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HUAWEI AP6010 Series Access Point Datasheet

HUAWEI TECHNOLOGIES CO., LTD.

Huawei AP6010SN-GN Access Point

- Supports 2.4 GHz frequency band.
- Complies with IEEE 802.11b/g/n.
- Green Certification
- IF Industrial Design Award

Huawei AP6010DN-AGN Access Point

- Supports 2.4 GHz and 5 GHz frequency bands.
- Complies with IEEE 802.11a/b/g/n.
- Green Certification
- Tolly Certification
- IF Industrial Design Award

The AP offers the following advantages:

- Elegant appearance
- Easy, zero touch deployment
- High performance: multi-service transmission and many concurrent users
- Energy saving and low power consumptions
- High security: data encryption and authentication

The Huawei AP6010 series, as enhanced indoor APs, provide 2.4 GHz and 5 GHz frequency bands to connect more users, comply with IEEE 802.11a/b/g/n, and support the MIMO technology and the Fit/Fat AP mode.

The AP6010 series offers the following overall advantages:

- High reliability
- High security
- Simple network deployment
- Automatic AC discovery and configuration
- Real-time management and maintenance

Product Characteristics

- Uses an elegant design and is intended for use in medium- and large-scale deployment scenarios, such as educational institutions, enterprise offices, airports, stations, and retail.
- An energy-efficient, new-generation 2 × 2 MIMO chip.
- Fit/Fat Mode
- WIDS/WIPS
- Mesh networking support
- Spectrum Analysis
- Wireless Location
- Provides up to 300 Mbit/s total data rate on the AP6010SN-GN and up to 600Mbit/s on the AP6010DN-AGN and has built-in antennas.
- Complies with 802.3af/at Power over Ethernet, providing easy installation.
- AP6010SN-GN supports 2.4 GHz frequency band.
- AP6010DN-AGN supports 2.4 GHz and 5 GHz frequency bands.

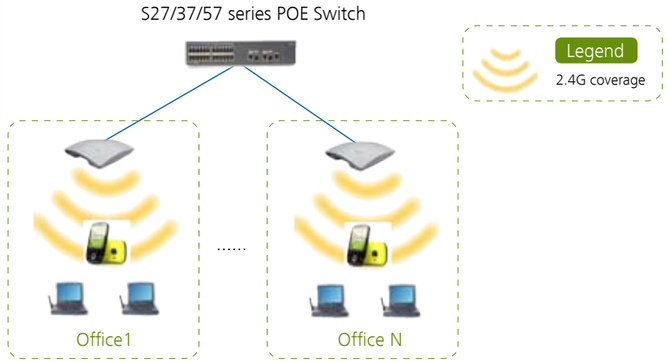
Scalability

Both Fit and Fat APs provide network access. Fit APs, which are managed by Access Controllers (ACs) provide centralized network management functions for simplified configuration and access control. The Automatic software upgrade technologies e feature of these WLANs allows users to seamlessly add and upgrade APs without incurring additional administrative or equipment expense. When coupled with ACs and Network Management Systems (NMS), Huawei 802.11n APs can implement real-time monitoring, intelligent RF management, spectrum analysis, wireless location, load balancing, spectrum analysis, wireless location, roaming, security policy control, wired network integration, as well as BYOD network security control and smart access strategy.

AP Networking

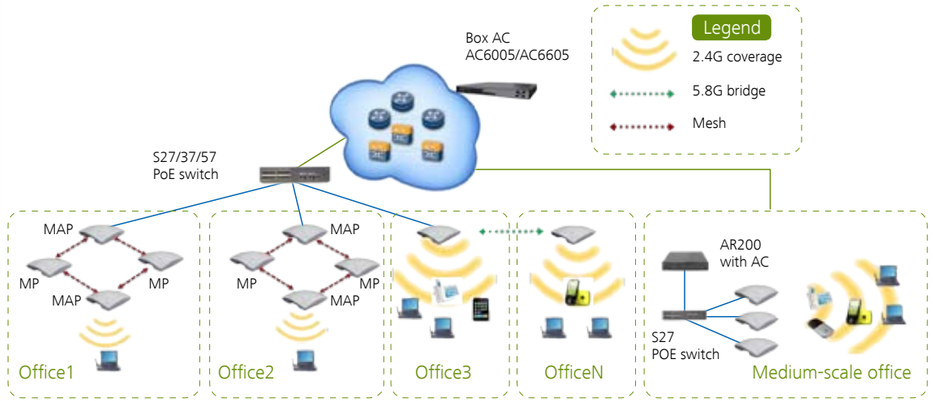
The following figures show typical networking of the AP6010SN-GN and AP6010DN-AGN.

Fat AP networking



When working as a Fat AP, the AP6010SN-GN and AP6010DN-AGN provide user authentication and access, data security, service data forwarding, QoS, and other functions without an AC.

Fit AP networking



When working as a Fit AP, 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 networking as a Fit AP.

In WDS mode, the AP supports P2Pand P2MP networking modes. With 5 GHz and 2.4 GHz frequency bands, the AP can also implement wireless bridging and access functions.

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

Product Specifications

Item	Specifications
Part Number	**Huawei indoor AP with built-in antennas** 02354196:AP6010DN -AGN 11a/b/g/n, indoor dual-frequency 2 × 2 AP with built-in antennas 02354197:AP6010SN -GN 11b/g/n, indoor single-frequency 2 × 2 AP with built-in antennas **WLAN service:** WLAN network design service Huawei provides a comprehensive design service that considers the customer's requirements for signal coverage, network capacity, cost, security, and network performance.
Software	Huawei WLAN AP V200R001C00 or later versions
WLAN AC	Huawei WLAN AC6005 Huawei WLAN AC6605
802.11n functions	2 × 2 Multiple-Input Multiple-Output (MIMO) with two spatial streams Maximal Ratio Combining (MRC) Maximum-Likelihood Detection (MLD) Automatic Channel Scanning 802.11n and 802.11a/g beamforming 20MHz- and 40-MHz channels Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Rx only) 802.11 Dynamic Frequency Selection (DFS) Signal Sustain Technology (SST) Unscheduled Automatic Power Save Delivery (U-APSD) Dying gasp

Supported data rate

802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps

802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps

802.11n data rates (2.4 GHz and 5 GHz):

MCS Index[1]	GI = 800 ns		GI = 400 ns	
	20-MHz Rate (Mbps)	40-MHz Rate (Mbps)	20-MHz Rate (Mbps)	40-MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	150

Item	Specifications				
Supported data rate	8	13	27	14.4	30
	9	26	54	28.9	60
	10	39	81	43.3	90
	11	52	108	57.8	120
	12	78	162	86.7	180
	13	104	216	115.6	240
	14	117	243	130	270
	15	130	270	144.4	300
Frequency band and 20-MHz operating channel	Note: Customers are responsible for verifying and obtaining approvals for channel and band frequencies used in their respective countries.				
Maximum number of non-overlapping channels	**2.4 GHz** 802.11b/g: 20 MHz: 3 802.11n: 20 MHz: 3; 40 MHz: 1		**5 GHz** 802.11a: 20 MHz: 24 802.11n: 20 MHz: 24; 40 MHz: 11		
Note: The maximum number of non-overlapping channels varies by regulatory domain.					
Receiver sensitivity	**802.11b (CCK)** -97 dBm @ 1 Mb/s -92 dBm @ 2 Mb/s -92 dBm @ 5.5 Mb/s -90 dBm @ 11 Mb/s	**802.11g (non HT20)** -92 dBm @ 6 Mb/s -91 dBm @ 9 Mb/s -90 dBm @ 12 Mb/s -87 dBm @ 18 Mb/s -83 dBm @ 24 Mb/s -80 dBm @ 36 Mb/s -76 dBm @ 48 Mb/s -74 dBm @ 54 Mb/s	**802.11a (non HT20)** -89 dBm @ 6 Mb/s -88 dBm @ 9 Mb/s -85 dBm @ 12 Mb/s -83 dBm @ 18 Mb/s -80 dBm @ 24 Mb/s -76 dBm @ 36 Mb/s -71 dBm @ 48 Mb/s -70 dBm @ 54 Mb/s	
	2.4-GHz 802.11n (HT20) -92 dBm @ MC0/8 -89 dBm @ MC1/9 -86 dBm @ MC2/10 -82 dBm @ MC3/11 -79 dBm @ MC4/12 -74 dBm @ MC5/13 -73 dBm @ MC6/14 -71 dBm @ MC7/15	**2.4-GHz 802.11n (HT40)** -89 dBm @ MC0/8 -86 dBm @ MC1/9 -83 dBm @ MC2/10 -79 dBm @ MC3/11 -76 dBm @ MC4/12 -72 dBm @ MC5/13 -70 dBm @ MC6/14 -68 dBm @ MC7/15	**5-GHz 802.11n (HT20)** -88 dBm @ MC0/8 -85 dBm @ MC1/9 -84 dBm @ MC2/10 -77 dBm @ MC3/11 -74 dBm @ MC4/12 -70 dBm @ MC5/13 -68 dBm @ MC6/14 -67 dBm @ MC7/15	**5-GHz 802.11n (HT40)** -85 dBm @ MC0/8 -80 dBm @ MC1/9 -78 dBm @ MC2/10 -74 dBm @ MC3/11 -71 dBm @ MC4/12 -67 dBm @ MC5/13 -65 dBm @ MC6/14 -63 dBm @ MC7/15

Item	Specifications	
Maximum transmit power	**2.4GHz** 802.11b: 20 dBm, single antenna 802.11g: 20 dBm, single antenna 802.11n (HT20): 20 dBm, single antenna 802.11n (HT40): 20 dBm, single antenna	**5.8GHz** 802.11a: 20 dBm, single antenna 802.11n (HT20): 20 dBm, single antenna 802.11n (HT40): 20 dBm, single antenna
Note: The maximum transmit power varies depending on channels and country regulations.		
Available transmit power setting	**2.4GHz** - 6 dBm (3.98 mW) - 7 dBm (5 mW) - 8 dBm (6.31 mW) - 9 dBm (7.94 mW) - 10 dBm (10 mW) - 11 dBm (12.59 mW) - 12 dBm (15.85 mW) - 13 dBm (19.95 mW) - 14 dBm (25.12 mW) - 15 dBm (31.62 mW) - 16 dBm (39.81 mW) - 17 dBm (50.12 mW) - 18 dBm (63.09 mW) - 19 dBm (79.43 mW) - 20 dBm (100 mW)	**5GHz** - 6 dBm (3.98 mW) - 7 dBm (5 mW) - 8 dBm (6.31 mW) - 9 dBm (7.94 mW) - 10 dBm (10 mW) - 11 dBm (12.59 mW) - 12 dBm (15.85 mW) - 13 dBm (19.95 mW) - 14 dBm (25.12 mW) - 15 dBm (31.62 mW) - 16 dBm (39.81 mW) - 17 dBm (50.12 mW) - 18 dBm (63.09 mW) - 19 dBm (79.43 mW) - 20 dBm (100 mW)
Note: The maximum transmit power setting varies depending on channels and country regulations.		
Integrated antenna	Built-in 2.4 GHz omni antenna, gain 4 dBi, horizontal beam width 360° Built-in 5 GHz omni antenna, gain 5 dBi, horizontal beam width 360°	
External antenna (sold separately)	None.	
Interface	10/100/1000BASE-T (RJ-45) Console interface (RJ-45)	
Indicator	Status LED: indicates the power module status, boot status, running status, idle status, and errors.	
Dimensions (W × D × H)	180 mm ×180 mm × 50 mm	
Weight	0.4kg	
Environment	Storage temperature: –40°C to +70°C Operating temperature: –10°C to +50°C Operating humidity: 10% to 95% (non-condensing) Protection class: IP31	

Item	Specifications
System memory	128 MB DRAM 32 MB Flash
Input power	DC power: 12V DC PoE: -48 V DC
Power options	Power adapter (100 to 240 V AC; 50 to 60 Hz; 12V/2A output) 802.3af-compliant PoE power supply 802.3af-compliant PoE power adapter
Maximum power	AP6010SN-GN: 6.5 W AP6010DN-AGN: 10.2 W
Warranty	One year (Includes hardware and software)
Standards compliance	Safety standards: • UL 60950-1 • IEC 60950-1 • EN 60950-1 • GB4943 Radio standards: • FCC Part 15.247, 15.407 • EN 300.328, EN 301.893 (Europe) • EMI and susceptibility (Class B) • FCC Part 15.107 and 15.109 • EN 301.489-1 and -17 (Europe) • GB9254 • EN60601-1-2 EMC requirements for the Medical Directive 93/42/EEC IEEE standards: • IEEE 802.11a/b/g, IEEE 802.11n, • IEEE 802.11h, IEEE 802.11d, IEEE 802.11e Security: • 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA • 802.1X • Advanced Encryption Standards (AES), Temporal Key Integrity Protocol (TKIP) Multimedia: • Wi-Fi Multi-Media (WMM™)

More Information

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