Huawei AP8030DN and AP8130DN Brochure-Detailed

HUAWEI TECHNOLOGIES CO., LTD.

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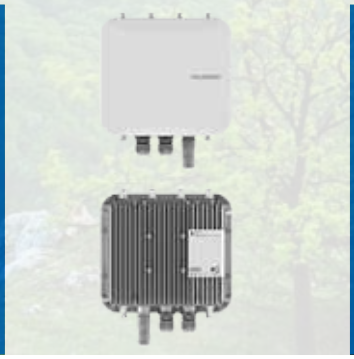


Huawei AP8030DN and AP8130DN are the latest-generation 802.11ac outdoor Access Points (APs) that offer high flexibility with IEEE 802.11a/b/g/n/ac standards compliance and Fit AP or Fat AP operations. Both APs are physically hardened and feature enhanced outdoor coverage performance. They offer services simultaneously on 2.4 GHz and 5 GHz radios to connect more users, support wireless bridging, and provide gigabit access for wireless users. The AP8030DN and AP8130DN provide comprehensive service support and feature high reliability, high security, simple network deployment, automatic Access Controller (AC) discovery and configuration, and real-time management and maintenance, which meet outdoor network requirements.

Huawei AP8030DN Access Point

- Compatibility with IEEE 802.11a/b/g/n/ac
- Built-in antenna
- Dual Ethernet ports and one optical port
- 2.4 GHz and 5 GHz frequency bands

Huawei AP8130DN Access Point

- Compatibility with IEEE 802.11a/b/g/n/ac
- External antenna
- Dual Ethernet ports and one optical port
- 2.4 GHz and 5 GHz frequency bands
- The AP can switch from the 2.4 GHz frequency band to the 5 GHz frequency band. When working at dual 5 GHz frequency bands simultaneously, the AP provides a system rate of 2.6 Gbit/s and can function as a repeater AP to implement wireless bridging functions, which reduces costs and improves device usage efficiency.

Huawei AP8030DN and AP8130DN advantages:

- High-speed, reliable outdoor wireless access services: uses the latest 802.11ac chip to achieve higher performance and wider coverage; provides a rate of 1.75 Gbit/s.
- One optical port and dual GE electrical ports; data backup and PoE power supply
- High surge protection: high-level built-in surge protector; no additional surge protection device required. This design simplifies installation and saves costs.
- Comprehensive user access control: implements fine-grained management.
- Solid network security: supports multiple authentication and encryption modes, as well as rogue AP and STA detection.
- Flexible networking and strong environment adaptability: provides access and bridging services and automatically adjusts radio parameters and bandwidth to adapt to various environments.
- Easy management and maintenance: supports Plug-and-Play (PnP) and deployment based on expert network planning and optimization tools.

Product Features

- Outdoor 802.11ac AP with IP67 dustproof and waterproof protection for use in coverage scenarios (for example, high-density stadiums, squares, pedestrian streets, and amusement parks) and bridging scenarios (for example, wireless harbors, data backhaul, video surveillance, and train-to-ground backhaul)
- Built-in, high-level surge protector, simplifying deployment and reducing costs
- Latest-generation 802.11ac 3 x 3 Multiple-Input Multiple-Output (MIMO) chips, energy-efficient design, and a rate of up to 1.75 Gbit/s
- Integrated Fit and Fat AP functions
- Wireless Intrusion Detection System (WIDS)/Wireless Intrusion Prevention System (WIPS)
- Wireless Distribution System (WDS)/Mesh
- Auto Radio
- High Density Boost
- User Awareness
- Beamforming
- IPv6 support
- Value-added services such as spectrum analysis and locating service
- One optical port and two auto-sensing uplink GE electrical ports; PoE power supply

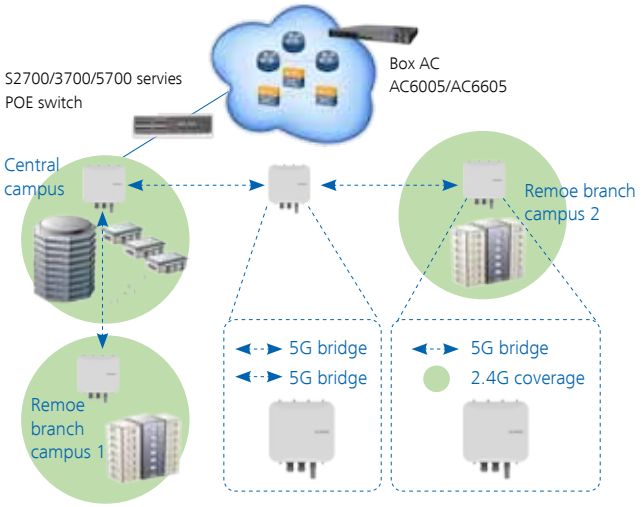
Scalability

When coupled with ACs and Network Management Systems (NMSs), Huawei 802.11ac APs can implement real-time monitoring, intelligent Radio Frequency (RF) management, spectrum analysis, wireless positioning, load balancing, roaming, security policy control, wired/wireless network integration, as well as Bring Your Own Device (BYOD) network security control and a smart access strategy. The AC + Fit AP architecture is highly scalable and supports centralized management of multiple Fit APs on a single AC. Software upgrade technologies allow users to seamlessly add and upgrade APs without incurring additional administrative or equipment expense.

Typical Networking

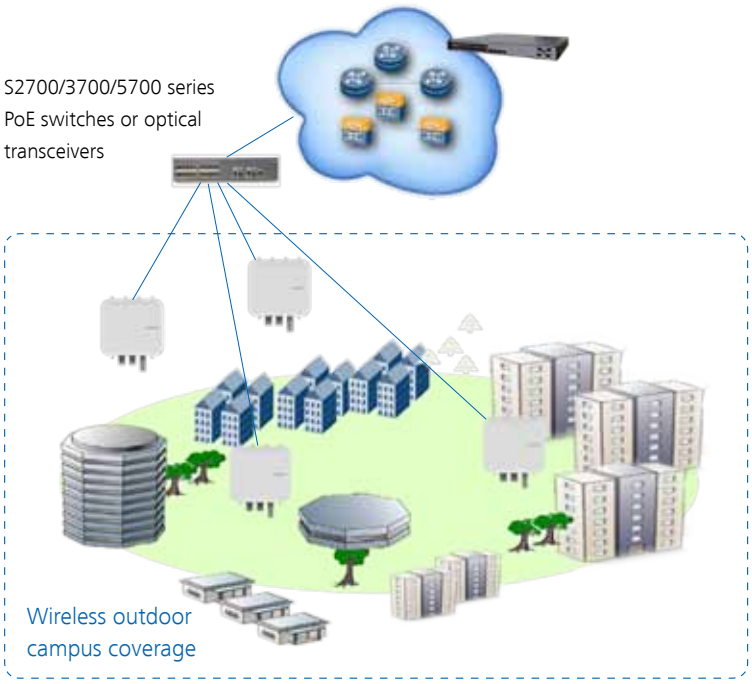
The following figures show typical AP8030DN and AP8130DN networking.

Fit AP WDS (P2MP networking)



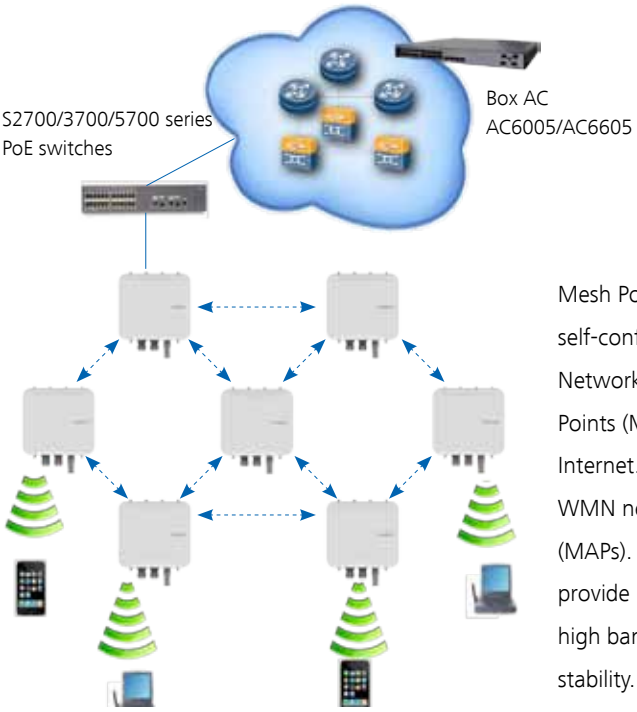
In WDS networking, the AP8030DN and AP8130DN use wireless links to connect two or more independent wired or wireless LANs so that users can communicate with each other. In WDS mode, the APs support Point-to-Point (P2P) and Point-to-Multi-Point (P2MP) networking. With 5 GHz and 2.4 GHz frequency bands, the APs can implement wireless bridging and access functions. In addition, AP8130DN can work at dual 5 GHz radios simultaneously to implement long-distance repeater functions with maximum rate of 2.6 Gbit/s.

Fit AP networking (access point mode)



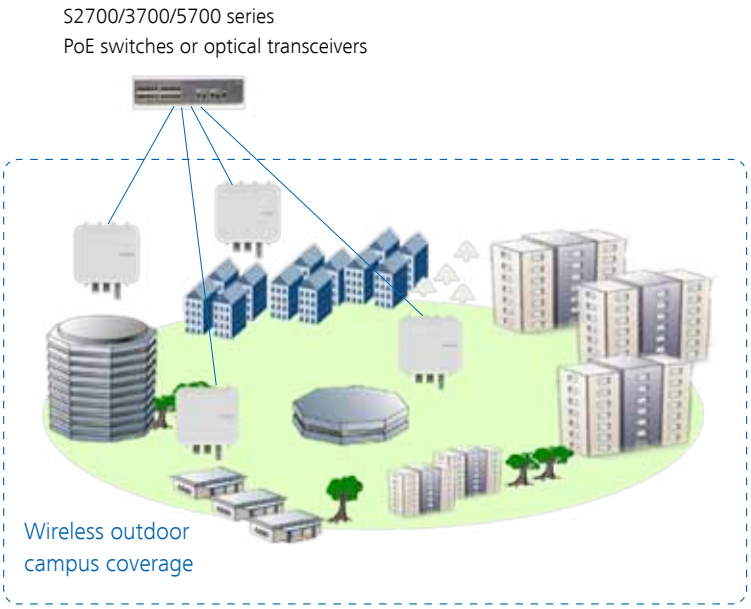
When working as Fit APs, the AP8030DN and AP8130DN provide data forwarding functions. An AC is required for user access, AP management, authentication, routing, security, and QoS.

Fit AP Mesh networking



Mesh Points (MPs) interconnect to form a self-configuring, self-healing Wireless Mesh Network (WMN) backbone, and Mesh Portal Points (MPPs) provide a connection to the Internet. Stations (STAs) can connect to the WMN network through Mesh Access Points (MAPs). Dedicated mesh routing protocols can provide better transmission quality to ensure high bandwidth and Internet connection service stability.

Fat AP networking



When working as Fat APs, the AP8030DN and AP8130DN provide user authentication and access, data security, service data forwarding, Quality of Service (QoS), and other functions without an AC.

Basic Specifications

Item		Description
Technical specifications	Dimensions (W x D x H)	290 mm x 260 mm x 100 mm
	System memory	256 MB DDR3 64 MB flash memory
Power specifications	Power input	AP8030DN/AP8130DN: PoE power supply (-48 V DC, in compliance with IEEE 802.3at) NOTE The AP does not support AC power supply. If AC power supply is required, use a PoE adapter. Ensure that the installation position of the PoE adapter meets requirements.
	Maximum power consumption	AP8030DN/AP8130DN: 25.5 W NOTE The actual maximum power consumption depends on local laws and regulations.
Environmental specifications	Operating temperature	–40°C to +60°C
	Storage temperature	–40°C to +70°C
	Operating humidity	0% to 100% (non-condensing)
	Waterproof and dustproof grade	IP67
	Altitude	–60 m to 4,000 m

Radio Specifications

Item	Description
Antenna type	AP8030DN: built-in antenna (directional antenna with 10dBi gain @2.4G&5G, horizontal beam-width 60° and vertical beam-width 30°) AP8130DN: outdoor external antenna
Maximum number of users	≤ 256 NOTE The number of concurrent online users on each VAP cannot exceed 128. The number of concurrent online users on each radio cannot exceed 128.
Maximum transmit power	• AP8030DN: 2.4 GHz: 23 dBm 5 GHz: 21 dBm • AP8130DN: 2.4 GHz: 23 dBm 5 GHz: 21 dBm NOTE The actual transmit power depends on local laws and regulations.
Power increment	1 dBm

Item	Description
Receiver sensitivity	2.4 GHz 802.11b (CCK): -96 dBm @ 1 Mb/s; –89 dBm @ 11 Mb/s
	2.4 GHz 802.11g (non-HT20): -87 dBm @ 6 Mb/s; –74 dBm @ 54 Mb/s
	2.4 GHz 802.11n (HT20): -87 dBm @ MCS0/8; –71 dBm @ MCS7/15
	2.4 GHz 802.11n(HT40): -84 dBm @ MCS0/8; –68 dBm @ MCS7/15
	5 GHz 802.11a (non-HT20): -90 dBm @ 6 Mb/s; –73 dBm @ 54 Mb/s
	5 GHz 802.11n (HT20): -87 dBm @ MCS0/8; –70 dBm @ MCS7/15
	5 GHz 802.11n (HT40): -86 dBm @ MCS0/8; –66 dBm @ MCS7/15
	5 GHz 802.11ac (HT20): -88 dBm @ MCS0NSS1; –65 dBm @ MCS8NSS1
	5 GHz 802.11ac (HT40): -85 dBm @ MCS0NSS1; –60 dBm @ MCS9NSS1
	5 GHz 802.11ac (HT80): -82 dBm @ MCS0NSS1; –57 dBm @ MCS9NSS1

Product Features

WLAN features	Compliance with IEEE 802.11a/b/g/n/ac; maximum rate of 1.75 Gbit/s Maximum Ratio Combining (MRC) Maximum Likelihood Detection (MLD) Data unit aggregation, including A-MPDU (Tx/Rx) and A-MSDU (Rx only) 802.11 Dynamic Frequency Selection (DFS) Short Guard Interval (GI) Priority mapping and packet scheduling based on a Wi-Fi Multimedia (WMM) profile for priority-based data processing and forwarding Automatic and manual rate adjustment (the rate is adjusted automatically by default) WLAN channel management and channel rate adjustment Automatic channel scanning and interference avoidance Service Set Identifier (SSID) hiding Signal Sustain Technology (SST) Unscheduled Automatic Power Save Delivery (U-APSD) Control and Provisioning of Wireless Access Points (CAPWAP) in Fit AP mode Automatic going online in Fit AP mode WDS networking in Fit AP mode Mesh networking in Fit AP mode
Network features	Compliance with IEEE 802.3u Auto-negotiation of the rate and duplex mode; automatic switchover between the Media Dependent Interface (MDI) and Media Dependent Interface Crossover (MDI-X) SSID-based VLAN assignment VLAN trunk on uplink Ethernet ports 4,094 VLAN IDs (1 to 4,094) and a maximum of 16 Virtual APs (VAPs) for each radio AP control channel in tagged and untagged mixed mode DHCP client, obtaining IP addresses through DHCP Tunnel forwarding and direct forwarding STA isolation in the same VLAN Access Control Lists (ACLs) Link Layer Discovery Protocol (LLDP) Service holding upon CAPWAP link disconnection in Fit AP mode Unified authentication on the AC in Fit AP mode AC dual-link backup in Fit AP mode

QoS features	Priority mapping and packet scheduling based on a WMM profile for priority-based data processing and forwarding WMM parameter management for each radio WMM power saving Priority mapping for upstream packets and flow-based mapping for downstream packets Queue mapping and scheduling User-based bandwidth limiting Adaptive bandwidth management (the system dynamically adjusts bandwidth allocation based on the user quantity and environment to improve the user experience) Airtime scheduling
Security features	Open system authentication WEP authentication/encryption WPA/WPA2-PSK authentication and encryption WPA/WPA2-802.1x authentication and encryption WAPI authentication and encryption WIDS including rogue AP and STA detection, attack detection, STA/AP blacklist and whitelist
Maintenance features	Unified management and maintenance on the AC in Fit AP mode Plug-and-Play (PnP) in Fit AP mode: automatically goes online and loads configurations WDS zero-configuration deployment in Fit AP mode Mesh zero-configuration deployment in Fit AP mode Batch upgrade Local AP management using Telnet Real-time configuration monitoring and fast fault location using the NMS System status alarm
BYOD	Identifies the device type according to the Organizationally Unique Identifier (OUI) in the MAC address. Identifies the device type according to the User Agent (UA) information in an HTTP packet. Identifies the device type according to DHCP options. The RADIUS server delivers packet forwarding, security, and QoS policies according to the device type carried in the RADIUS authentication and accounting packets.
Locating service	Locates tags manufactured by AeroScout or Ekahau. Locates Wi-Fi terminals.
Spectrum analysis	Identifies interference sources such as baby monitors, Bluetooth devices, digital cordless phones (at 2.4 GHz frequency band only), wireless audio transmitters (at both the 2.4 GHz and 5 GHz frequency bands), wireless game controllers, and microwave ovens. Works with Huawei eSight to locate and perform spectrum analysis on interference sources.

Standards Compliance

Safety standards	UL 60950–1 UL 60950–22 CAN/CSA 22.2 No.60950-1 CAN/CSA 22.2 No.60950-22 IEC 60950–1	IEC 60950–22 EN 60950–1 EN 60950–22 GB 4943
Radio standards	ETSI EN 300 328 ETSI EN 301 893 FCC Part 15C: 15.247	FCC Part 15C: 15.407 RSS-210 AS/NZS 4268

EMC standards	ETSI EN 301 489–1 ETSI EN 301 489–17 ETSI EN 60601-1-2 FCC Part 15 ICES-003 YD/T 1312.2-2004 ITU k.21 GB 9254	GB 17625.1 AS/NZS CIPSR22 EN 55022 EN 55024 CISPR 22 CISPR 24 IEC61000-4-6 IEC61000-4-2
IEEE standards	IEEE 802.11a/b/g IEEE 802.11n IEEE 802.11ac	IEEE 802.11h IEEE 802.11d IEEE 802.11e
Security standards	802.11i, Wi-Fi Protected Access 2 (WPA2), and WPA 802.1X Advanced Encryption Standards (AES) and Temporal Key Integrity Protocol (TKIP) EAP Type (s)	
Environmental standards	ETSI 300 019-2-1 ETSI 300 019-2-2 ETSI 300 019-2-4 IEC 60068-2-52	ETSI 300 019-1-1 ETSI 300 019-1-2 ETSI 300 019-1-4
EMF	CENELEC EN 62311 CENELEC EN 50385 OET65	RSS-102 FCC Parts 1 & 2 FCC KDB series
RoHS	Directive 2002/95/EC & 2011/65/EU	
Reach	Regulation 1907/2006/EC	
WEEE	Directive 2002/96/EC & 2012/19/EU	

Professional Service and Support

Huawei WLAN planning tools deliver expert network design and optimization services using the most professional simulation platform in the industry. Backed by fifteen years of continuous investment in wireless technologies, extensive network planning and optimization experience, as well as rich expert resources, Huawei helps customers:

- Design, deploy, and operate a high-performance network that is reliable and secure.
- Maximize return on investment and reduce operating expenses.

More Information

For more information, please visit http://e.huawei.com or contact your local Huawei office.

Enterprise Services

Product Overview

Marketing Documentation