Huawei AirEngine 5761-11W Access Point Datasheet

Product Overview

Huawei AirEngine 5761-11W is a Wi-Fi 6 (802.11ax) wall plate access point (AP). It can simultaneously provide services on 2.4 GHz (2x2 MIMO) and 5 GHz (2x2MIMO) frequency bands, achieving a device rate of up to 1.775Gbps.   Built-in smart antennas of the AP enable always-on Wi-Fi signals for users, significantly enhancing users' wireless experiences. These strengths make AirEngine 5761-11W ideal for scenarios requiring high bandwidth and high-quality network experience, such as hotels, wards and dormitories.

AirEngine 5761-11W

- Provides services simultaneously on both the 2.4 GHz and 5 GHz bands, at a rate of up to 575Mbps at 2.4 GHz (2x2), 1.2Gbps at 5 GHz (2x2), and 1.775Gbps for the device.
- Uplink: 1 x GE; downlink: 4 x GE and 2 x RJ45 pass-through.
- Various installation modes for easy deployment, including wall-mounting and plate-mounting.
- Built-in smart antennas to provide precise coverage for STAs, reduce interference, and improve signal quality.
- USB port for external IoT expansion (supporting protocols such as ZigBee, and RFID).
- Supports Bluetooth serial interface-based O&M through built-in Bluetooth and CloudCampus APP.
- Supports the Fat, Fit, and cloud three working modes.

Feature Descriptions

Wi-Fi 6 (802.11ax) standards

- As the latest generation Wi-Fi standards of IEEE 802.11, 802.11ax improves user experience in high-density access scenarios and supports 2.4 GHz and 5 GHz frequency bands.
- MU-MIMO on both the 2.4 GHz and 5 GHz frequency bands, allowing an AP to transmit data to and receive data from multiple STAs simultaneously and multiplying the utilization of radio spectrum resources.
- 1024QAM modulation, improving data transmission efficiency by 25% compared with 802.11ac (256QAM).
- OFDMA scheduling enables multiple users to receive and send information at the same time, reducing latency and improving network efficiency.
- Spatial reuse (SR) technology uses basic service set (BSS) coloring to enable APs and STAs to distinguish BSSs, minimizing co-channel interference.
- The target wake time (TWT) allows APs and STAs to negotiate the sleep and wake time with each other, thereby improving the battery life of the STAs.

MU-MIMO

The AP supports MU-MIMO and supports a maximum of four spatial streams, two spatial streams at 2.4 GHz (2x2 MIMO) and two spatial streams at 5 GHz (2x2 MIMO). The MU-MIMO technology enables an AP to send data to multiple STAs

simultaneously, which doubles the radio spectrum resource usage, increases the number of access users and bandwidth, and improves user experience in high-density access scenarios.

Smart antenna array technology

The AP equipped with the dual-band smart antenna array and intelligent switchover algorithm can intelligently detect the application environment and access density, achieving more accurate signal coverage and interference suppression. This design helps provide the optimal signal coverage direction and signal quality for each mobile access STA, bringing seamless and smooth wireless network access experience to the users.

High-speed access

New Wi-Fi 6 technologies such as 1024QAM modulation, more subcarriers, and more efficient Symbol scheduling enable the 2.4 GHz radio rate to reach 0.575 Gbps, the 5 GHz radio rate to reach 1.2 Gbps, and the device rate to reach 1.775 Gbps.

High Density Boost technology

Huawei uses the following technologies to address challenges in high-density scenarios, including access problems, data congestion, and poor roaming experience:

SmartRadio for air interface optimization

- Load balancing during smart roaming: The load balancing algorithm can work during smart roaming for load balancing detection among APs on the network after STA roaming to adjust the STA load on each AP, improving network stability.

- Intelligent DFA technology: The dynamic frequency assignment (DFA) algorithm is used to automatically detect adjacent-channel and co-channel interference, and identify any 2.4 GHz redundant radio. Through automatic inter-AP negotiation, the redundant radio is automatically switched to another mode (dual-5G AP models support 2.4G-to-5G switchover) or is disabled to reduce 2.4 GHz co-channel interference and increase the system capacity.

- Intelligent conflict optimization technology: The dynamic enhanced distributed channel access (EDCA) and airtime scheduling algorithms are used to schedule the channel occupation time and service priority of each user. This ensures that each user is assigned relatively equal time for using channel resources and user services are scheduled in an orderly manner, improving service processing efficiency and user experience.

Air interface performance optimization

- In high-density scenarios where many users access the network, increased number of low-rate STAs consumes more resources on the air interface, reduces the AP capacity, and lowers user experience. Therefore, Huawei APs will check the signal strength of STAs during access and rejects access from weak-signal STAs. At the same time, the APs monitor the rate of online STAs in real time and forcibly disconnect low-rate STAs so that the STAs can reassociate with APs that have stronger signals. The terminal access control technology can increase air interface use efficiency and allow access from more users.

5GHz-prior access (band steering)

- The APs support both 2.4GHz and 5GHz frequency bands. The 5GHz-prior access function enables an AP to steer STAs to the 5 GHz frequency band first, which reduces load and interference on the 2.4 GHz frequency band, improving the user experience.

Wired and wireless dual security guarantee

To ensure data security, Huawei APs integrate wired and wireless security measures and provide comprehensive security protection.

Authentication and encryption for wireless access

- The APs support WEP, WPA/WPA2-PSK, WPA3-SAE, WPA/WPA2-PPSK, WPA/WPA2/WPA3-802.1x, and WAPI authentication/encryption modes to ensure security of the wireless network. The authentication mechanism is used to authenticate user identities so that only authorized users can access network resources. The encryption mechanism is used to encrypt data transmitted over wireless links to ensure that the data can only be received and parsed by expected users.

Analysis on non-Wi-Fi interference sources

- Huawei APs can analyze the spectrum of non-Wi-Fi interference sources and identify them, including 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. Coupled with Huawei NCE-Campus, the precise

locations of the interference sources can be detected, and the spectrum of them displayed, enabling the administrator to remove the interference in a timely manner.

Rogue device monitoring

- Huawei APs support WIDS/WIPS, and can monitor, identify, defend, counter, and perform refined management on the rogue devices, to provide security guarantees for air interface environment and wireless data transmission.

Wired access authentication and encryption for the AP

- The AP access control ensures validity of APs. The CAPWAP link protection, DTLS/IPsec encryption and hardware encryption provide security assurance, improving data transmission security between the AP and the AC.

Automatic radio calibration

Automatic radio calibration allows an AP to collect signal strength and channel parameters of surrounding APs and generate an AP topology according to the collected data. Based on the interference caused by authorized APs, rogue APs, and No Wi-Fi APs and their loads, each AP automatically adjusts its transmit power and working channel to make the network operate at the optimal performance. In this way, network reliability and user experience are improved.

Automatic application identification

Huawei APs support smart application control technology and can implement visualized control on Layer 4 to Layer 7 applications.

Traffic identification

- Coupled with Huawei WLAN ACs, the APs can identify over 6000 common applications in various office scenarios. Based on the identification results, policy control can be implemented on user services, including priority adjustment, scheduling, blocking, and rate limiting to ensure efficient bandwidth resource and improve quality of key services.

Traffic statistics collection

- Traffic statistics of each application can be collected globally, by SSID, or by user, enabling the network administrator to know application use status on the network. The network administrator or operator can implement visualized control on service applications on smart terminals to enhance security and ensure effective bandwidth control.

Leader AP

The leader AP integrates some WLAN AC functions and can be used to manage Fit APs in small- and medium-sized enterprises and stores, implementing WLAN AC-free access not requiring licenses and saving customer investment.

Cloud-based Management

The AP can be managed via cloud, then no need to deploy a WLAN AC and an authentication server. In cloud-based management mode, abundant authentication functions, such as pre-shared key (PSK) authentication, Portal authentication, SMS authentication, and social media authentication, can be implemented. This mode significantly simplifies the networking and reduces the capital expenditure (CAPEX). In addition, multiple advanced functions, such as online cloud-based network planning, cloud-based deployment, cloud-based inspection, and cloud-based O&M, can be implemented through Huawei cloud management platform. In multi-branch deployment scenarios, cloud APs are pre-configured on the cloud management platform firstly. Then on site, you only need to power on the cloud APs and connect them to switch ports, then scan the QR code to implement AP plug-and-play. Pre-configurations are automatically delivered to devices, greatly shortening the network deployment time. The cloud management platform can monitor the network status, device status, and terminal connection status of all sites of a tenant in a comprehensive and intuitive manner to learn the network and service running status in real time.

Basic Specifications

Fat/Fit AP mode

Item	Description
WLAN features	Compliance with IEEE 802.11ax and compatibility with IEEE 802.11a/b/g/n/ac/ac Wave 2

Item	Description
	Maximum ratio combining (MRC)
	Space time block code (STBC)
	Cyclic Delay Diversity (CDD)/Cyclic Shift Diversity (CSD)
	Beamforming
	Multi-user multiple-input multiple-output (MU-MIMO)
	Orthogonal frequency division multiple access (OFDMA)
	Compliance with 1024-quadrature amplitude modulation (QAM) and compatibility with 256-QAM, 64-QAM, 16-QAM, 8-QAM, quadrature phase shift keying (QPSK), and binary phase shift keying (BPSK)
	Target wake time (TWT)
	Low-density parity-check (LDPC)
	Frame aggregation, including A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx)
	802.11 dynamic frequency selection (DFS)
	Short guard interval (GI) in 20 MHz, 40 MHz, 80 MHz modes
	Priority mapping and scheduling that are compliant with Wi-Fi multimedia (WMM) to implement 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
	NOTE *For detailed management channels, see the Country Code & Channel Compliances.*
	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
	Extended Service Set (ESS) in Fit AP mode
	Multi-user call admission control (CAC)
	Advanced cellular coexistence (ACC), minimizing the impact of interference from cellular networks
	802.11k and 802.11v smart roaming
	802.11r fast roaming (≤ 50 ms)
Network features	Compliance with IEEE 802.3ab
	Auto-negotiation of the rate and duplex mode and automatic switchover between the Media Dependent Interface (MDI) and Media Dependent Interface Crossover (MDI-X)
	Compliance with IEEE 802.1q
	SSID-based VLAN assignment
	VLAN trunk on uplink Ethernet ports
	Management channel of the AP uplink port in tagged and untagged mode
	DHCP client, obtaining IP addresses through DHCP
	Tunnel data forwarding and direct data forwarding
	Application identification and QoS classification when AP local forwarding (also called direct forwarding), which can significantly improve voice quality for applications such as Skype, QQ, and WeChat
	STA isolation in the same VLAN
	IPv4/IPv6 access control lists (ACLs)
	Link Layer Discovery Protocol (LLDP)
	Uninterrupted service forwarding upon CAPWAP channel disconnection in Fit AP mode

Item	Description
	Unified authentication on the AC in Fit AP mode
	AC dual-link backup in Fit AP mode
	Network Address Translation (NAT) in Fat AP mode
	IPv6 in Fit AP mode
	Telemetry in Fit AP mode, quickly collecting AP status and application experience parameters
	IPv6 Source Address Validation Improvements (SAVI)
	Multicast Domain Name Service (mDNS) gateway protocol
QoS features	Priority mapping and scheduling that are compliant with Wi-Fi multimedia (WMM) to implement 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 (automatic bandwidth adjustment based on the user quantity and radio environment) to improve user experience
	Airtime scheduling
	Air interface HQoS scheduling
	Intelligent multimedia scheduling
Security features	Open system authentication
	WEP authentication/encryption using a 64-bit, 128-bit, 152-bit or 192-bit encryption key
	WPA2-PSK authentication and encryption (WPA2-Personal)
	WPA2-802.1X authentication and encryption (WPA2-Enterprise)
	WPA3-SAE authentication and encryption (WPA3-Personal)
	WPA3-802.1X authentication and encryption (WPA3-Enterprise)
	WPA-WPA2 hybrid authentication
	WPA2-WPA3 hybrid authentication
	WPA2-PPSK authentication and encryption in Fit AP mode
	WAPI authentication and encryption
	Wireless intrusion detection system (WIDS) and wireless intrusion prevention system (WIPS), including rogue device detection and containment, attack detection and dynamic blacklist, and STA/AP blacklist and whitelist
	802.1x authentication, MAC address authentication, and Portal authentication
	DHCP snooping
	Dynamic ARP Inspection (DAI)
	IP Source Guard (IPSG)
	802.11w Protected Management Frames (PMF)
	IPsec/DTLS hardware encryption
Maintenance features	Unified management and maintenance on the AC in Fit AP mode
	Automatic login and configuration loading, and plug-and-play (PnP) in Fit AP mode
	Batch upgrade in Fit AP mode
	Telnet
	STelnet using SSHv2
	SFTP using SSHv2
	Remote wireless O&M through the Bluetooth serial interface

Item	Description
	Web-based local AP management through HTTP or HTTPS in Fat AP mode
	Real-time configuration monitoring and fast fault locating using the NMS
	SNMP v1/v2/v3 in Fat AP mode
	System status alarm
	Network Time Protocol (NTP) in Fat AP mode
BYOD	**NOTE** *The AP supports bring your own device (BYOD) only in Fit AP mode.* 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
Spectrum analysis	**NOTE** *The AP supports spectrum analysis only in Fit AP mode.* Identification of multiple interference sources including Bluetooth devices, microwave ovens, cordless phones, ZigBee devices, game controllers, 2.4 GHz/5 GHz wireless video and audio devices, and baby monitors Working with a location server to locate interference sources and perform spectrum analysis on them

Cloud-based management mode

Item	Description
WLAN features	Compliance with IEEE 802.11ax and compatibility with IEEE 802.11a/b/g/n/ac/ac Wave 2
	Maximum ratio combining (MRC)
	Space time block code (STBC)
	Cyclic Delay Diversity (CDD)/Cyclic Shift Diversity (CSD)
	Beamforming
	Multi-user multiple-input multiple-output (MU-MIMO)
	Orthogonal frequency division multiple access (OFDMA)
	Compliance with 1024-quadrature amplitude modulation (QAM) and compatibility with 256-QAM, 64-QAM, 16-QAM, 8-QAM, quadrature phase shift keying (QPSK), and binary phase shift keying (BPSK)
	Low-density parity-check (LDPC)
	Frame aggregation, including A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx)
	802.11 dynamic frequency selection (DFS)
	Priority mapping and scheduling that are compliant with WMM to implement 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 **NOTE** *For detailed management channels, see the Country Code & Channel Compliances.*
	Automatic channel scanning and interference avoidance
	Service set identifier (SSID) hiding
	Signal sustain technology (SST)
	Unscheduled automatic power save delivery (U-APSD)

Item	Description
Network features	Compliance with IEEE 802.3ab
	Auto-negotiation of the rate and duplex mode and automatic switchover between the Media Dependent Interface (MDI) and Media Dependent Interface Crossover (MDI-X)
	Compliance with IEEE 802.1q
	SSID-based VLAN assignment
	DHCP client, obtaining IP addresses through DHCP
	STA isolation in the same VLAN
	Access control lists (ACLs)
	Unified authentication on the Cloud management platform
	Network Address Translation (NAT)
QoS features	Priority mapping and scheduling that are compliant with WMM to implement 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
	Airtime scheduling
	Air interface HQoS scheduling
Security features	Open system authentication
	WEP authentication/encryption using a 64-bit, 128-bit, 152-bit or 192-bit encryption key
	WPA2-PSK authentication and encryption (WPA2-Personal)
	WPA2-802.1X authentication and encryption (WPA2-Enterprise)
	WPA3-SAE authentication and encryption (WPA3-Personal)
	WPA3-802.1X authentication and encryption (WPA3-Enterprise)
	WPA-WPA2 hybrid authentication
	WPA2-WPA3 hybrid authentication
	802.1x authentication, MAC address authentication, and Portal authentication
	DHCP snooping
	Dynamic ARP Inspection (DAI)
	IP Source Guard (IPSG)
Maintenance features	Unified management and maintenance on the Cloud management platform
	Automatic login and configuration loading, and plug-and-play (PnP)
	Batch upgrade
	Telnet
	STelnet using SSHv2
	SFTP using SSH v2
	Remote wireless O&M through the Bluetooth console port
	Web-based local AP management through HTTP or HTTPS
	Real-time configuration monitoring and fast fault locating using the NMS
	System status alarm
	Network Time Protocol (NTP)

Technical Specifications

Item		Description
Technical specifications	Dimensions (H x W x D)	38 x 86 x 160 mm
	Weight	0.3 kg
	Interface type	Up link: 1 x 10M/100M/1GE (RJ-45) Down link: 4 x 10M/100M/1GE (RJ-45) Pass through: 2 x RJ45 1 x USB **NOTE** ● *The UPlink GE Supports PoE input.* ● *Pass Through: Connects to a network cable or phone cable for transparent transmission.*
	Bluetooth	BLE 5.2
	LED indicator	Indicates the power-on, startup, running, alarm, and fault states of the system
Power specifications	Power input	● DC: 12V±10% ● PoE power supply: In compliance with 802.3af **NOTE** *When 802.3af power is supplied, the USB port is disabled.*
	Maximum power consumption	● 12.7 W (excluding USB) **NOTE** *The actual maximum power consumption depends on local laws and regulations.*
Environmental specifications	Operating temperature	0°C to +40°C **NOTE** *The shell temperature may be higher than the operating temperature, but it does not affect, since it is within the safety standard.*
	Storage temperature	-40°C to +70°C
	Operating humidity	5% to 95% (non-condensing)
	Altitude	-60 m to +5000 m
	Atmospheric pressure	53 kPa to 106 kPa
Radio specifications	Antenna type	Built-in smart antennas
	Antenna gain	2.4GHz: 2.5dBi 5GHz: 3dBi **NOTE** ● *The gains above are the single-antenna peak gains.* ● *The equivalent antenna gain after all 2.4 GHz or 5 GHz antennas are combined is 1 dBi in 2.4 GHz or 1 dBi in 5 GHz.*
	Maximum number of SSIDs for each radio	≤ 16
	Maximum number of users	≤ 1024 (512/Radio)

Item	Description
	NOTE *The actual number of users varies according to the environment.*
Maximum transmit power	2.4GHz: 23dBm (combined power) 5GHz: 23dBm (combined power) **NOTE** *The actual transmit power depends on local laws and regulations.*
Power increment	1 dBm

Maximum number of non-overlapping channels	2.4 GHz (2.412 GHz to 2.472 GHz)
	• 802.11b/g
	   − 20 MHz: 3
	• 802.11n
	   − 20 MHz: 3
	   − 40 MHz: 1
	• 802.11ax
	   − 20 MHz: 3
	   − 40 MHz: 1
	5 GHz (5.18 GHz to 5.825 GHz)
	• 802.11a
	   − 20 MHz: 13
	• 802.11n
	   − 20 MHz: 13
	   − 40 MHz: 6
	• 802.11ac
	   − 20 MHz: 13
	   − 40 MHz: 6
	   − 80 MHz: 3
	• 802.11ax
	   − 20 MHz: 13
	   − 40 MHz: 6
	   − 80 MHz: 3
	NOTE
	The table uses the number of non-overlapping channels supported by China as an example. The number of non-overlapping channels varies in different countries. For details, see the Country Codes & Channels Compliance.

Receiver sensitivity	• 2.4GHz 802.11b: -100dBm/1Mbit/s;-97dBm/2Mbit/s;-95dBm/5.5Mbit/s;-92dBm/11Mbit/s; • 2.4GHz 802.11g: -95dBm/6Mbit/s;-92dBm/9Mbit/s;-90dBm/12Mbit/s;-86dBm/18Mbit/s;-83dBm/24Mbit/s;-80dBm/36Mbit/s;-77dBm/48Mbit/s;-76dBm/54Mbit/s; • 2.4GHz 802.11n(HT20): -95dBm/MCS0;-92dBm/MCS1;-90dBm/MCS2;-86dBm/MCS3;-83dBm/MCS4;-80dBm/MCS5;-77dBm/MCS6;-76dBm/MCS7;-94dBm/MCS8;-91dBm/MCS9;-89dBm/MCS10;-85dBm/MCS11;-82dBm/MCS12;-79dBm/MCS13;-76dBm/MCS14;-75dBm/MCS15; • 2.4GHz 802.11n(HT40): -93dBm/MCS0;-91dBm/MCS1;-

Item		Description
		89dBm/MCS2;-86dBm/MCS3;-83dBm/MCS4;-79dBm/MCS5;-77dBm/MCS6;-76dBm/MCS7;-92dBm/MCS8;-90dBm/MCS9;-88dBm/MCS10;-85dBm/MCS11;-82dBm/MCS12;-78dBm/MCS13;-76dBm/MCS14;-75dBm/MCS15;
		• 2.4GHz 802.11ac(VHT20): -95dBm/MCS0NSS1;-92dBm/MCS1NSS1;-90dBm/MCS2NSS1;-86dBm/MCS3NSS1;-83dBm/MCS4NSS1;-80dBm/MCS5NSS1;-77dBm/MCS6NSS1;-76dBm/MCS7NSS1;-71dBm/MCS8NSS1;-94dBm/MCS0NSS2;-91dBm/MCS1NSS2;-89dBm/MCS2NSS2;-85dBm/MCS3NSS2;-82dBm/MCS4NSS2;-79dBm/MCS5NSS2;-76dBm/MCS6NSS2;-75dBm/MCS7NSS2;-70dBm/MCS8NSS2;
		• 2.4GHz 802.11ac(VHT40): -93dBm/MCS0NSS1;-91dBm/MCS1NSS1;-89dBm/MCS2NSS1;-86dBm/MCS3NSS1;-83dBm/MCS4NSS1;-79dBm/MCS5NSS1;-77dBm/MCS6NSS1;-76dBm/MCS7NSS1;-72dBm/MCS8NSS1;-70dBm/MCS9NSS1;-92dBm/MCS0NSS2;-90dBm/MCS1NSS2;-88dBm/MCS2NSS2;-85dBm/MCS3NSS2;-82dBm/MCS4NSS2;-78dBm/MCS5NSS2;-76dBm/MCS6NSS2;-75dBm/MCS7NSS2;-71dBm/MCS8NSS2;-69dBm/MCS9NSS2;
		• 2.4GHz 802.11ax(HE20): -93dBm/MCS0NSS1;-91dBm/MCS1NSS1;-89dBm/MCS2NSS1;-86dBm/MCS3NSS1;- -95dBm/MCS0NSS1;-92dBm/MCS1NSS1;-90dBm/MCS2NSS1;-86dBm/MCS3NSS1;-83dBm/MCS4NSS1;-80dBm/MCS5NSS1;-77dBm/MCS6NSS1;-76dBm/MCS7NSS1;-71dBm/MCS8NSS1;-70dBm/MCS9NSS1;-66dBm/MCS10NSS1;-64dBm/MCS11NSS1;-94dBm/MCS0NSS2;-91dBm/MCS1NSS2;-89dBm/MCS2NSS2;-85dBm/MCS3NSS2;-82dBm/MCS4NSS2;-79dBm/MCS5NSS2;-76dBm/MCS6NSS2;-75dBm/MCS7NSS2;-70dBm/MCS8NSS2;-69dBm/MCS9NSS2;-65dBm/MCS10NSS2;-63dBm/MCS11NSS2;
		• 2.4GHz 802.11ax(HE40): -93dBm/MCS0NSS1;-91dBm/MCS1NSS1;-89dBm/MCS2NSS1;-86dBm/MCS3NSS1;- -95dBm/MCS0NSS1;-92dBm/MCS1NSS1;-90dBm/MCS2NSS1;-86dBm/MCS3NSS1;-83dBm/MCS4NSS1;-80dBm/MCS5NSS1;-77dBm/MCS6NSS1;-76dBm/MCS7NSS1;-71dBm/MCS8NSS1;-70dBm/MCS9NSS1;-66dBm/MCS10NSS1;-64dBm/MCS11NSS1;-94dBm/MCS0NSS2;-91dBm/MCS1NSS2;-89dBm/MCS2NSS2;-85dBm/MCS3NSS2;-82dBm/MCS4NSS2;-79dBm/MCS5NSS2;-76dBm/MCS6NSS2;-75dBm/MCS7NSS2;-70dBm/MCS8NSS2;-69dBm/MCS9NSS2;-65dBm/MCS1-93dBm/MCS0NSS1;-91dBm/MCS1NSS1;-89dBm/MCS2NSS1;-86dBm/MCS3NSS1;-83dBm/MCS4NSS1;-79dBm/MCS5NSS1;-77dBm/MCS6NSS1;-76dBm/MCS7NSS1;-72dBm/MCS8NSS1;-70dBm/MCS9NSS1;-66dBm/MCS10NSS1;-65dBm/MCS11NSS1;-92dBm/MCS0NSS2;-

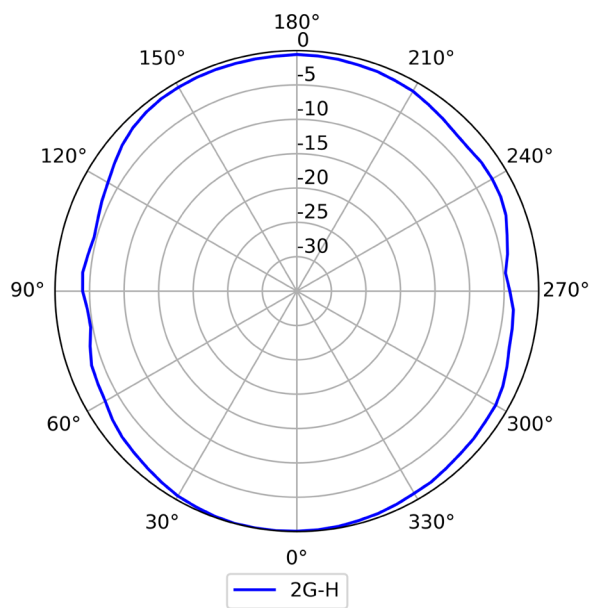| Item	Description
	90dBm/MCS1NSS2;-88dBm/MCS2NSS2;-85dBm/MCS3NSS2;-82dBm/MCS4NSS2;-78dBm/MCS5NSS2;-76dBm/MCS6NSS2;-75dBm/MCS7NSS2;-71dBm/MCS8NSS2;-69dBm/MCS9NSS2;-65dBm/MCS10NSS2;-64dBm/MCS11NSS2;0NSS2;-63dBm/MCS11NSS2; ● 5GHz 802.11a: -94dBm/6Mbit/s;-91dBm/9Mbit/s;-90dBm/12Mbit/s;-88dBm/18Mbit/s;-85dBm/24Mbit/s;-82dBm/36Mbit/s;-79dBm/48Mbit/s;-76dBm/54Mbit/s; ● 5GHz 802.11n(HT20): -93dBm/MCS0;-91dBm/MCS1;-88dBm/MCS2;-85dBm/MCS3;-82dBm/MCS4;-79dBm/MCS5;-76dBm/MCS6;-74dBm/MCS7;-92dBm/MCS8;-90dBm/MCS9;-87dBm/MCS10;-84dBm/MCS11;-81dBm/MCS12;-78dBm/MCS13;-75dBm/MCS14;-73dBm/MCS15; ● 5GHz 802.11n(HT40): -91dBm/MCS0;-89dBm/MCS1;-86dBm/MCS2;-83dBm/MCS3;-80dBm/MCS4;-77dBm/MCS5;-74dBm/MCS6;-71dBm/MCS7;-90dBm/MCS8;-88dBm/MCS9;-85dBm/MCS10;-82dBm/MCS11;-79dBm/MCS12;-76dBm/MCS13;-73dBm/MCS14;-70dBm/MCS15; ● 5GHz 802.11ac(VHT20): -93dBm/MCS0NSS1;-91dBm/MCS1NSS1;-88dBm/MCS2NSS1;-85dBm/MCS3NSS1;-82dBm/MCS4NSS1;-79dBm/MCS5NSS1;-76dBm/MCS6NSS1;-74dBm/MCS7NSS1;-71dBm/MCS8NSS1;-92dBm/MCS0NSS2;-90dBm/MCS1NSS2;-87dBm/MCS2NSS2;-84dBm/MCS3NSS2;-81dBm/MCS4NSS2;-78dBm/MCS5NSS2;-75dBm/MCS6NSS2;-73dBm/MCS7NSS2;-70dBm/MCS8NSS2; ● 5GHz 802.11ac(VHT40): -91dBm/MCS0NSS1;-89dBm/MCS1NSS1;-86dBm/MCS2NSS1;-83dBm/MCS3NSS1;-80dBm/MCS4NSS1;-77dBm/MCS5NSS1;-74dBm/MCS6NSS1;-71dBm/MCS7NSS1;-68dBm/MCS8NSS1;-66dBm/MCS9NSS1;-90dBm/MCS0NSS2;-88dBm/MCS1NSS2;-85dBm/MCS2NSS2;-82dBm/MCS3NSS2;-79dBm/MCS4NSS2;-76dBm/MCS5NSS2;-73dBm/MCS6NSS2;-70dBm/MCS7NSS2;-67dBm/MCS8NSS2;-65dBm/MCS9NSS2; ● 5GHz 802.11ac(VHT80): -88dBm/MCS0NSS1;-85dBm/MCS1NSS1;-83dBm/MCS2NSS1;-80dBm/MCS3NSS1;-77dBm/MCS4NSS1;-74dBm/MCS5NSS1;-71dBm/MCS6NSS1;-68dBm/MCS7NSS1;-65dBm/MCS8NSS1;-62dBm/MCS9NSS1;-87dBm/MCS0NSS2;-84dBm/MCS1NSS2;-82dBm/MCS2NSS2;-79dBm/MCS3NSS2;-76dBm/MCS4NSS2;-73dBm/MCS5NSS2;-70dBm/MCS6NSS2;-67dBm/MCS7NSS2;-64dBm/MCS8NSS2;-61dBm/MCS9NSS2; ● 5GHz 802.11ax(HE20): -93dBm/MCS0NSS1;-91dBm/MCS1NSS1;-88dBm/MCS2NSS1;-85dBm/MCS3NSS1;-82dBm/MCS4NSS1;-79dBm/MCS5NSS1;-76dBm/MCS6NSS1;-74dBm/MCS7NSS1;-71dBm/MCS8NSS1;-69dBm/MCS9NSS1;-66dBm/MCS10NSS1;-63dBm/MCS11NSS1;-92dBm/MCS0NSS2;-90dBm/MCS1NSS2;-87dBm/MCS2NSS2;-84dBm/MCS3NSS2;-81dBm/MCS4NSS2;-

Item		Description
		78dBm/MCS5NSS2;-75dBm/MCS6NSS2;-73dBm/MCS7NSS2;-70dBm/MCS8NSS2;-68dBm/MCS9NSS2;-65dBm/MCS10NSS2;-62dBm/MCS11NSS2; • 5GHz 802.11ax(HE40): -91dBm/MCS0NSS1;-89dBm/MCS1NSS1;-86dBm/MCS2NSS1;-83dBm/MCS3NSS1;-80dBm/MCS4NSS1;-77dBm/MCS5NSS1;-74dBm/MCS6NSS1;-71dBm/MCS7NSS1;-68dBm/MCS8NSS1;-66dBm/MCS9NSS1;-63dBm/MCS10NSS1;-61dBm/MCS11NSS1;-90dBm/MCS0NSS2;-88dBm/MCS1NSS2;-85dBm/MCS2NSS2;-82dBm/MCS3NSS2;-79dBm/MCS4NSS2;-76dBm/MCS5NSS2;-73dBm/MCS6NSS2;-70dBm/MCS7NSS2;-67dBm/MCS8NSS2;-65dBm/MCS9NSS2;-62dBm/MCS10NSS2;-60dBm/MCS10NSS2; • 5GHz 802.11ax(HE80): -88dBm/MCS0NSS1;-85dBm/MCS1NSS1;-83dBm/MCS2NSS1;-80dBm/MCS3NSS1;-77dBm/MCS4NSS1;-74dBm/MCS5NSS1;-71dBm/MCS6NSS1;-68dBm/MCS7NSS1;-65dBm/MCS8NSS1;-62dBm/MCS9NSS1;-60dBm/MCS10NSS1;-58dBm/MCS11NSS1;-87dBm/MCS0NSS2;-84dBm/MCS1NSS2;-82dBm/MCS2NSS2;-79dBm/MCS3NSS2;-76dBm/MCS4NSS2;-73dBm/MCS5NSS2;-70dBm/MCS6NSS2;-67dBm/MCS7NSS2;-64dBm/MCS8NSS2;-61dBm/MCS9NSS2;-59dBm/MCS10NSS2;-57dBm/MCS11NSS2;

Standards Compliance

Item	Description		
Safety standards	• UL 60950-1 • EN 60950-1 • IEC 60950-1	• UL 62368-1 • EN 62368-1 • IEC 62368-1	• GB 4943.1 • CAN/CSA 22.2 No.60950-1
Radio standards	• ETSI EN 300 328	• ETSI EN 301 893	• AS/NZS 4268
EMC standards	• EN 301 489-1 • EN 301 489-17 • EN 60601-1-2 • EN 55024 • EN 55032 • EN 55035	• GB 9254 • GB 17625.1 • GB 17625.2 • AS/NZS CISPR32 • CISPR 24 • CISPR 32 • CISPR 35	• IEC/EN61000-4-2 • IEC/EN 61000-4-3 • IEC/EN 61000-4-4 • IEC/EN 61000-4-5 • IEC/EN61000-4-6 • ICES-003
IEEE standards	• IEEE 802.11a/b/g • IEEE 802.11n • IEEE 802.11ac	• IEEE 802.11h • IEEE 802.11d • IEEE 802.11e	• IEEE 802.11v • IEEE 802.11w • IEEE 802.11r

Item	Description		
	• IEEE 802.11ax	• IEEE 802.11k	
Security standards	• 802.11i，Wi-Fi Protected Access (WPA)，WPA2，WPA2-Enterprise，WPA2-PSK，WPA3 • 802.1X • Advanced Encryption Standards(AES)，Temporal Key Integrity Protocol(TKIP)，WEP，Open • EAP Type(s)		
EMF	• EN 62311	• EN 50385	
RoHS	• Directive 2002/95/EC & 2011/65/EU	• (EU)2015/863	
Reach	• Regulation 1907/2006/EC		
WEEE	• Directive 2002/96/EC & 2012/19/EU		

Antennas Pattern

2.4G (Horizontal)
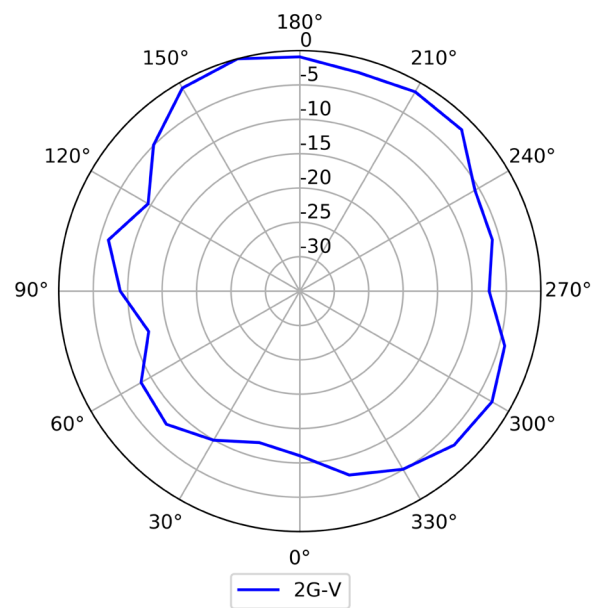
2.4G (Vertical)
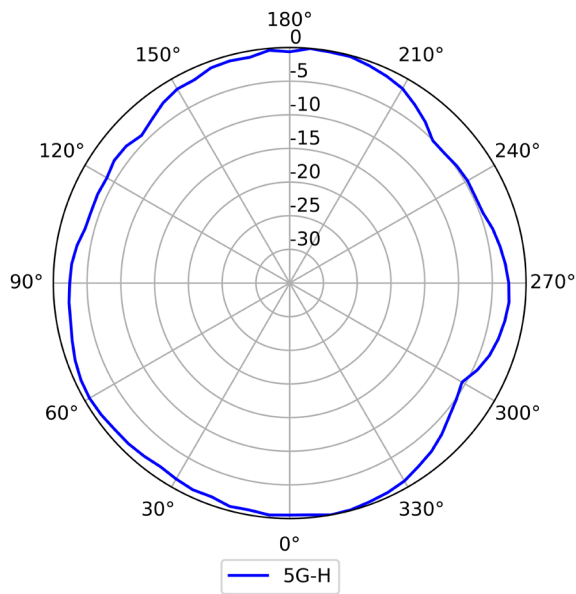
5G (Horizontal)
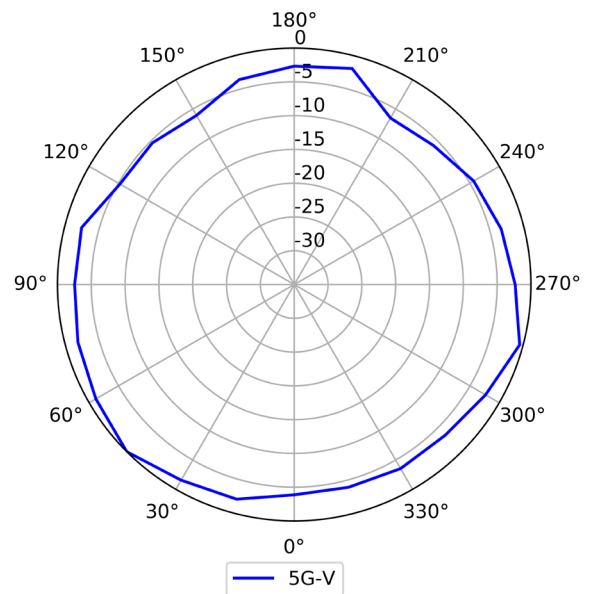
5G (Vertical)

More Information

For more information about Huawei WLAN products, visit http://e.huawei.com or contact us in the following ways:

- Global service hotline: http://e.huawei.com/en/service-hotline
- Logging in to the Huawei Enterprise technical support web: http://support.huawei.com/enterprise/
- Sending an email to the customer service mailbox: support_e@huawei.com

Huawei Technologies Co., Ltd.

Address:Huawei Industrial Base Bantian, Longgang Shenzhen 518129 People's Republic of China

Website:www.huawei.com