, enabling wireless users to roam freely in the whole network.

• Abundant QoS Policies

The Wireless Controller supports an extensive array of QoS policies. By setting bandwidth limitations, higher priority is given to critical applications over the others. The Wireless Controller Series hence delivers guaranteed bandwidth performance for network of all sizes.

• Wireless IPv6 Access

The Wireless Controller Series fully supports IPv6 features and implements IPv6 forwarding in a wireless network. Both IPv4 and IPv6 users can automatically connect to the controller over tunnels, enabling IPv6 applications to be borne on the wireless network.

• Advanced Application Identification and Strategy Control Technology

The Wireless Controller supports application traffic identification and application-level QoS mapping technology. Under centralized forwarding, through deep packet inspection (DPI) on the characteristics of the message, it can identify, count and control QoS mapping for applications, so as to understand the application usage in the network, and application traffic for service quality assurance control.

Flexible and Comprehensive Security Policies

• **Local Authentication**

The Wireless Controller allows local authentication based on the actual user demand, saving costs by getting rid of devices such as external portal and RADIUS server. The network infrastructure is also greatly simplified.

• **User Data Encryption**

The Wireless Controller fully supports the advanced encryption technologies such as Wired Equivalent Privacy (WEP), Temporal Key Integrity Protocol (TKIP), and Advanced Encryption Standard (AES), ensuring end-to-end security of data transmission over the wireless network.

• **Standard Communication Protocol**

Encrypted communication between the Wireless Controller and APs is enabled with the international standard Control and Provisioning of Wireless Access Points (CAPWAP). The function ensures complete isolation from the wired network and guarantees high security for the real-time communication between the Wireless Controller and APs.

• **Virtual Wireless Packet Technology**

With the virtual AP technology, the Wireless Controller can partition multiple SSIDs within the network. Network administrator can separately encrypt and isolate subnets or VLANs that have the same SSID. The deployment thereby enables specified authentication mode and encryption mechanism for each SSID.

• **Virtual AP Technology**

Virtualization technology allows virtualizing a physical AP into multiple virtual APs to handle different services. Different VAP can connect to the isolated AC to ensure the only authorized user access to right resource.

• **Virtual AC Technology**

The AC Virtualization technology help to virtualize multiple AC into single logical AC regardless of module or appliance-based AC. It supports to up 6 members of hardware AC in single high availability cluster. Its high availability feature ensures no business downtime in the event of one of AC fails. The failover mechanism is fully automated and completed within milliseconds, WiFi services resumed immediately in backup AC.

• **RF Security**

The Wireless Controller supports RF probe scanning feature to detect unauthorized access points or other RF interference sources. Once detected, the Wireless Controller will send real-time alerts to the network management system. It delivers easy management for network administrator to monitor potential threats and usage status.

• **Protection Against Viruses and Attacks**

The Wireless Controller provides a wide range of built-in security mechanisms to effectively prevent and control virus spread and network traffic attacks. The mechanisms ensure secure network access by the authorized users only. Such protection mechanisms include IP/MAC/WLAN binding, hardware ACL control, traffic-based bandwidth limitation, etc.

• **Secure User Access**

The Wireless Controller supports Web Authentication, allowing users to perform authentication using any web browser. 802.1X authentication is another security highlight. A major difference from web authentication is that 802.1X enables IP/MAC/WLAN binding after authentication. The feature totally guarantees the legitimacy of the user's identity.

- **Protection Against ARP Spoofing**

Address Resolution Protocol (ARP) detection effectively protects network users from ARP gateway spoofing and host spoofing for secure wireless access. Automatic binding can be enabled in both dynamic and static IP address allocation environments to greatly save manpower resources and management costs.

- **Rogue AP Countermeasure**

The Wireless Controller enables effective rogue AP detection and containment to enhance wireless security. The Wireless Controller arranges an active AP to perform rogue detection, send probe packets and hear probe responses from valid APs. Network administrator can hence easily single out rogue APs from the authorized to ensure wireless network security.

- **DHCP Security**

With Dynamic Host Configuration Protocol (DHCP) snooping, the Wireless Controller permits DHCP response messages from the trusted ports only. The Wireless Controller can thus prevent unauthorized deployment of any DHCP server to disturb the allocation and management of IP addresses and affect normal operation of the network.

- **Management Information Security**

To ensure the security of devices and offer protection against attacks, the Secure Shell (SSH) and SNMPv3 technologies encrypt management information by Telnet and Simple Network Management Protocol (SNMP). The Wireless Controller offers Telnet access control based on source IP address, offering a high level of granularity on device management. Only the IP addresses authorized by network administrator can log into the Wireless Controller, which further enhances the security of device network management.

Unified Network Management

- **Web Interface Management**

The Wireless Controller supports web management interface for AC, which provides simplified wireless configuration and high visibility for the whole network operation. With the AC web interface, the Wireless Controller can also manage the APs and also the associated users, achieving user bandwidth control and network access restriction. Network administrator can hence plan, operate and maintain the wireless network with ease.

Application

The AC-224AP provides a comprehensive wireless security solution for easy integration into any network. The Wireless Intrusion Detection System (WIDS) featured in the AC-224AP detects rogue access points, rogue clients, and can anticipate wireless threats, to help prevent potential breaches and illegal access before any damage is done to the network.
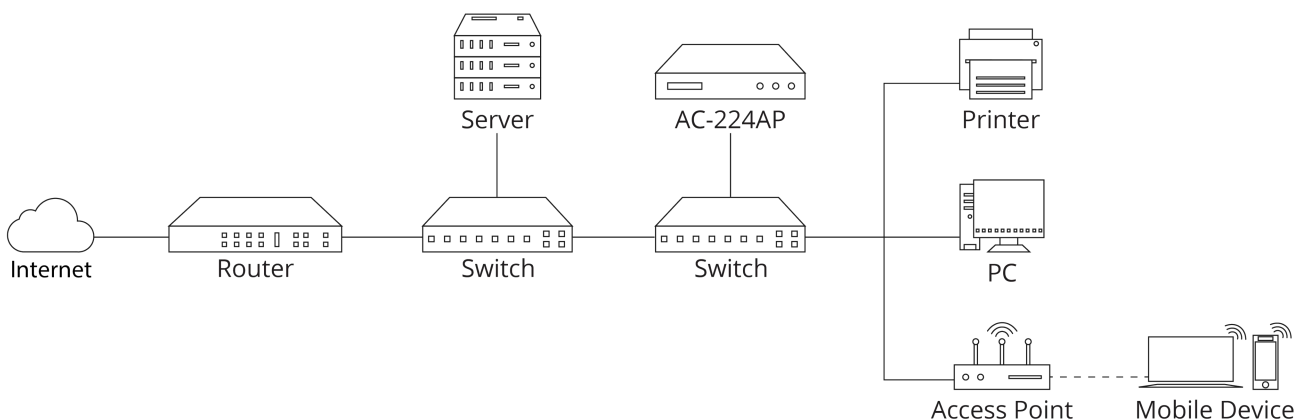
Technical Specification

Wireless LAN Controller comes with advanced hardware architecture design. Here's a look at the details.

CHARACTERISTICS

	AC-224AP
Ports	
Service Port	6x 1000BASE-T ports, 2x 1000BASE-T / 1000BASE-X ports (combo)
Console Port	1
MGMT Port	1
USB Port	2
Key Components	
AP Chip	CN6130
Power	
Power Supply	100V~240VAC, 50/60Hz, 1.5A
Power Consumption	<40W
Physical and Environmental	
MTBF (Hours)	248000
Rack Space	1U
Dimensions (HxWxD)	1.71"x17.32"x7.87"(43.6x440x200mm)
Operating Temperature	0ºC to 45ºC
Storage Temperature	-40ºC to 70ºC
Operating Humidity	5% to 95% (non-condensing)
Storage Humidity	5% to 95% (non-condensing)
Warranty	
Warranty	3 Years

FEATURES

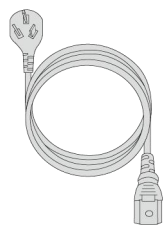| Item	Description
Performance	Maximum Number of Manageable APs: 224 Maximum Number of Configurable APs: 2048 Maximum Number of Clients: 7168 802.11 Performance: 8 Gbps VLAN: 4K Maximum Number of Clients Supported by the Built-in Portal: 1500 ACL: 64K MAC Address Table: 32K ARP Table: 32K Inter-AC Roaming Switch Time: ≤50ms
WLAN	**802.11 LAN Protocols** • 802.11, 802.11b, 802.11a, 802.11g, 802.11d, 802.11h, 802.11w, 802.11k, 802.11v, 802.11r, 802.11i, 802.11e, 802.11n, 802.11ac, 802.11ax **CAPWAP Protocols** • Layer 2/Layer 3 network topology between an AP and AC • Enable an AP to automatically discover an accessible AC • Enable an AP to automatically upgrade software version from an AC • Enable an AP to automatically download configurations from an AC • Network Address Translation (NAT) traversal **Roaming** • Support Layer 2 / Layer 3 roaming within AC • Support cross-AC Layer 2 / Layer 3 roaming • Support Layer 2/Layer 3 roaming within AC under local forwarding • Support Layer 2 / Layer 3 roaming between ACs under local forwardin **Forward** • Centralized forwarding • Local forwarding • Flexible forwarding based on business

Item	Description
WLAN	Wireless QoS • AP-based bandwidth control • WLAN-based bandwidth control • User-based static and smart speed control • Fair balancing User Isolation • AC-based user isolation • AP-based user isolation • WLAN-based user isolation Reliability • Fast switching between 2 ACs • Multiple ACs redundancy (1:1 A/A and A/S, N:1) • Multiple ACs clustering (N:N) • Remote Intelligent Perception Technology (RIPT) • Service upgrade STA Management • AP-based STA access control • SSID-based STA access control • AP- based load balancing • AP traffic-based load balancing • 5G priority access • RSSI threshold STA RSSI • 0-100 STA Idle Timeout • 60-86400 STA Average Data Rate Threshold • 8 to 261120 Adjusting Transmit Power of Beacon and Probe Response

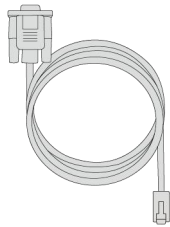| Item	Description
WLAN	RF management • Support country code setting • Support manual setting of transmit power • Support automatic setting of transmit power • Support manual setting of working channel • Support automatic setting of working channel • Support automatic adjustment of transmission rate • Support black hole compensation • Support AP load sharing based on traffic and number of users • Support band select • Support wireless radio frequency interference detection and avoidance
Security	IPv4 security certification • WEB authentication • 802.1X authentication • No perception authentication • QR code authentication IPv6 security certification • 802.1X authentication • WEB authentication 802.11 security and encryption • Support multiple SSID • Support hidden SSID • Support 802.11i standard PSK certification • Support WPA, WPA2 standards • WEP (WEP/WEP128) • WAPI support • TKIP • CCMP • Support anti-ARP spoofing

Item	Description
Security	CPP
	NFPP
	WIDS
	Virtual AP
IP Protocols	IPv4 Protocols
	• Ping, traceroute
	• DHCP server
	• DHCP client
	• DHCP relay
	• DHCP snooping
	• DNS client
	• NTP
	• Telnet
	• TFTP server
	• TFTP client
	• FTP server
	• FTP client
	IPv6 Protocols
	• DNSv6 client
	• DHCPv6 relay
	• DHCPv6 server
	• DHCPv6 client
	• TFTPv6 client
	• FTPv6 server
	• FTPv6 client
	• IPv6 CAPWAP
	• ICMPv6
	• IPv6 traceroute
	• Manual tunnel
	• Automatic tunnel manual configuration address
	• Automatic local address

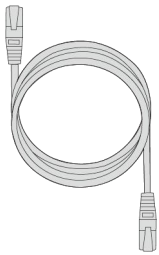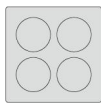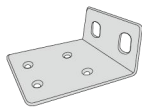| Item	Description
IP Protocols	**IPv4 Routing** • Static routing • RIP • OSPF **IPv6 Routing** • Static routing
Management	**Network Management** • SNMPv1/v2c/v3 • RMON • Syslog **Network Management Platform** • Web management (Smart-web) • Heat map diagram **User Access Management** • Login via console port • Login via Telnet • Login via SSH • Upload to FTP **Support Wirless Access Points** • AP-W6D1775C • AP-W6D2400C • AP-W6T3267C • AP-W6Q4134C • AP-W6T6817C • AP-W6T10000C

Accessories

Power Cord x1

Console Cable x1
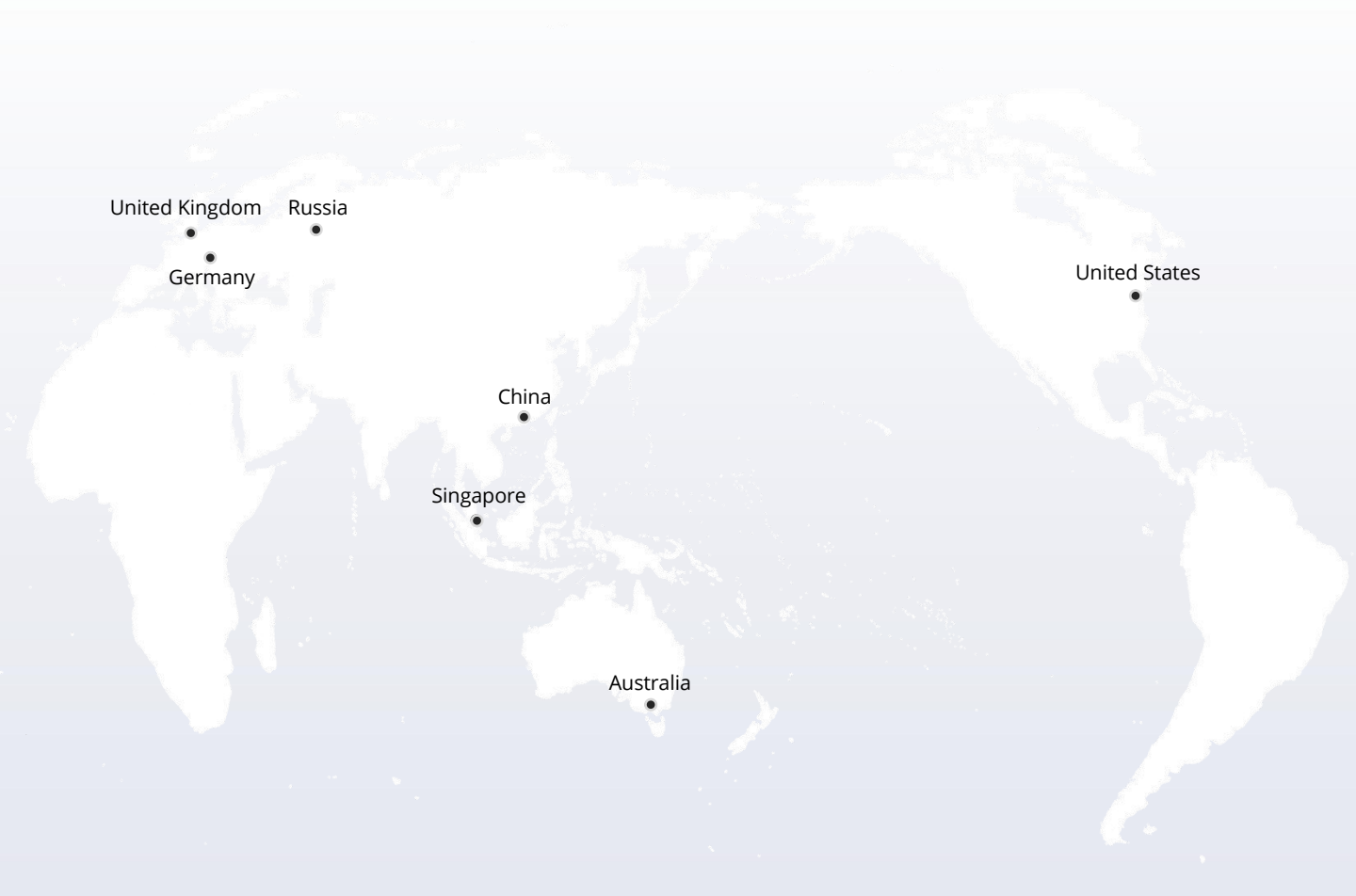
Network Cable x1

Rubber Pad x4

Mounting Bracket x2

M4 Screw x6

Ordering Information

ID	Description
149659	Wireless LAN Controller with 224 AP License
149655	1167Mbps 2x2 MU-MIMO Dual Radios Wireless Access Point
115392	1775Mbps 2x2 MU-MIMO Dual Radios Gigabit Access Point
108705	2400Mbps 2x2 MU-MIMO Dual Radios Gigabit Access Point
149657	2400Mbps 2x2 MU-MIMO Dual Radios Gigabit Outdoor Access Point
149658	2400Mbps 2x2 MU-MIMO Dual Radios Gigabit Outdoor Access Point
149656	3000Mbps 2x2 MU-MIMO Dual Radios Gigabit Access Point
115391	3267Mbps 2x2 MU-MIMO Three Radios Gigabit Access Point
115390	4134Mbps 2x2 MU-MIMO Four Radios Gigabit Access Point
108707	6817Mbps 4x4 MU-MIMO Three Radios Gigabit Access Point
115389	10Gbps 4x4 MU-MIMO Three Radios Gigabit Access Point

Note: AC-224AP can manage all Wi-Fi 6 APs on the website, except three APs: AP-T565, AP-T567 and AP-N505.

United Kingdom

Russia

Germany

United States

China

Singapore

Australia

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