FS

AP-N505 Access Point Datasheet

3000 Mbps 2x2 MU-MIMO Dual-Band Gigabit Wi-Fi 6 Indoor Access Point

Overview

Equipped with the latest and fastest Wi-Fi 6 (802.11ax) technology, AP-N505 is built to provide your business with next-level coverage, ease of installation and management. It supports 2x2 MU-MIMO, and can simultaneously deliver services on the 2.4 GHz and 5 GHz , achieving a rate of up to 3000 Mbps. With built-in smart antennas that enable signals to follow Stations (STAs), providing better coverage, the AP is ideal for Indoor environments such as offices, classrooms, corridors, and other indoor scenarios.

Benefits

- Dual Radios 3000 Mbps: 2.4 GHz (2x2), 5 GHz (2x2)
- OFDMA and MU-MIMO Support
- Support Seamless Roaming with WLAN Controller
- Managed via WLAN Controller or Simply Operate Alone
- WPA3 and Enhanced Open Security
- Ceiling-Mount and Wall-Mount Model
- Powered by 802.3af PoE (PoE injector sold separately)

Product Characteristics

Multi-service Port Design

The AP-N505 supports a maximum wired negotiation rate of 2.5G throughout. In addition, one adaptive Ethernet electrical port provides high-speed wired access of up to 1G, enabling high-speed transmission conversion between wireless and wired. One 2.5G SFP port, adapted to different customer site wired network link patterns, supports SFP optical port to undertake data transmission.

Wi-Fi 6 Technology

- **1024-QAM High-speed Access**

The AP-N505 features a dual-way, dual-band design with the next-generation Wi-Fi wireless standard 802.11ax protocol; dual radio frequencies are turned on simultaneously for up to 2.976 Gbps high-speed wireless for a high-speed, complete experience.

- **OFDMA High-density User Access**

The AP supports OFDMA of 802.11ax, which divides the WLAN channel into a plurality of narrower subchannels, with each user occupying one or more subchannels. By scheduling multiple users to receive and send packets concurrently via the AP, user competition and back-off can be reduced, thereby reducing network latency and improving network efficiency.

- **Bi-Directional MU-MIMO**

Compared with the previous Wi-Fi 5 (802.11ac) with only downlink MU-MIMO support, Wi-Fi 6 supports both uplink and downlink MU-MIMO (multi-user, multiple-input and multiple-output). Therefore, the AP can connect clients simultaneously, significantly improving the wireless performance and experience.

- **BSS Color Space Multiplexing**

AP-N505 supports the BSS Color space multiplexing function of 802.11ax standard, which identifies different BSS (Basic Service Set) of WLANs in the network by different coloring (BSS Color). Further, it divides them into two categories: internal BSS (device belonging to BSS) and external BSS The BSSs are identified by different colorings (BSS Color) and further divided into internal BSSs (device owned BSSs) and external BSSs and maintains different threshold values for receiving and sending messages. When receiving a statement, the BSS color is used to quickly determine that the message is from an external BSS. If the signal strength is less than the threshold value of the external BSS, the message is ignored, and the message from the internal BSS is not affected.
This technique can achieve channel multiplexing in high-density scenarios and alleviate the impact of co-channel interference in actual network deployment.

- **Green with the Lower Power Consumption per Unit of Performance**

A large number of new energy-saving technologies have been applied to the AP-N505, including single-antenna standby technology, dynamic MIMO power-saving technology, enhanced automatic power-saving transmission technology, and packet-by-packet power control technology, which, combined with the high-performance power supply design, make the AP-N505provide high-speed wireless access while easily saving energy and power.

- **Industry-leading Local Forwarding Technology**

The AP integrates intelligent local forwarding technology and breaks through the bottleneck in the traffic of AC. The AC can be used to pre-configure the data forwarding mode for the AP. Then, this AP determines whether data needs to be forwarded by the AC based on the SSID name or user VLAN, or be sent to a wired network for data exchange.

- **Abundant QoS Policies**

The AP supports abundant QoS policies. It provides WLAN/AP/STA-based bandwidth limitation and supports Wi-Fi Multimedia (WMM) that defines priorities for different service data. The AP authentically implements timely and quantitative transmission of audio and video, and guarantees smooth application of multimedia services.

Comprehensive Security Protection

- **Secure User Access**

The AP Supports Web, 802.1x, MAC address, local authentication, and other user access authentication methods. In addition, complying with the standard network access control, it offers a set of control policies in terms of user access, authorization, equipment compliance check, network behavior monitoring, network attack prevention, etc. All these control features guarantee high network security for authenticated users.

- **Comprehensive Wireless Security Protection**

AP-N505 has a series of wireless security protection functions such as WIDS (wireless intrusion detection), RF interference positioning, rogue AP countermeasures, anti-ARP spoofing, DHCP security protection, etc. to build a safe and reliable wireless network for users fundamentally.

Hybrid Management

- **Flexible Management Options**

All 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.

- **Web Management Interface**

AP-N505 provides a Web management interface for AC and AP, easy to handle wireless configuration, and operates the wireless network as a whole. The Web interface of AC can manage AP and manage the users connected under AP, limiting users' speed and restricting users from connecting to the network and other behaviors. Hence, it is convenient for operation and maintenance personnel to plan to operate the wireless.

Small Branch Office All-in-One

AP-N505 can provide wireless access service for office areas and act as a VPN gateway in a small branch office scenario, realizing All-in-One of AP + VPN gateway, simplifying network deployment and saving construction costs for users.

- **PPPoE**

AP-N505 supports the PPPoE client function, which can access the Internet through PPPoE so that the branch office area does not need to set up a separate gateway to access the Internet.

- **NAT**

AP-N505 supports the NAT function to provide NAT address translation between LAN and the branch office's Internet.

- **IPsec VPN**

The AP-N505 supports IPsec VPN, enabling IPsec VPN tunnels to be established between branch office areas and office headquarters, enabling LAN interconnection between headquarters and all branch office areas.

Typical Networking

FAT AP

In the below networking, the AP-N505 works as a fat AP to complete user access, authentication, data security, service forwarding, and QoS.
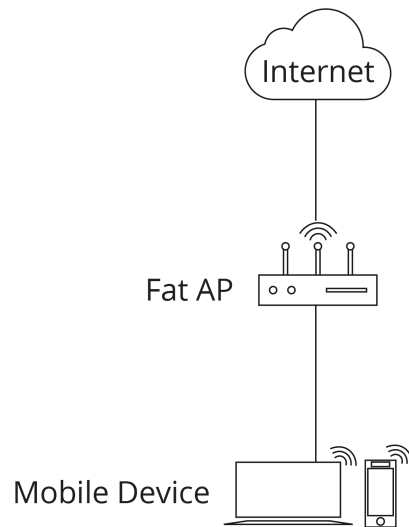
FIT AP

In the below networking, the AP-N505 works as a fit AP to bearer bridge forwarding function, and the functions of user access, AP online, authentication, routing, AP management, security protocol, and QoS are completed by the AC.
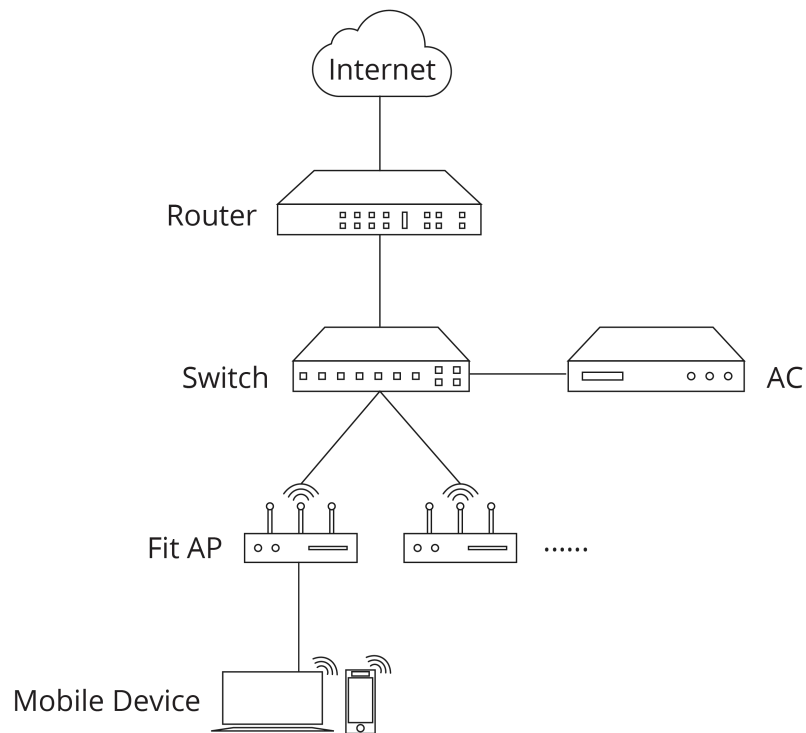
Technical Specification

Wi-Fi 6 access point comes with advanced hardware architecture design. Here's a look at the details.

CHARACTERISTICS

	AP-N505
Ports	
Service Port	1x 10/100/1000Base-T Ethernet port, 1x 2.5G SFP, 1x RJ45 Console port
Console Port	1
Key Components	
AP Chip	Qualcomm IPQ5018
DRAM	256MB
Flash Memory	128MB
Radio Specifications	
2.4GHz Operating Bands	802.11b/g/n/ax, 2.4GHz~2.483GHz;
5GHz Operating Bands	802.11a/n/ac/ax: 5.150-5.350GHz, 5.47-5.725GHz, 5.725-5.850GHz (vary depending on different countries)
MIMO	2.4G/5G 2x2 MIMO
Spatial Streams	2.4GHz: 2x2:2, 5GHz 2x2:2
Antenna	Built-in Omnidirectional Antenna
Antenna Gain	2.4GHz: 2dBi, 5GHz: 2dBi
Coverage Radius	8m
Power	
Power Supply	IEEE 802.3af PoE, DC 48V/0.6A
Power Consumption	12.95W
Transmit Power	20dBm
Adjustable Power	1dBm
Physical and Environmental	
Installation Mode	Ceiling/Wall
Bluetooth	Bluetooth 5.1
Reset Button	Support

CHARACTERISTICS

	AP-N505
IP Rating	IP41
Dimensions (HxWxD)	1.92"x8.66"x8.66" (49x220x220mm)
Operating Temperature	-10°C to 50°C
Storage Temperature	-40°C to 70°C
Operating Humidity	5% to 95% (non-condensing)
Storage Humidity	5% to 95% (non-condensing)
Warranty	
Warranty	3 Years

## FEATURES

Functionality	Description
WLAN	802.11ax/a/b/g/n/ac - Maximum throughput per AP: 2976Mbps - Radio 1: 2.4G 574Mbps, Radio 2: 5G 2402Mbps - Recommended number of access users: 64 - SSID hiding - Configuring the authentication mode, encryption mechanism and VLAN attributes for each SSID - Remote Intelligent Perception Technology (RIPT) - Intelligent device recognition technology - Intelligent load balancing based on the number of users or traffic **Number of users limit** - Support SSID-based user number limit - Support RF card-based user limit **Bandwidth limitation** - Speed limit based on STA/SSID/AP **Fat/Fit mode switching** - When working in fit (thin) mode, it can be switched to fat mode by AC series wireless controller - When working in fat mode, it can be switched to fit mode through local control port or Telnet mode

FEATURES

Functionality	Description
Security Features	• Data encryption: WPA (TKIP), WPA-PSK, WPA2 (AES), WPA3, WEP (64/128 bits) • PSK and web authentication • Data frame filtering: whitelist, static blacklist, dynamic blacklist • Support user isolation • Illegal AP detection and countermeasures • Dynamic ACL issuance • RADIUS protocol • CPU Protection Policy (CPP) • Network Foundation Protection Policy (NFPP)
Routing Switching	• IPv4: static IPv4 address and DHCP to obtain IPv4 address • Multicast to unicast • PPPoE client • IPsec VPN • FTP ALG/DNS ALG
Management and Maintenance	• Managed via wireless LAN controller: AC-1004/ AC-7072 wireless controller • Management protocol: Telnet, TFTP, Web • Wireless location: RBIS support • Wireless marketing: WMC/MCP support • Fault detection and alarm • Information statistics and logs

Accessories
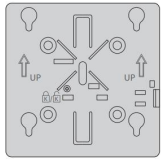
Mounting Bracket x1

Screw x4

Screw Anchor x4

Anti-theft Key x1

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Ordering Information

ID	Description
149655	1167 Mbps 2x2 MU-MIMO Dual Radios Gigabit Access Point
115392	1775 Mbps 2x2 MU-MIMO Dual Radios Gigabit Access Point
108705	2400 Mbps 2x2 MU-MIMO Dual Radios Gigabit Access Point
149657	2400 Mbps 2x2 MU-MIMO Dual Radios Gigabit Outdoor Access Point
149658	2400 Mbps 2x2 MU-MIMO Dual Radios Gigabit Outdoor Access Point
149656	3000 Mbps 2x2 MU-MIMO Dual Radios Gigabit Access Point
115391	3267 Mbps 2x2 MU-MIMO Three Radios Gigabit Access Point
115390	4134 Mbps 2x2 MU-MIMO Four Radios Gigabit Access Point
108707	6817 Mbps 4x4 MU-MIMO Three Radios Gigabit Access Point
115389	10 Gbps 4x4 MU-MIMO Three Radios Gigabit Access Point
141375	Wireless LAN Controller with 64 AP License
108708	Wireless LAN Controller with 224 AP License
149659	Wireless LAN Controller with 1152 AP License

Note: AC-1004/AC-7072 can manage all APs on the website, except three Wi-Fi 5 APs: FS-AP733C, FS-AP1167C, FS-AP3000C; 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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