

AIR-AP610C-AX
(Version-2)

Wi-Fi 7 Tri-Band Enterprise Access Point

KEY FEATURES

High-Performance Wi-Fi 7 Architecture

- Supports the latest IEEE 802.11a/b/g/n/ac/ax/be wireless standards
- Tri-band operation with:
 - 2.4 GHz radio
 - 5 GHz low-band radio
 - 5 GHz high-band radio
- Aggregate wireless throughput up to 6452 Mbps
- Advanced 4096-QAM modulation for higher transmission efficiency and enhanced user experience
- Optimized for high-density deployments and multi-device environments



PRODUCT OVERVIEW

The AIR-AP610C-AX (Version-2) is a next-generation enterprise-grade indoor wireless access point built on the latest IEEE 802.11be (Wi-Fi 7) standard. Designed for high-density and performance-critical environments, the AP delivers ultra-fast wireless connectivity, intelligent RF optimization, and enterprise-class security for modern digital infrastructures.

Supporting simultaneous operation across 2.4 GHz and dual 5 GHz frequency bands, the AIR-AP610C-AX (Version-2) provides an aggregate wireless throughput of up to 6.45 Gbps, enabling exceptional performance for bandwidth-intensive applications, real-time collaboration, cloud services, HD video streaming, and high-user-density deployments.

Ideal deployment environments include:

- Enterprise offices
- Hospitality venues
- Education campuses
- Retail environments
- Healthcare facilities
- Public venues and conference centers

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Advanced RF and Signal Optimization

The AIR-AP610C-AX (Version-2) integrates intelligent wireless technologies to maximize coverage, throughput, and reliability:

Maximum Ratio Combining (MRC)

Improves receiver sensitivity by combining multiple received signals to maximize signal-to-noise ratio (SNR).

Space-Time Block Coding (STBC)

Enhances transmission reliability and extends wireless coverage through antenna diversity.

Low-Density Parity Check (LDPC)

Provides efficient forward error correction to reduce packet loss and improve throughput.

Transmit Beamforming (TxBF)

Focuses RF energy directly toward connected clients to improve signal quality, coverage, and transmission performance.

Intelligent RF Management

When deployed with an AIRPRO wireless controller, the AP supports intelligent RF optimization features including:

- Automatic channel selection and optimization
- RF interference detection and mitigation
- Dynamic power adjustment
- Coverage optimization
- Intelligent roaming enhancement
- High-density wireless optimization

These capabilities ensure stable, efficient, and high-performance wireless communication in complex RF environments.

Flexible Deployment Modes

The AIR-AP610C-AX (V2) supports multiple operating modes for flexible network deployment:

- Fit AP Mode
- Fat AP Mode
- Bridge Mode

Administrators can dynamically switch between operating modes according to network design requirements.

Flexible Power Options

The AP supports:

- IEEE 802.3af/at PoE
- External 48V DC power adapter

Universal PoE Compatibility

Compatible with industry-standard PoE switches from leading vendors including Cisco, Huawei, Juniper, and others supporting IEEE 802.3af/at standards.

HARDWARE SPECIFICATIONS

Specification	AIR-AP610C-AX (Version-2)
Dimensions (L x W x D)	260 x 160 x 38 mm
Uplink Interfaces	1 x 1/2.5GE RJ45, 1 x 1/10G SFP+
Downlink Interface	1 x 10/100/1000 Mbps Ethernet
USB Port	1 x USB 2.0
Console Port	1 x RJ45
BLE	Supported
LED Indicator	Supported
Reset Button	Supported
Power Supply	IEEE 802.3af/at PoE or 48V DC Adapter
Max. Power Consumption	< 25W
Antenna	Built-in 2.4 GHz 3 dBi, 5 GHz low-band 3 dBi, 5 GHz high-band 3 dBi
Operating Temperature	0°C to 40°C
Storage Temperature	-40°C to +70°C
Operating Humidity	10% to 95% non-condensing
Protection Rating	IP41

WIRELESS SPECIFICATIONS

Specification	AIR-AP610C-AX (Version-2)
Wireless Standards	802.11a/b/g/n/ac/ax/be
Frequency Bands	2.4 GHz, 5 GHz Low Band, 5 GHz High Band
Total Throughput	Up to 6452 Mbps
2.4 GHz Throughput	688 Mbps
5 GHz Low Band Throughput	2882 Mbps
5 GHz High Band Throughput	2882 Mbps
Virtual APs (BSSID)	48
Concurrent Users	360
Spatial Streams	2x2 (2.4 GHz), 4x4 (5 GHz Low), 4x4 (5 GHz High)
Dynamic Channel Adjustment	Yes
Transmit Power Control (TPC)	Yes
RF Environment Scanning	Yes
High-Density Optimization	Yes
Airtime Fairness	Yes
Intelligent Roaming	Yes

WI-FI 7 ENHANCEMENTS

Features	
Multi-Link Operation (MLO)	Yes
4096-QAM	Yes
A-MPDU Aggregation	Yes
A-MSDU Aggregation	Yes
Maximum Likelihood Demodulation (MLD)	Yes
Transmit Beamforming (TxBF)	Yes
Maximum Ratio Combining (MRC)	Yes
Space-Time Block Coding (STBC)	Yes
Low-Density Parity Check (LDPC)	Yes

SECURITY FEATURES

The AIR-AP610C-AX (V2) delivers enterprise-grade wireless security with comprehensive authentication, encryption, and threat protection mechanisms.

Security and Authentication:

- WPA/WPA2/WPA3 Personal and Enterprise
- 802.1X Authentication
- Portal Authentication
- MAC Address Authentication
- AD/LDAP Authentication
- PEAP Authentication
- WAPI Support
- Wireless Intrusion Detection and Prevention (WIDS/WIPS)

Wireless Protection:

- Anti-DoS protection for wireless management packets
- Dynamic and static blacklist support
- Wireless user isolation
- SSID-based isolation
- Secure AP-to-controller authentication
- 802.11w management frame protection

QOS AND TRAFFIC MANAGEMENT

Advanced Quality of Service capabilities ensure optimized application delivery and efficient bandwidth utilization.

QoS Features:

- WMM support
- 802.1P priority mapping
- SSID/VLAN-based QoS policies
- Layer 2–Layer 4 packet classification
- User and traffic-based load balancing
- Frequency band load balancing
- AP, SSID, terminal, and application bandwidth limiting
- Call Admission Control (CAC)
- Multicast-to-unicast optimization

MANAGEMENT AND OPERATIONS

Features	
Centralized Management	AIRPRO Controller & Cloud Controller
Mesh Networking	Yes
Local and Remote Maintenance	Yes
Syslog and Log Export	Yes
Alarm and Fault Detection	Yes
Statistical Monitoring	Yes
Remote Probe Analysis	Yes
Watchdog Protection	Yes

ORDERING INFORMATION

Product Model	Description
AIR-AP610C-AX (Version-2)	Wi-Fi 7 indoor tri-band enterprise AP with 10 spatial streams, up to 6452 Mbps wireless throughput, BLE, 10G SFP+ uplink, 2.5GE uplink, and Gigabit downlink port.

TYPICAL DEPLOYMENT SCENARIOS

The AIR-AP610C-AX (Version-2) is optimized for:

Security and Authentication:

- High-density enterprise wireless networks
- Smart campuses and universities
- Hotels and hospitality deployments
- Large office environments
- Retail and shopping centers
- Conference halls and public venues
- Cloud-managed enterprise WLAN infrastructures

SUMMARY

The AIR-AP610C-AX (Version-2) combines Wi-Fi 7 performance, intelligent RF optimization, enterprise security, and flexible deployment capabilities into a powerful next-generation wireless platform. With tri-band architecture, advanced modulation technologies, and comprehensive enterprise features, it is designed to meet the evolving demands of modern wireless networks.



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