AIR AP940 Wireless Access Point for Enterprise solutions

AIR AP940

Boost your wireless signal and enjoy ultimate coverage

DATASHEET

Quick Overview

AirPro AIR-AP940 is a high-performance Wi-Fi 6 enterprise AP designed for the majority of indoor scenarios. With the built-in IoT module, enterprise customers can be ready for future IoT expansion to boost operational efficiency and customer experience.

- Maximize ROI (Lifetime Free Cloud Managemen).
- Hybrid Management (Cloud / Controller / Standalone).
- Fast Provisioning by AirPro Cloud.
- Automated Radio Optimization by Big Data Technology.
- Stylish Design (Integrated Antenna).
- Dual-band access points in AirPro SME AP Series.

What does this product do?

AirPro truly understands the challenges of having the best class of Wi-Fi along with ultra-high-performance. AIR-AP940 supports concurrent dual-band dual-radio (2x2:2 in 2.4GHz, 4x4:4 in 5GHz), up to 6 total spatial streams, and a maximum of 5.2Gbps wireless throughput. Taking the advantage of Wi-Fi 6 OFDMA Modulation, MU-MIMO, and BSS Color Spatial Reuse, the AIR-AP940- guarantees minimal signal interference and a maximum of 1024 client connections.

Additionally, AIR-AP940 is IoT ready with an integrated module of BLE, without the need for an external module and additional investment. With a total of 3 built-in Gigabit LAN ports, the LAN3 port is specially designed for external IoT sensor connection with PoE out (passive) feature. Therefore, no extra power adaptor is needed for the sensor.

Upon the uprising challenges of management efficiency and wireless security, all AirPro enterprise APs support hybrid management mode. Either deployed as standalone AP (Fat mode) or managed AP (Fit mode), the AP will detect the operation mode automatically without extra effort on firmware upgrade. For additional security and operation, we recommend the enterprise customers to choose either one of the below wireless controller options depending on the functionality and capacity:

Ultra-High Performance Wi-Fi for SMEs
AirPro Public Cloud for SME -
- Targeted for the SME segment with integrated captive portal, authentication (such as PPSK for employees, Facebook, voucher, account, etc.), and reporting features.
- Together with AirPro Cloud, SME customers can provision and manage their networks at fingertips.

AirPro Hybrid Cloud for Enterprise Office and Campus -
- Targeted for enterprise office and campus with single or multiple sites and high-density AP deployment.
- The controller appliances are installed at the customer's site with fully integrated wireless management and authentication features, supporting up to 5000 APs per cluster.
- Optionally, the cloud management platform allows for value-added features like centralized device configuration and monitoring, AI radio (RF) optimization, reporting, etc..

Air Pro

AirPro Private Cloud for ISP, Government, MNC-

- Targeted for ISP/MSP, government, or multi-national corporation (MNC) with diverse customer sites and demand on the integration of their billing, portal, and security systems.
- The AirPro Cloud service supports unified device management, not only for wireless access points but also for switches and gateway devices.

Enterprise Support for SME -

- AirPro SME products are all bundled with an exclusive 2-year product warranty free of charge.
- AirPro customers can also enjoy complimentary professional online support which is staffed with AirPro certified experts to respond to your problems efficiently.

AirPro AIR-AP940 is specially designed for dense Wi-Fi usage environments like Restaurant, Hotel Reception, Enterprise Office, MNC, Government & Conference Room, Student Lecture Hall, etc. Upto1024 clients per AP supported by AIR-AP940, max wireless throughput up to 5.2Gbps, this is taken advantage of IEEE 802.11b/g/n & 802.11a/n/ac/ax standard and unique Concurrent Dual-band design, with the 2.4G radio and 5G radio for client access at concurrent, each radio can effectively load balance the traffic without bringing additional interference for the environment.

Key Feataures

- Max 5.2Gbps (Total 6 Spatial Streams) with Concurrent Dual-Band Design.
- Max 1024 Client connections.
- OFDMA, MU-MIMO, and BSS Technology for minimal wireless signal interference.
- IoT Ready: Integrated with BLE module and one IoT extension port with PoE Out (passive).
- AI Wireless Optimization: one-click optimization powered by AirPro WIS technology.
- Hybrid Management: support standalone AP to over thousands of APs with deployment options of appliances, private cloud, or public cloud service.
- Mobility Management: Free Cloud - private cloud or AirPro Public Cloud customers.

**DATASHEET**

Flexible Hybrid Management -
- AirPro SME AP offers the flexibility for SME to choose the mode of management.
- It supports standalone AP to over thousands of APs with deployment options of appliances, private cloud, or public cloud service
- For the AirPro Cloud option, no extra cost or firmware upgrade is required, which saves company expenses and time.

Stylish Design & Mobility Management -
- SME APs all employ a simplistic and stylish design to fit different scenarios.
- The APs feature an integrated antenna design and hidden LAN port along with hidden cabling to hide the messy wires, which gives a professional and simplistic deployment style that is less noticeable.

PPSK Enterprise Authentication -
- For internal staff, it is hassled to maintain the pre-defined PSK and distribute it among them.
- Especially for the offboarding employees, potential Wi-Fi PSK leaked out could be harmful to your network.
- With AirPro PPSK, you now can easily provide different Wi-Fi passwords for each user.
- It is tied to individual end-user devices like laptops or smartphones and the same password can't be used by others.
- The possibility of a Wi-Fi password leak is eliminated completely.
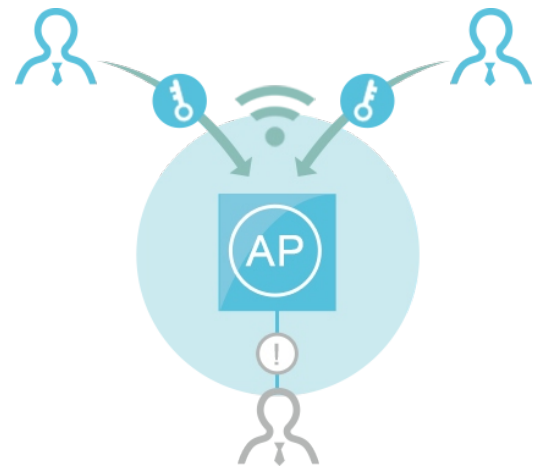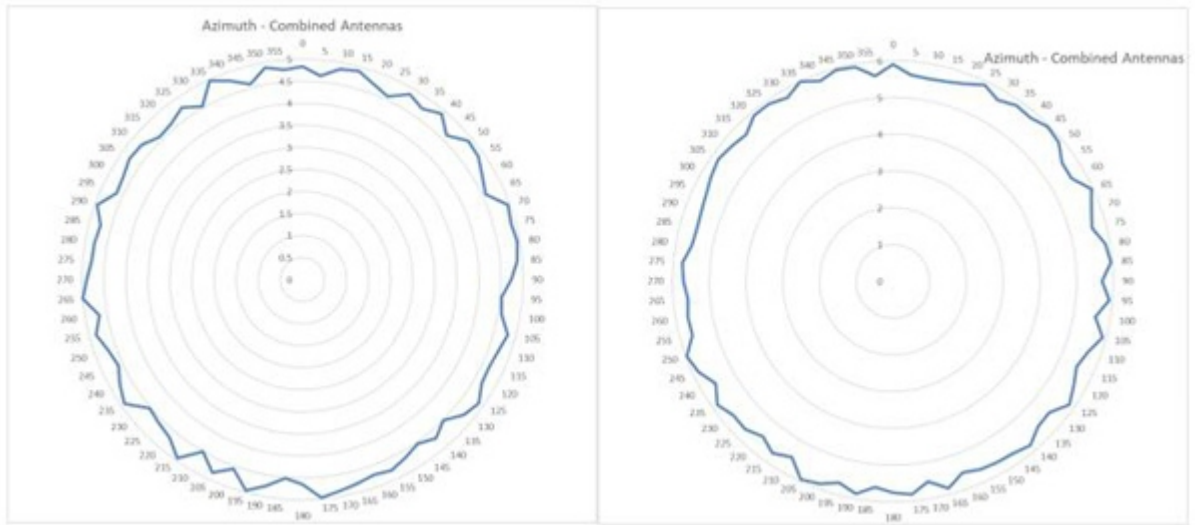
Relevant Standard -
- Wi-Fi Alliance Certification (Support)
- Radio Standard (SRRC, EN300 328, EN301 893)
- EMC Standard (GB9254, EN301 489 | EN 55032 , EN 61000, EN 55035)
- Safety Standard (GB4943, EN/IEC 60950-1)
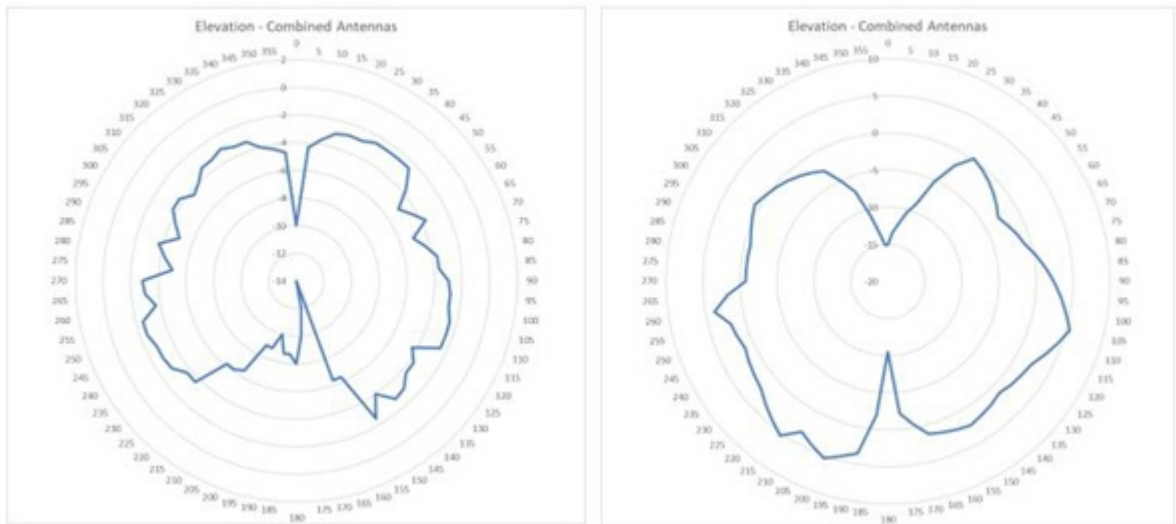- Health Standard (EN 62311)

Air Pro

Antenna Patterns
Horizontal planes (top view)

Antenna Patterns
Vertical (elevation) planes (side view, AP facing down)

TECHNICAL SPECIFICATIONS

| Hardware	
Model	AIR Ap940
Basic Spec	
Radio	Dual-radio dual-band Radio 1: 2.4G 11ax: 2×2 MIMO Radio 2: 5G 11ax: 4x4 MIMO
Protocol	Supports standard 802.11ax, dual-radio dual-band, concurrent 802.11ax and 802.11a/b/g/n/ac
Operating Bands	802.11b/g/n: 2.4G ~ 2.483GHz 802.11a/n/ac/ax: 5.150~5.350GHz, 5.47~5.725GHz, 5.725~5.850GHz (vary depending on different countries)
Spatial Streams	Up to 6: 2×2:2 in 2.4GHz, 4×4:4 in 5GHz
Max Throughput	Maximum throughput of 2.4G: 400Mbps Maximum throughput of 5G: 4.8Gbps Maximum throughput per AP: 5.2Gbps
Modulation	OFDM: BPSK@6/9Mbps, QPSK@12/18Mbps, 16-QAM@24Mbps, 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps, DQPSK@2Mbps, and CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAM OFDMA (up to 1024-QAM)
Receiver Sensitivity	11b: -96dBm (1Mbps), -93dBm (5Mbps), -89dBm (11Mbps) 11g: -91dBm (6Mbps), -85dBm (24Mbps), -80dBm (36Mbps), -74dBm (54Mbps) 11n: -90dBm (MCS0), -70dBm (MCS7), -89dBm (MCS8), -68dBm (MCS15) 11ac HT20: -88Bm (MCS0), -63dBm (MCS9) 11ac HT40: -85dBm (MCS0), -60dBm (MCS9) 11ac HT80: -82dBm (MCS0), -57dBm (MCS9) 11ax Ht80: -82dBm (MCS0), -57dBm (MCS9), -52dBm (MCS11) 11ax Ht160: -80dBm MCS0), -49dBm (MCS11)
Antenna	Integrated antenna design (5th gen X-Sense patent smart antenna)
Antenna Gain	2.4G: 3dBi 5G: 3dBi
Service Ports	3 10/100/1000M Ethernet ports (The LAN1 Port supports PoE in, LAN3 Port supports LAN & IoT module expansion with PoE out)
Management Port	1 console port
USB	1 USB 2.0 port
IoT Capability	BLE
Reset Button	Support
Anti-theft Lock	Support
LED Indicator	1 LED indicator (Supports red, green, blue, orange and flashing mode, which indicates device access. The indicator can be switched off to silent mode.)
Transmit Power	≤100mw (20dBm) (Vary depending on different countries)
Adjustable Power	1dBm
Power Supply	Local power supply (DC 48V/1A) Power adapters are sold separately), PoE (802.3af) PoE (802.3af) – Not recommended: 5G radio is degraded to 2x2 MIMO, and the PoE out of the LAN3/ IoT port is disabled
Power Consumption	< 25.4W
PHYSICAL SPECIFICATIONS	
Temperature	Operating Temperature: -10°C to 50°C Storage Temperature: -40°C to 70°C
Humidity	Operating Humidity: 5% to 95% (non-condensing) Storage Temperature: 5% to 95% (non-condensing)
Installation Mode	Ceiling/wall-mountable
Dimensions (W x D x H)	220mm ×220mm x48.85mm (Height of the AP only, excluding the mount kit)
Weight	1.30kg
IP Rating	Ip41
MTBF	250,000 hours
Certifications and Compliance	
Safety Standard	GB4943, EN/IEC 60950-1
EMC Standard	GB9254, EN301 489, EN 55032 , EN 61000, EN 55035
Health Standard	EN 62311
Radio Standard	SRRC, EN300 328, EN301 893

TECHNICAL SPECIFICATIONS

Software Specifications WLAN	
Maximum clients per AP	1024
BSSID capacity	Up to 32
SSID hiding	Support
5G Priority (Band Steering)	Support
Configuring the authentication mode, encryption mechanism and VLAN attributes for each SSID	Support
Remote Intelligent Perception Technology (RIPT)	Support
Intelligent device recognition technology	Support
Intelligent load balancing based on the number of users or traffic	Support
STA control	SSID/radio-based
Bandwidth control	STA/SSID/AP-based bandwidth control
Data encryption	WPA (TKIP), WPA-PSK, WPA2 (AES), WPA3, WEP (64/128 bits)
PSK and web authent.	Support
PPSK authentication (For Employee)	Support (require wireless controller)
802.1x authentication	Support
PEAP authentication	Support
Data frame filtering	White list, static/dynamic blacklist
User isolation	Support
Rogue AP detection and countermeasure	Support
Dynamic ACL assignment	Support
RADIUS	Support
CPU Protection Policy (CPP)	Support
Network Foundation Protection Policy (NFPP)	Support
IP	
IPv4 and IPv6 address	Support
Multicast routing	Multicast to unicast conversion
DHCP service	DHCP Snooping, Option 82, Server, Client
Management and Maintenance	
Supported wireless	AirPro WS Series Wireless Controller
LAN controllers	AirPro MACC-Base Software Controller AirPro Cloud (Public Cloud)
Management protocol	Telnet, SSH, TFTP, Web
Wireless Intelligent AI Optimization Service (WIS)	Support
SNMP	SNMPV1,V2c,V3
Syslog / Debug	Support
FAT/FIT/MACC mode	Factory default firmware supports
switching	FAT (standalone) or FIT mode (WS controller) or MACC mode management

AirPro Wi-fi Solution
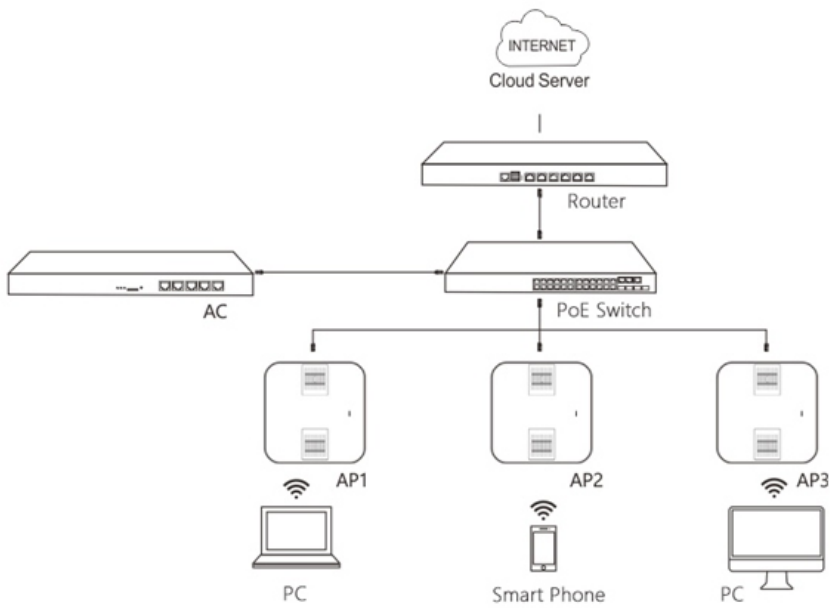
Connection Diagram 1
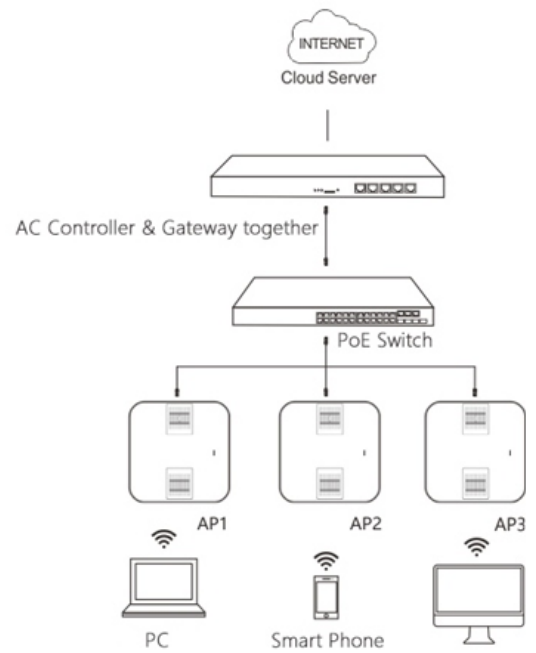
Connection Diagram 2

www.airpro.in