

# Huawei AP6010 Series Brochure-Detailed



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Huawei AP6010, a standard indoor Access Point (AP) with an elegant design, supports 2.4 GHz and 5 GHz frequency bands, complies with IEEE 802.11a/b/g/n, and works in Fit AP and Fat AP modes. It supports Multiple-Input Multiple-Output (MIMO) technology, provides radio coverage for large areas, and offers services simultaneously on 2.4 GHz and 5 GHz to connect more users.

The AP6010 provides comprehensive service support capabilities and features proven reliability, high security, simple network deployment, automatic AC discovery and configuration, and real-time management and maintenance meeting indoor settled network requirements.



## Huawei AP6010SN-GN Access Point

- 2.4 GHz frequency band
- Compatibility with IEEE 802.11b/g/n
- Certified energy-efficient
- iF Design Award winner for superior value

## Huawei AP6010DN-AGN Access Point

- 2.4 GHz and 5 GHz frequency bands
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- Certified energy-efficient
- Tolly certified
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## Huawei AP6010 offers the following advantages:

- High-speed and reliable wireless access services: supports 802.11n Beamforming and uses the latest 802.11n chip for better performance in high-density scenarios
- Comprehensive user access control: implements fine-grained user management
- Secure network: supports multiple authentication and encryption methods, as well as rogue AP and STA detection
- Flexible networking and strong environment adaptability: provides access and bridging services; automatically adjusts radio parameters and bandwidth for different environments
- Easy management and maintenance: supports Plug-and-Play (PnP); professional network design tools optimize deployment

## Product Features

- Recommended for middle- to large-scale scenarios with high user density and bandwidth requirements, such as educational institutions, government offices, airports, bus stations, and retail stores
- Integrated Fit AP and Fat AP functions
- Wireless Intrusion Detection System (WIDS)/Wireless Intrusion Prevention System (WIPS)
- Wireless Distribution System (WDS)/Mesh networking
- Value-added services, such as spectrum analysis and locating service
- Auto Radio
- High Density Boost
- User Awareness
- IPv6 support
- 300 Mbit/s for each frequency band and integrated built-in antenna
- PoE power supply in compliance with IEEE 802.3af/at, simplifying installation
- Single-band AP6010SN-GN: works on the 2.4 GHz frequency band
- Dual-band AP6010DN-AGN: works on both 2.4 GHz and 5 GHz frequency bands

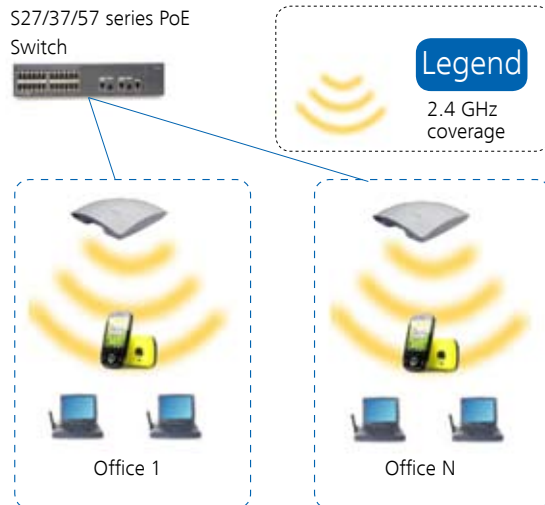
## Scalability

When coupled with Access Controllers (ACs) and Network Management Systems (NMSs), Huawei 802.11n 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

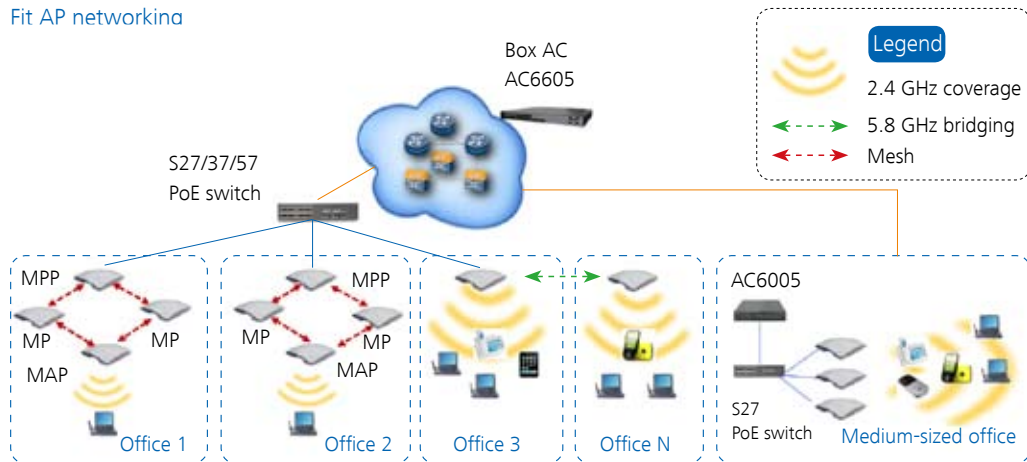
The following figures show typical AP6010SN-GN and AP6010DN-AGN networking.

### Fat AP networking



In Fat AP mode, the AP6010SN-GN and AP6010DN-AGN provide user authentication and access, data security, service data forwarding, Quality of Service (QoS), and other functions, without an AC.

### Fit AP networking





In Fit AP mode, the AP6010SN-GN and AP6010DN-AGN provide data forwarding functions. An AC is required for user access, AP management, authentication, routing, security, and QoS. The AP6010SN-GN and AP6010DN-AGN can also be deployed in a Wireless Distribution System (WDS) or mesh network as a Fit AP.


In WDS mode, the AP supports Point-to-Point (P2P) and Point-to-Multi-Point (P2MP) networking. With 5 GHz and 2.4 GHz frequency bands, the AP provides wireless bridging and access functions.

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

## Basic Specifications

Item		Description
Technical specifications	Dimensions (W x D x H)	180 mm x 180 mm x 50 mm
	Weight	0.4 kg
	System memory	<ul style="list-style-type: none"> <li>• 128 MB DDR2</li> <li>• 32 MB flash memory</li> </ul>
Power specifications	Power input	<ul style="list-style-type: none"> <li>• 12V DC <math>\pm</math> 10%</li> <li>• PoE power supply: -48V DC (in compliance with IEEE 802.3af/at)</li> </ul> <p> NOTE The AP6010DN-AGN and AP6010SN-GN cannot use PoE power supply and adapter power supply simultaneously.</p>
	Maximum power consumption	<ul style="list-style-type: none"> <li>• AP6010DN-AGN: 10.2W</li> <li>• AP6010SN-GN: 6.5W</li> </ul> <p> NOTE The actual maximum power consumption depends on local laws and regulations.</p>
Environmental specifications	Operating temperature	-10°C to +50°C
	Storage temperature	-40°C to +70°C
	Operating humidity	5% to 95% (non-condensing)
	Waterproof and dustproof grade	IP31
	Altitude	-60 m to 4,000 m

## Radio Specifications

Item	Description
Antenna type	Built-in antennas
Antenna gain	AP6010DN-AGN: <ul style="list-style-type: none"> <li>• 2.4 GHz: 4 dBi</li> <li>• 5 GHz: 5 dBi</li> </ul> AP6010SN-GN: 4 dBi
Maximum number of users	$\leq$ 128
Maximum transmit power	20 dBm for each radio port <p> NOTE The actual transmit power depends on local laws and regulations.</p>
Power increment	1 dBm

Item	Description
Receiver sensitivity	2.4 GHz 802.11b (CCK): -97 dBm @ 1 Mb/s; -90 dBm @ 11 Mb/s
	2.4 GHz 802.11g (non-HT20): -92 dBm @ 6 Mb/s; -74 dBm @ 54 Mb/s
	2.4 GHz 802.11n (HT20): -92 dBm @ MCS0; -71 dBm @ MCS15
	2.4 GHz 802.11n (HT40): -89 dBm @ MCS0; -68 dBm @ MCS15
	5 GHz 802.11a (non-HT20): -89 dBm @ 6 Mb/s; -70 dBm @ 54 Mb/s
	5 GHz 802.11n (HT20): -88 dBm @ MCS0; -67 dBm @ MCS15
	5 GHz 802.11n (HT40): -85 dBm @ MCS0; -63 dBm @ MCS15

## Product Features

WLAN features	<p>AP6010DN-AGN: compliance with IEEE 802.11a/b/g/n</p> <p>AP6010SN-GN: compliance with IEEE 802.11b/g/n</p> <p>AP6010SN-GN: maximum rate of 300 Mbit/s</p> <p>AP6010DN-AGN: maximum rate of 600 Mbit/s</p> <p>Maximum Ratio Combining (MRC)</p> <p>Maximum Likelihood Detection (MLD)</p> <p>Data unit aggregation, including A-MPDU (Tx/Rx) and A-MSDU (Rx only)</p> <p>802.11 Dynamic Frequency Selection (DFS) for the AP6010DN-AGN</p> <p>Short Guard Interval (GI)</p> <p>Priority mapping and packet scheduling based on a Wi-Fi Multimedia (WMM) profile for priority-based data processing and forwarding</p> <p>Automatic and manual rate adjustment (the rate is adjusted automatically by default)</p> <p>WLAN channel management and channel rate adjustment</p> <p>Automatic channel scanning and interference avoidance</p> <p>Service Set Identifier (SSID) hiding</p> <p>Signal Sustain Technology (SST)</p> <p>Unscheduled Automatic Power Save Delivery (U-APSD)</p> <p>Control and Provisioning of Wireless Access Points (CAPWAP) in Fit AP mode</p> <p>Automatically going online in Fit AP mode</p> <p>WDS in Fit AP mode</p> <p>Mesh networking in Fit AP mode</p>
Network features	<p>Compliance with IEEE 802.3u</p> <p>Auto-negotiation of the rate and duplex mode; automatic switchover between the Media Dependent Interface (MDI) and Media Dependent Interface Crossover (MDI-X)</p> <p>SSID-based VLAN assignment</p> <p>VLAN trunk on uplink Ethernet ports</p> <p>4,094 VLAN IDs (1 to 4,094) and a maximum of 16 virtual APs (VAPs) for each radio</p> <p>AP control channel in tagged and untagged mixed mode</p> <p>DHCP client, obtaining IP addresses through DHCP</p> <p>Tunnel forwarding and direct forwarding</p> <p>STA isolation in the same VLAN</p> <p>Access Control Lists (ACLs)</p> <p>Link Layer Discovery Protocol (LLDP)</p> <p>Service holding upon CAPWAP link disconnection in Fit AP mode</p> <p>Unified authentication on the AC in Fit AP mode</p> <p>AC dual-link backup in Fit AP mode</p>

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

## Standards Compliance

Safety standards	<ul style="list-style-type: none"> <li>UL 60950-1</li> <li>CAN/CSA 22.2 No.60950-1</li> <li>IEC 60950-1</li> <li>EN 60950-1</li> <li>GB 4943</li> </ul>
Radio standards	<p>AP6010DN-AGN:</p> <ul style="list-style-type: none"> <li>ETSI EN 300 328</li> <li>ETSI EN 301 893</li> <li>FCC Part 15C: 15.247</li> <li>FCC Part 15C: 15.407</li> <li>RSS-210</li> <li>AS/NZS 4268</li> </ul> <p>AP6010SN-GN:</p> <ul style="list-style-type: none"> <li>ETSI EN 300 328</li> <li>FCC Part 15C: 15.247</li> <li>RSS-210</li> <li>AS/NZS 4268</li> </ul>
EMC standards	<ul style="list-style-type: none"> <li>EN 301 489-1</li> <li>EN 301 489-17</li> <li>ETSI EN 60601-1-2</li> <li>FCC Part 15</li> <li>ICES-003</li> <li>YD/T 1312.2-2004</li> <li>ITU k.21</li> <li>GB 9254</li> <li>GB 17625.1</li> <li>AS/NZS CIPSR22</li> <li>EN 55022</li> <li>EN 55024</li> <li>CISPR 22</li> <li>CISPR 24</li> <li>IEC61000-4-6</li> <li>IEC61000-4-2</li> </ul>
IEEE standards	<p>AP6010DN-AGN:</p> <ul style="list-style-type: none"> <li>IEEE 802.11a/b/g</li> <li>IEEE 802.11n</li> <li>IEEE 802.11h</li> <li>IEEE 802.11d</li> <li>IEEE 802.11e</li> </ul> <p>AP6010SN-GN:</p> <ul style="list-style-type: none"> <li>IEEE 802.11b/g</li> <li>IEEE 802.11n</li> <li>IEEE 802.11h</li> <li>IEEE 802.11d</li> <li>IEEE 802.11e</li> </ul>

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 300 019-2-3 ETSI 300 019-1-1 ETSI 300 019-1-2 ETSI 300 019-1-3
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