

Huawei AirEngine 5573-23W Access Point Datasheet

Product Overview

Huawei AirEngine 5573-23W are wall plate access points (APs) in compliance with Wi-Fi 7 (802.11be). It can simultaneously provide services on 2.4 GHz (2x2 MIMO) and 5 GHz (2x2 MIMO) frequency bands. Designed with a total of 4 spatial streams, the AP deliver a data rate of up to 3.57 Gbps. The AP draw on Wi-Fi 7 innovations to redefine wireless user experience. These strengths make AirEngine 5573-23W ideal for indoor coverage scenarios such as dormitories and hotels.



AirEngine 5573-23W

- Provide services simultaneously on both the 2.4 GHz (2x2 MIMO) and 5 GHz (2x2 MIMO) frequency bands, at a
 data rate of up to 689 Mbps at 2.4 GHz and 2.88 Gbps at 5 GHz, 3.57 Gbps for the entire AP.
- Built-in smart antennas that automatically adjust the coverage direction and signal strength based on the intelligent switchover algorithm. Such capability enables the AP to flexibly adapt to the application environment changes, providing accurate and stable coverage as STAs move.
- Support Bluetooth serial port-based O&M through built-in Bluetooth and CloudCampus APP.
- Support Fit AP, Fat AP and cloud-managed AP modes, easily managing the AP and its services on Huawei cloud management platform and reducing network O&M costs.

Feature Descriptions

Wi-Fi 7 (802.11be) Standard

Wi-Fi 7 (802.11be) is the next-generation Wi-Fi standard to be launched, also known as IEEE 802.11be or extremely high throughput (EHT). Based on Wi-Fi 6, Wi-Fi 7 introduces technologies such as 320 MHz bandwidth, 4096-quadrature amplitude modulation (QAM), multi-resource unit (RU), multi-link operation (MLO), enhanced multi-user multiple-input multiple-output (MU-MIMO), and multi-AP coordination. Drawing on these cutting-edge technologies, Wi-Fi 7 delivers a higher data transmission rate and lower latency than Wi-Fi 6.

Wi-Fi 7 vs. Wi-Fi 6

Based on the Wi-Fi 6 standard, Wi-Fi 7 introduces a plurality of new technologies. The following compares Wi-Fi 6 and Wi-Fi 7.

	Wi-Fi 6	Wi-Fi 7
IEEE standard	802.11ax	802.11be
Maximum transmission rate	9.6 Gbps	23 Gbps
Frequency band	2.4 GHz, 5 GHz, 6 GHz (Wi-Fi 6E)	2.4 GHz, 5 GHz, and 6 GHz
Security protocol	WPA3	WPA3
Channel bandwidth	20 MHz, 40 MHz, 80 MHz, 160 MHz, 80+80 MHz	Up to 320 MHz
Modulation mode	1024-QAM OFDMA	4096-QAM OFDMA

□ NOTE

The maximum transmission rate of the picture is the maximum rate of a single radio. It is 5 GHz radio for Wi-Fi 6, while it is 6 GHz radio for Wi-Fi 7.

New Features in Wi-Fi 7

Wi-Fi 7 aims to increase the WLAN throughput and provide low-latency access assurance. To achieve this goal, the Wi-Fi 7 standard defines modifications to both the physical layer (PHY) and MAC layer. Compared with Wi-Fi 6, Wi-Fi 7 brings the following technical innovations:

Multi-RU

• In Wi-Fi 6, each user can send or receive frames only on the RUs allocated to them, which greatly limits the flexibility of spectrum resource scheduling. To resolve this problem and further improve spectrum efficiency, Wi-Fi 7 defines a mechanism for allocating multiple RUs to a single user. To balance the implementation complexity and spectrum utilization, the Wi-Fi 7 standard specifications impose certain restrictions on RU combination. That is, small RUs (containing fewer than 242 tones) can be combined only with small RUs, and large RUs (containing greater than or equal to 242 tones) can be combined only with large RUs. Small RUs and large RUs cannot be combined together.

Higher-Order 4096-QAM

• The highest order modulation supported by Wi-Fi 6 is 1024-QAM, which allows each modulation symbol to carry up to 10 bits. To further improve the rate, Wi-Fi 7 introduces 4096-QAM so that each modulation symbol can carry 12 bits. With the same coding scheme, 4096-QAM in Wi-Fi 7 can achieve a 20% rate increase compared with 1024-QAM in Wi-Fi 6.

Multi-Link Mechanism

- To efficiently utilize all available spectrum resources, the Wi-Fi 7 standard defines multi-link aggregation technologies, including the MAC architecture of enhanced multi-link aggregation, multi-link channel access, and multi-link transmission.
- There are two modes as for MLO:
 - High-concurrency mode, multiple links send different data to improve bandwidth.
 - High-reliability mode, multiple links send the same data, improving reliability.

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.

Wi-Fi 7 Application Scenarios

New functions introduced by Wi-Fi 7 significantly improve the data transmission rate and deliver lower latency. These highlights contribute to the development of emerging applications, such as:

- Video streaming
- Video/Audio conference
- Online gaming
- Real-time collaboration
- Cloud/Edge computing
- Industrial IoT
- Immersive AR/VR
- Interactive telemedicine

Basic Specifications

Fit AP Mode

Item	Description	
WLAN features	Compliance with IEEE 802.11be and compatibility with IEEE 802.11a/b/g/n/ac/ax	
	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)	
	Preamble puncturing	
	BSS Color	
	TxBF	
	TWT	
	Compliance with 4096-quadrature amplitude modulation (QAM) and compatibility with 1024-QAM, 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)	
	Short guard interval (GI) in 20 MHz, 40 MHz, 80 MHz, and 160 MHz modes	
	Wi-Fi multimedia (WMM) for priority-based data processing and forwarding	
	WLAN channel management and channel rate adjustment	
	□ NOTE	
	For detailed management channels, see the Country Codes & Channels Compliance.	
	Automatic channel scanning and interference avoidance	

Item	Description
	Service set identifier (SSID) hiding configuration for each AP, supporting Chinese SSIDs
	Signal sustain technology (SST)
	Unscheduled automatic power save delivery (U-APSD)
	Control and Provisioning of Wireless Access Points (CAPWAP)
	Automatic AP onboarding
	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)
	Spectrum analysis
	Terminal location
Network features	Compliance with IEEE 802.3ab
	Auto-negotiation of the rate and duplex mode, and automatic switchover between Media Dependent Interface (MDI) and Media Dependent Interface Crossover (MDI-X)
	Compatibility with IEEE 802.1Q
	SSID-based VLAN assignment
	Eth-Trunk function
	Management channel of the AP's uplink port in tagged and untagged modes
	DHCP client, obtaining IP addresses through DHCP
	Tunnel data forwarding and direct data forwarding
	STA isolation in the same VLAN
	IPv4/IPv6 access control list (ACL)
	Link Layer Discovery Protocol (LLDP)
	Service holding upon CAPWAP link disconnection
	Unified authentication on the AC
	AC dual-link backup
	Telemetry , quickly collecting AP status and application experience parameters
	MESH
	HotSpot2.0
QoS features	WMM power save
	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
	Application identification and QoS classification to improve voice quality for popular applications, such as Zoom, QQ, and WeChat

Item	Description	
	Airtime scheduling	
	Air interface HQoS scheduling	
Security features	Open system authentication	
	WEP authentication and encryption. The encryption length can be 64 bits, 128 bits, 152 bits, or 192 bits	
	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	
	WPA/WPA2/WPA2-PPSK authentication and encryption	
	WPA/WPA2/WPA2-DPSK authentication and encryption	
	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	
	802.11w Protected Management Frames (PMF)	
	WAPI GCM-SM4 encryption algorithm	
	CAPWAP DTLS data encryption and decryption	
	URL filtering	
	Secure boot	
EAP types	EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-CHAP, EAP-SIM, EAP-AKA, EAP-GTC, EAP-FAST, EAP-PEAP, EAP-MD ₅ , EAP-MSCHAPv ₂ , PEAPv ₀ , PEAPv ₁	
Maintenance	Unified AP management and maintenance on the AC	
features	Automatic AP onboarding, automatic configuration loading, and plug-and-play (PnP)	
	Automatic batch upgrade	
	STelnet using SSHv2	
	SFTP using SSHv2	
	Remote wireless O&M through the Bluetooth serial port	
	System status alarm	

Fat AP Mode

Item	Description	
WLAN features	Compliance with IEEE 802.11be and compatibility with IEEE 802.11a/b/g/n/ac/ax	
	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)	
	Preamble puncturing	
	BSS Color	
	TxBF	
	Compliance with 4096-quadrature amplitude modulation (QAM) and compatibility with 1024-QAM, 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)	
	Short guard interval (GI) in 20 MHz, 40 MHz, 80 MHz, and 160 MHz modes	
	Wi-Fi multimedia (WMM) for priority-based data processing and forwarding	
	WLAN channel management and channel rate adjustment	
	□ NOTE	
	For detailed management channels, see the Country Codes & Channels Compliance.	
	Automatic channel scanning and interference avoidance	
	Service set identifier (SSID) hiding configuration for each AP, supporting Chinese SSIDs	
	Signal sustain technology (SST)	
	Unscheduled automatic power save delivery (U-APSD)	
	Control and Provisioning of Wireless Access Points (CAPWAP)	
	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 Media Dependent Interface (MDI) and Media Dependent Interface Crossover (MDI-X)	
	Compatibility with IEEE 802.1Q	
	SSID-based VLAN assignment	
	DHCP client, obtaining IP addresses through DHCP	
	Tunnel data forwarding and direct data forwarding	

Item	Description	
	STA isolation in the same VLAN	
	IPv4 access control list (ACL)	
	Link Layer Discovery Protocol (LLDP)	
	Leader AP	
	Unified authentication of Leader AP	
	NAT	
QoS features	WMM power save	
	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	
	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	
	MAC address authentication and Portal authentication	
	DHCP snooping	
	802.11w Protected Management Frames (PMF)	
	Secure boot	
EAP types	EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-CHAP, EAP-SIM, EAP-AKA, EAP-GTC, EAP-FAST, EAP-PEAP, EAP-MD ₅ , EAP-MSCHAPv ₂ , PEAPv ₀ , PEAPv ₁	
Maintenance	STelnet using SSHv2	
features	SFTP using SSHv2	
	Remote wireless O&M through the Bluetooth serial port	
	System status alarm	

Cloud-Managed AP Mode

Item	Description
WLAN features	Compliance with IEEE 802.11be and compatibility with IEEE 802.11a/b/g/n/ac/ax Maximum ratio combining (MRC) Space time block code (STBC) Cyclic Delay Diversity (CDD)/Cyclic Shift Diversity (CSD)

Item	Description
	Beamforming
	Multi-user multiple-input multiple-output (MU-MIMO)
	Orthogonal frequency division multiple access (OFDMA)
	Preamble puncturing
	BSS Color
	TxBF
	TWT
	Compliance with 4096-quadrature amplitude modulation (QAM) and compatibility with 1024-QAM, 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)
	Short guard interval (GI) in 20 MHz, 40 MHz, 80 MHz, and 160 MHz modes
	Wi-Fi multimedia (WMM) for priority-based data processing and forwarding
	WLAN channel management and channel rate adjustment
	□ NOTE
	For detailed management channels, see the Country Codes & Channels Compliance.
	Automatic channel scanning and interference avoidance
	Service set identifier (SSID) hiding configuration for each AP, supporting Chinese SSIDs
	Signal sustain technology (SST)
	Unscheduled automatic power save delivery (U-APSD)
	Automatic AP onboarding
	Automatic AP Online by NCE (Campus)
	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)
	Spectrum analysis
	Terminal location
Network features	Compliance with IEEE 802.3ab
	Auto-negotiation of the rate and duplex mode, and automatic switchover between Media Dependent Interface (MDI) and Media Dependent Interface Crossover (MDI-X)
	Compatibility with IEEE 802.1Q
	SSID-based VLAN assignment
	DHCP client, obtaining IP addresses through DHCP
	STA isolation in the same VLAN

Item	Description	
	IPv4/IPv6 access control list (ACL)	
	Link Layer Discovery Protocol (LLDP)	
	Unified authentication on the cloud management platform	
	Network address translation (NAT)	
	Telemetry, quickly collecting AP status and application experience parameters	
	MESH	
	Tunnel-AC	
	HotSpot2.0	
QoS features	WMM power save	
	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	
	Application identification and QoS classification to improve voice quality for popular applications, such as Zoom, QQ, and WeChat	
	Airtime scheduling	
	Air interface HQoS scheduling	
Security features	Open system authentication	
	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	
	WPA/WPA2/WPA2-PPSK authentication and encryption	
	WPA/WPA2/WPA2-DPSK authentication and encryption802.1X authentication, MAC address authentication, and Portal authentication	
	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	
	DHCP snooping	
	802.11w Protected Management Frames (PMF)	
	CAPWAP DTLS data encryption and decryption	
	URL filtering	
	Secure boot	
EAP types	EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-CHAP, EAP-SIM, EAP-AKA, EAP-GTC, EAP-FAST, EAP-PEAP, EAP-MD ₅ , EAP-MSCHAPv ₂ , PEAPv ₀ , PEAPv ₁	

Item	Description
Maintenance features	Unified AP management and maintenance on the cloud management platform Automatic AP onboarding, automatic configuration loading, and PnP Batch upgrade STelnet using SSHv2 SFTP using SSHv2
	Remote wireless O&M through the Bluetooth serial port Real-time user configuration monitoring and fast fault locating using the NMS System status alarm Network Time Protocol (NTP)

Technical Specifications

Item		AirEngine 5573-23W
Technical specifications	Dimensions (H x W x D)	175 mm x 86 mm x 45 mm
'	Weight	0.41 kg
	Port type	1 x 100M/1000M/2.5GE electrical port 4 x 10M/100M/1GE electrical port 2 x RJ45 Pass through 1 x USB port NOTE • The 2.5GE electrical port supports PoE input.
	Bluetooth	Bluetooth 5.4
	IoT	 USB port extension external IoT (Supports protocols such as ZigBee, RFID, and UWB)
	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 8o2.3at/af NOTE 8o2.3af power supply restrictions are detailed in the Info-Finder.
	Maximum power	13.2W (excluding USB)
	consumption	NOTE The actual maximum power consumption depends on local laws and regulations.

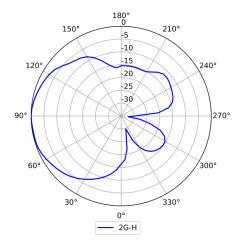
nvironmental specifications	Operating temperature	o°C to +40°C
specifications	Storage	-40°C to +70°C
	temperature	
	Operating humidity	5% to 95% (non-condensing)
	Altitude	-60 m to +5000 m
	Atmospheric pressure	53 kPa to 106 kPa
Radio	Antenna type	Built-in smart antennas
specifications	Antenna gain	2.4GHz: 5 dBi
		5GHz: 5 dBi
		□ NOTE
		 The preceding gains are the peak gains of a single antenna.
		 When all WLAN 2.4 GHz or 5 GHz antennas are combined, the equivalent antenna gain is 3 dBi for 2.4 GHz radios or 3 dBi for 5 GHz radios.
	Maximum number of SSIDs for each radio	15
	Maximum transmit power	2.4 GHz: 23 dBm (combined power)
		5 GHz: 23 dBm (combined power)
		₩ NOTE
		The actual transmit power depends on local laws and regulations.
	Maximum transmit power	2.400 to 2.4835 GHz ISM
		5.150 to 5.250 GHz U-NII-1
		5.250 to 5.350 GHz U-NII-2A
		5.470 to 5.725 GHz U-NII-2C
		5.725 to 5.850 GHz U-NII-3/ISM
		□ NOTE
		The available bands and channels are dependent on the configured regulatory domain (country).

Standards Compliance

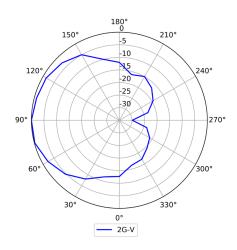
Item	Description		
Safety standards	• EN 62368-1	• IEC 62368-1	• GB 4943.1
Radio standards	• ETSI EN 300 328	• ETSI EN 301 893	• AN/NZS 4268
EMC standards	• EN 301 489-1	• GB 9254	• IEC/EN61000-4-2
	• EN 301 489-17	• GB 17625.2	• IEC/EN 61000-4-3
	• EN 60601-1-2	• AS/NZS CISPR32	• IEC/EN 61000-4-4
	• EN 55032	• CISPR 32	• IEC/EN 61000-4-5
	• EN 55035	• CISPR 35	• IEC/EN 61000-4-6
			• ICES-003
IEEE standards	• IEEE 802.11a/b/g	• IEEE 802.11h	• IEEE 802.11v
	• IEEE 802.11n	• IEEE 802.11d	• IEEE 802.11w
	• IEEE 802.11ac	• IEEE 802.11e	• IEEE 802.11r
	• IEEE 802.11ax	• IEEE 802.11k	
	• IEEE 802.11be		
Security standards			
	• 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

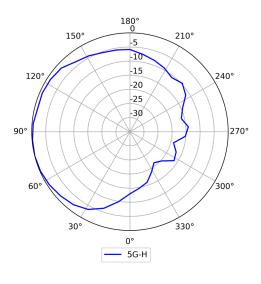
AirEngine 5573-23W



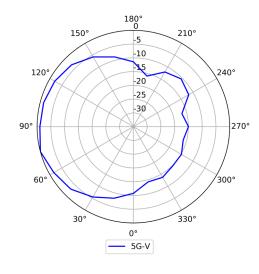




2.4GHz (Vertical)



5GHz (Horizontal)



5GHz (Vertical)

More Information

For more information about Huawei WLAN products, visit http://e.huawei.com/en/ or contact Huawei's local sales office. Alternatively, you can contact us through one of the following methods:

- Global service hotline: http://e.huawei.com/en/service-hotline
- Enterprise technical support website: http://support.huawei.com/enterprise/
- Service email address for enterprise users: support_e@huawei.com

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