

Huawei Enterprise AP Series 802.11ac Brochure





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1 Overview

Release of 802.11ac standards has driven wireless technologies to the era of GE Wi-Fi. Enterprise Wi-Fi networks face challenges of explosive growth in enterprise application types. Increases in large bandwidth services such as High Definition (HD) video streams, multimedia, desktop services, and popularization of Bring Your Own Device (BYOD) office create high requirements for enterprise Wi-Fi networks.

To meet these requirements, Huawei has developed the latest-generation 802.11ac Access Points (APs), which inherit all the advantages of 802.11n products, and add the newest improvements of AP functions and performance. The 802.11ac APs integrate the industry's latest wireless chip with Huawei's advanced wireless technologies. As a result, enterprise customers have benefitted with larger bandwidths and more reliable communications.

Huawei 802.11ac APs employ a dual-band design that supports both 2.4 GHz and 5 GHz frequency bands. Because they are backwards compatible with 802.11a/b/g/n standards, 802.11ac APs enable existing networks to easily migrate to 802.11ac networks. Compared with traditional 802.11n APs, the next-generation APs not only provide enhanced performance on the 2.4 GHz frequency band but also make unprecedented achievements on the 5 GHz frequency band.

1. With 2.4 GHz and 5 GHz frequency bands, Huawei 802.11ac APs provide a rate of up to 1.75 Gbit/s, a major leap in Wi-Fi access from 100M to GE.

Carrier bandwidth is doubled for Huawei 802.11ac APs, with extended channels and more sub-carriers for data transmission. High Quadrature Amplitude Modulation (HQAM) — at 256-QAM — increases the 5 GHz radio rate to 1.3 Gbit/s. The throughput of 802.11ac APs are twice higher than that of traditional APs, addressing insufficient bandwidth problems caused by bandwidth sharing.

2. Huawei 802.11ac APs integrate innovative technologies, making wireless networks more agile.

Huawei-unique technologies, including Auto Radio, High Density Boost, Link Following, and User Awareness improve radio performance, increase the number of supported concurrent users, and enlarge coverage areas, providing comprehensive quality guarantees.

For enterprise networks of different types and scales, Huawei offers the following AP models: 802.11ac indoor 7X30 series and 5X30 series APs, outdoor 802.11ac 8X30 series APs, and 802.11ac AP9130DN vehicle-mounted APs specially designed for rail transit communications.

2 802.11ac Indoor APs

2.1 AP7030DE



- Recommended for use in high-density scenarios, including business and exhibition centers, stadiums, and other large venues
- 3 x 3 Multiple-Input Multiple-Output (MIMO) with three spatial streams; 600 Mbit/s at 2.4 GHz; 1.3 Gbit/s at 5 GHz; and 1.9 Gbit/s for the device
- PoE power supply in compliance with IEEE 802.3at, making APs easy to install and highly reliable
- Dual GE Ethernet ports, supporting data backup and PoE power supply redundancy
- Smart antenna arrays, which can adjust radiation direction and power accordingly as wireless terminals move; 12 built-in, smart dual-band antennas with 4 dBi gain at 2.4 GHz and 4 dBi gain at 5 GHz
- Support for Auto Radio, High Density Boost, Link Following, and User Awareness

2.2 AP5030DN and AP5130DN



- Recommended for use in enterprise offices, airports and stations, digital trains, and stadiums
- 3 x 3 MIMO with three spatial streams; 450 Mbit/s at 2.4 GHz; 1.3 Gbit/s at 5 GHz; and 1.75 Gbit/s for the device
- PoE power supply in compliance with IEEE 802.3af/at, making APs easy to install
- Dual GE ports, supporting data backup and PoE power supply redundancy
- AP5130DN: uses external antennas. Antenna can be configured and deployment locations determined according to networking requirements. External antennas are delivered with APs in the standard configuration, and provide 2.5 dBi gain at 2.4 GHz and 4 dBi gain at 5 GHz
- AP5030DN: uses built-in antennas with 4 dBi gain at 2.4 GHz and 5 dBi gain at 5 GHz
- Support for Auto Radio, High Density Boost, and User Awareness

3 802.11ac Outdoor APs

3.1 AP8030DN and AP8130DN



- Recommended for use in coverage scenarios (for example, squares, pedestrian streets, and amusement parks) and bridging scenarios (for example, wireless harbors, data backhaul, video surveillance, and train-to-ground backhaul).
- 3 x 3 MIMO with three spatial streams; 450 Mbit/s at 2.4 GHz; 1.3 Gbit/s at 5 GHz; and 1.75 Gbit/s for the device
- PoE power supply in compliance with IEEE 802.3at, making APs easy to install
- Uplink optical port and dual GE Ethernet ports, supporting data backup and PoE power supply redundancy
- AP8130DN: uses external antennas. Antenna can be configured and deployment locations determined according to networking requirements.
- AP8030DN: uses built-in antennas with 12 dBi gain at 2.4 GHz and 12 dBi gain at 5 GHz
- Support for Auto Radio, High Density Boost, and User Awareness

4 802.11ac APs for Dedicated Scenarios

4.1 AP9130DN



- Recommended for use on trains in rail transit scenarios
- 3 x 3 MIMO with three spatial streams; 450 Mbit/s at 2.4 GHz; 1.3 Gbit/s at 5 GHz; and 1.75 Gbit/s for the device
- PoE power supply in compliance with IEEE 802.3at, making APs easy to install
- Dual uplink GE Ethernet ports, supporting data backup and PoE power supply redundancy
- Industrial anti-vibration M12 connectors on Ethernet and power ports
- External dual-band antennas, which can be configured and deployment locations determined according to networking requirements
- 50 ms fast switchover
- Support for Auto Radio, High Density Boost, and User Awareness

5 Huawei AP Specifications and Features

Table 5-1 Specifications of Huawei 802.11ac APs

Huawei 802.11ac AP	AP5030DN/ AP5130DN	AP7030DE	AP8030DN/ AP8130DN	AP9130DN
Standard protocols	2.4 GHz: 802.11b/g/n 5 GHz: 802.11a/n/ac	2.4 GHz: 802.11b/g/n 5 GHz: 802.11a/n/ac	2.4 GHz: 802.11b/g/n 5 GHz: 802.11a/n/ac	2.4 GHz: 802.11b/g/n 5 GHz: 802.11a/n/ac
MIMO: number of spatial streams	3x3:3	3x3:3	3x3:3	3x3:3
Rate	450 Mbit/s (2.4 GHz) + 1.3 Gbit/s (5 GHz)	600 Mbit/s (2.4 GHz) + 1.3 Gbit/s (5 GHz)	450 Mbit/s (2.4 GHz) + 1.3 Gbit/s (5 GHz)	450 Mbit/s (2.4 GHz) + 1.3 Gbit/s (5 GHz)
Number of SSIDs supported by each radio	16	16	16	16
Uplink ports	2 x 10/100/1000 BASE-T Ethernet ports	2 x 10/100/1000 BASE-T Ethernet ports	2 x 10/100/1000 BASE-T Ethernet ports AP8130DN: 1 x 10/100/1000M, SPF	2 x 10/100/1000 BASE-T Ethernet ports
Power supply	12 V DC PoE: 802.3af/at	12 V DC PoE: 802.3at	PoE: 802.3at	12 V DC PoE: 802.3at
Maximum power consumption	13 W	21 W	25.5 W	25.5 W
Temperature	-10°C to 50°C	-10°C to 50°C	-40°C to 60°C	-40°C to 65°C
Antenna	5030DN: built-in antennas 5130DN: external antennas	12 x built-in dual-band smart antennas	AP8030DN: built-in antenna AP8130DN: external antenna	External antenna
Maximum transmit power	2.4 GHz: 20 dBm for each radio port	20 dBm for each radio port	2.4 GHz: 23 dBm 5 GHz: 21 dBm	2.4 GHz: 23 dBm 5 GHz: 21 dBm
	NOTE: The actual transmit power depends on local laws and regulations.			
IP protection grade	IP41	IP41	IP67	IP30

Table 5-2 Features of Huawei 802.11ac APs

Huawei 802.11ac AP	AP5030DN/ AP5130DN	AP7030DE	AP8030DN/ AP8130DN	AP9130DN
Target market	Mid-range market: small- to medium-sized enterprises	High-end market: medium- to large-sized enterprises	Large campus outdoor coverage or backhaul	Rail transit
Working mode	Fit/Fat AP	Fit AP	Fit/Fat AP	Fat AP
Dying gasp	-	√	√	√
Wireless positioning/ Real-Time Location System (RTLS)	√	√	√	-
Spectrum analysis	√	√	√	-
Seamless roaming	√	√	√	√
IPv6	√	√	√	√
Wireless Intrusion Prevention System (WIPS)/Wireless Intrusion Detection System (WIDS)	√	√	√	√
Wireless Distribution System (WDS)/Mesh	√	√	√	-
Auto Radio	√	√	√	√
High Density Boost	√	√	√	√
Link Following	-	√	-	-
User Awareness	√	√	√	√

6 Optimal Choice

Professional Service Stemming from Abundant Accumulation

- Huawei, staffed with top industry experts (including chair of the IEEE 802.11ac Working Group), has made continuous investments in the wireless field over the past 15 years, earning more than 100 innovative patents.
- Huawei has the most efficient simulation platform and world's largest automation test factory, enabling the company to establish an accurate test environment. Huawei products have been strictly verified through accurate simulation tests, ensuring high product quality.
- By capitalizing on successful 3G/4G network planning cases and Huawei-developed 3D network planning tools, Huawei delivers professional network planning and optimization solutions well-suited to actual environments, making wireless network deployment easy in complex scenarios.

Innovative High Performance Experience

- **Auto Radio:** Huawei applies innovative technologies to WLAN products, including dynamic power adjustment, channel optimization, 5-G prior, and dynamic load balancing, which enables wireless networks to be deployed rapidly and automatically adjusts to network changes in real time, improving network running efficiency and radio performance. Interference suppression technologies, such as Clear Channel Assessment (CCA), rogue device detection, and radio calibration dynamically detect and minimize interference in the radio environment, creating a clean radio experience.
- **High Density Boost:** By integrating dynamic access control, multi-user collision control, airtime scheduling, and user CAC technologies, High Density Boost addresses challenges in high-density scenarios, including access problems, data congestion, and poor roaming experience, helping construct a wireless expressway network that can accommodate more terminals.
- **User Awareness:** This technology helps build a more secure and resilient network and provides access policies matching each user or terminal anywhere at any time. The network delivers policies based on user identities, terminal types, terminal operating system, network use time, and physical locations, which improves network security and serviceability. In addition, Huawei ACs provide a built-in Bonjour gateway. Devices running Apple Bonjour can construct a network automatically, without extra settings or an additional Bonjour gateway.
- **Link Following:** Convergence of smart antenna and implicit Beamforming technologies allows antennas to detect user locations in real time. As terminals move, the antennas switch directions accordingly to improve signal strength and reduce interferences. Link Following realizes millisecond-level switchover and allows Huawei products to deliver ubiquitous network coverage for customers.

Rich Experience for Complex Scenarios

- Huawei unique high-density technologies and specially crafted antennas help customers easily deal with such challenges of high-density situations as high density access and large burst traffic.
- Huawei outdoor wide coverage solution can achieve a distance of 10 km, facilitating broadband access and data transmissions in small towns where wired networks are difficult to deploy.
- Huawei wireless office solution employs industry-leading GE wireless access devices to implement fine-grained security management and control, bringing users super fast bandwidth and high security experience.
- High-speed rail transit communications solution implements 50 ms fast and seamless switching. The purpose-built GE vehicle-mounted APs lead the industry in performance, breaking the stability and bandwidth bottleneck.

NOTE: All products are subject to the latest releases.

More Information

For more information, visit www.huawei.com/enterprise or contact the Huawei local sales office.



Enterprise Services



Product Overview



Marketing Documentation



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HUAWEI TECHNOLOGIES CO.,LTD.
Huawei Industrial Base
Bantian Longgang
Shenzhen 518129,P.R.China
Tel: +86 755 28780808

www.huawei.com