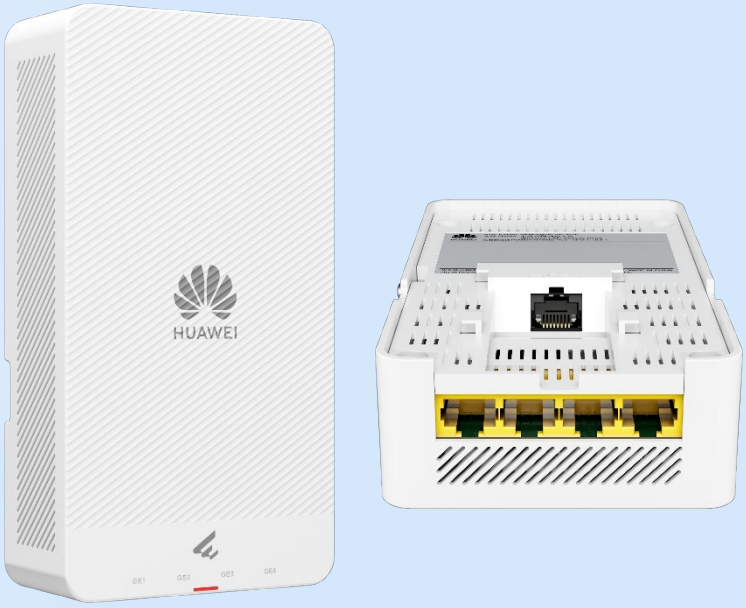
HUAWEI eKit

Huawei eKitEngine AP265E Wireless Access Point Datasheet



AX3000 Dual-Band Five-Port Wi-Fi 6 Wall Plate AP

Make SME Network Easier and Smarter

HUAWEI

Product Overview

Huawei eKitEngine AP265E is an indoor slim wall plate access point (AP) in compliance with the Wi-Fi 6 (802.11ax) standard. It can simultaneously provide services on the 2.4 GHz (2x2 MIMO) and 5 GHz (2x2 MIMO) frequency bands with four spatial streams, delivering a data rate of up to 2.975 Gbps.

The AP provides one GE uplink port and four GE downlink ports. It can be installed on a desk, wall, ceiling, or junction box, meeting connection requirements in multiple scenarios. The AP is small and easy to deploy, ideal for indoor coverage scenarios such as budget hotels, hospitals, commercial stores, and schools.

You can use the EasyWeb or wireless access controller (WAC) to locally deploy and manage APs, or use the HUAWEI eKit App & SNC platform to remotely manage and maintain APs. In this way, network projects can be handed over or managed together, simplifying network O&M.

Feature Description

Wi-Fi 6 (802.11ax) Standard

- As the latest Wi-Fi standard defined in IEEE 802.11, 802.11ax improves the user access capacity and bandwidth in high-density access scenarios, reducing service latency and enhancing user experience.
- Multi-user multiple-input multiple-output (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 stations (STAs) simultaneously and multiplying the utilization of radio spectrum resources.
- 1024-quadrature amplitude modulation (QAM), improving data transmission efficiency by 25% compared with 802.11ac (256-QAM).

MU-MIMO

The AP supports MU-MIMO and supports a maximum of four spatial streams (two on the 2.4 GHz frequency band and two on the 5 GHz frequency band). 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.

High-Speed Access

- The AP supports 160 MHz frequency bandwidth, which increases the number of available data subcarriers and expands transmission channels. In addition, the AP adopts 1024-QAM and MU-MIMO to achieve a rate of up to 575 Mbps on the 2.4 GHz band and 2.4 Gbps on the 5 GHz band, meaning up to 2.975 Gbps for the device.

Smart Antenna

- The dual-band smart antenna array technology and intelligent switchover algorithm enable the AP to intelligently sense the application environment and access density, achieving accurate Wi-Fi coverage and interference suppression. They together provide the optimal coverage direction and signal quality for each access STA, and offer seamless and smooth wireless network experience to users.

Wired and Wireless 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 AP supports WEP, WPA/WPA2-PSK, WPA3-SAE, WPA/WPA2-PPSK, and WPA/WPA2/WPA3-802.1X authentication/encryption modes to ensure the security of wireless networks. 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 data can only be received and parsed by authorized users.

Authentication and encryption for wired access

- The AP access control mechanism ensures that only authorized users can access the AP. Control and provisioning of wireless access point (CAPWAP) link protection and Datagram Transport Layer Security (DTLS) encryption provide security guarantee and improve data transmission security between the AP and WAC.

Automatic Radio Calibration

Automatic radio calibration allows the AP to collect signal strength, channel, and other parameters of surrounding APs and generate an AP topology according to the collected data. Based on interference from surrounding environments and their loads, the 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.

Cloud Management

The AP supports cloud-based management. It provides various authentication functions, such as PSK and Portal authentication, without the need of a WAC or an authentication server. This greatly simplifies networking and reduces CAPEX. In addition, the AP can be deployed on the Huawei SNC platform to implement cloud-based network planning, deployment, inspection, and O&M.

Deployment and O&M Through HUAWEI eKit App

The HUAWEI eKit App supports Wi-Fi-based deployment and barcode scanning–based deployment. After the deployment is complete, you can perform more project maintenance operations on the HUAWEI eKit App.

Wi-Fi-based deployment

- Quick deployment mode: You can use a mobile phone to connect to the management Wi-Fi network of an AP to deploy a network project. In this way, devices can automatically go onboarded and be remotely managed on the HUAWEI eKit App.

Barcode scanning–based deployment

- Another deployment mode: Use a mobile phone to scan the serial number (SN) of the device chassis and synchronize the device information to HUAWEI eKit to implement device onboarding management.

Product Features

Fat AP and Fit AP Mode

Item	Description
WLAN features	Compliance with IEEE 802.11ax and compatibility with IEEE 802.11a/b/g/n/ac/ac wave2 Maximum ratio combining (MRC) Space time block code (STBC) Cyclic delay diversity (CDD)/Cyclic shift diversity (CSD) Beamforming MU-MIMO Compliance with 1024-QAM and compatibility with 256-QAM/64-QAM/16-QAM/8-QAM/QPSK/BPSK 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) WLAN channel management and channel rate adjustment

Item	Description
	NOTE For detailed management channels, see *Country Code & Channel Compliance Table*. Separate service set identifier (SSID) hiding configuration for each AP, supporting Chinese SSIDs Unscheduled automatic power save delivery (U-APSD) CAPWAP in Fit AP mode Extended service set (ESS) in Fit AP mode 802.11k and 802.11v smart roaming 802.11r fast roaming
Network features	Compliance with IEEE 802.3ab Auto-negotiation of the rate and duplex mode SSID-based VLAN assignment Management channel of the AP's uplink port in tagged or untagged mode DHCP client, obtaining IP addresses through DHCP STA isolation in the same VLAN IPv4/IPv6 access control list (ACL) Link layer discovery protocol (LLDP) Uninterrupted service forwarding upon CAPWAP tunnel disconnection in Fit AP mode Unified authentication on the WAC in Fit AP mode
QoS features	WMM parameter management for each radio Queue mapping and scheduling User-based bandwidth limiting Adaptive bandwidth management (automatic bandwidth adjustment based on the user quantity and radio environment) for user experience improvement Airtime scheduling
Security features	Open system authentication WEP authentication and encryption using a 64-bit, 128-bit, 152-bit, or 192-bit encryption key WPA2-PSK authentication and encryption WPA2-802.1X authentication and encryption WPA3-SAE authentication and encryption WPA3-802.1X authentication and encryption WPA-WPA2/WPA2-WPA3 hybrid authentication WPA2-PPSK authentication and encryption in Fit AP mode 802.1X authentication, MAC address authentication, Portal authentication, etc. DHCP snooping Dynamic ARP inspection (DAI) IP Source Guard (IPSG) 802.11w Protected Management Frames (PMF) DTLS encryption
Maintenance features	Unified management and maintenance on the WAC in Fit AP mode Automatic login, automatic configuration loading, and plug-and-play (PnP) in Fit AP mode Automatic batch upgrade in Fit AP mode Telnet and STelnet using SSHv2

Item	Description
	SFTP using SSHv2 Real-time configuration monitoring and fast fault locating using the NMS System status alarm

Cloud Management Mode

Item	Description
WLAN features	Compliance with IEEE 802.11a/b/g/n/ac/ac Wave 2/ax Maximum ratio combining (MRC) Space time block code (STBC) Cyclic delay diversity (CDD)/Cyclic shift diversity (CSD) Beamforming MU-MIMO Compliance with 1024-QAM and compatibility with 256-QAM/64-QAM/16-QAM/8-QAM/QPSK/BPSK 802.11 DFS Short GI in 20 MHz, 40 MHz, 80 MHz and 160 MHz modes Priority mapping and scheduling in compliance with WMM WLAN channel management and channel rate adjustment **NOTE** For detailed management channels, see *Country Code & Channel Compliance Table*. Automatic channel scanning and interference avoidance SSID hiding U-APSD 802.11k and 802.11v smart roaming 802.11r fast roaming
Network features	Compliance with IEEE 802.3ab Auto-negotiation of the rate and duplex mode SSID-based VLAN assignment DHCP client, obtaining IP addresses through DHCP STA isolation in the same VLAN ACL Unified authentication on the cloud management platform Network address translation (NAT)
QoS features	Priority mapping and scheduling in compliance with WMM WMM parameter management for each radio Queue mapping and scheduling User-based bandwidth limiting Airtime scheduling
Security features	Open system authentication WEP authentication and encryption using a 64-bit, 128-bit, 152-bit, or 192-bit encryption key

Item	Description
	WPA2-PSK authentication and encryption WPA2-802.1X authentication and encryption WPA3-SAE authentication and encryption WPA3-802.1X authentication and encryption WPA-WPA2/WPA2-WPA3 hybrid authentication 802.1X authentication, MAC address authentication, Portal authentication, etc. DHCP snooping DAI IPSG
Maintenance features	Unified management and maintenance on the cloud management platform Batch upgrade Telnet and STelnet using SSHv2 SFTP using SSHv2 Web-based NMS, and login through HTTP or HTTPS Real-time configuration monitoring and fast fault locating using the NMS System status alarm Network Time Protocol (NTP)

Product Specifications

Item		Description
Technical specifications	Dimensions (W x H x D)	86 mm x 160 mm x 38 mm
	Weight	0.23 kg
	Port	Uplink: 1 x 10M/100M/GE electrical port Downlink: 4 x 10M/100M/GE electrical ports **NOTE** The uplink electrical port supports PoE IN.
	LED indicator	Indicate the power-on, startup, running, alarm, and fault states of the system.
Power specifications	Power input	• PoE power supply: in compliance with IEEE 802.3af
	Maximum power consumption	• 9.4 W **NOTE** The actual maximum power consumption depends on local laws and regulations.
Environmental specifications	Operating temperature	0°C to 40°C (From 1800 m to 5000 m, the maximum temperature of the device decreases by 1°C for every 300 m increase in altitude.) **NOTE** The temperature on part of the AP shell may be higher than its operating temperature upper limit. The AP's performance will not be affected as long as the shell temperature complies with the safety standards.
	Storage temperature	–40°C to +70°C

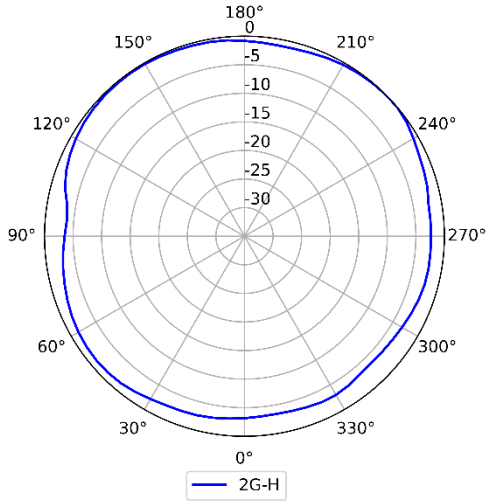
Item		Description
	Operating humidity	5% to 95% (non-condensing)
	Altitude	–60 m to +5000 m
	Atmospheric pressure	53 kPa to 106 kPa
Radio specifications	Antenna type	Built-in smart antennas
	Antenna gain	2.4 GHz: 4 dBi 5 GHz: 4 dBi **NOTE** The preceding gains are the peak gains of a single antenna.
	Maximum quantity of SSIDs	16
	Maximum number of access STAs	128 **NOTE** The actual number of users varies according to the environment.
	Maximum transmit power	2.4 GHz: 23 dBm (combined power) 5 GHz: 23 dBm (combined power) **NOTE** The actual transmit power varies according to local laws and regulations.
	Power adjustment increment	1 dBm

Standards Compliance

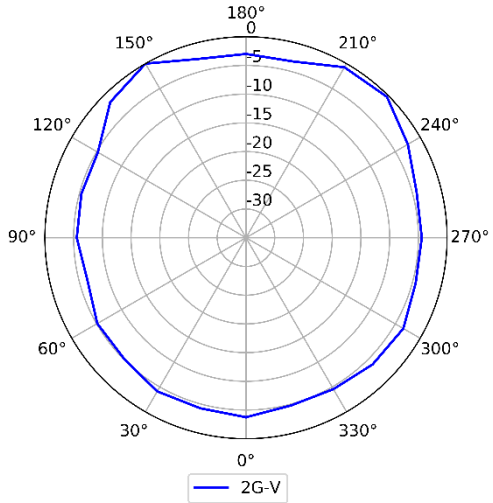
Item	Description		
Safety standards		• UL 62368-1 • EN 62368-1 • IEC 62368-1 • CSA 62386-1	• GB 4943.1
Radio standards	• ETSI EN 300 328	• ETSI EN 301 893	• AS/NZS 4268
EMC standards	• EN 301 489-1 • EN 301 489-17 • EN 60601-1-1 • EN 60601-1-2 • EN 55024 • EN 55032 • EN 55035	• GB 9254 • GB 17625.1 • GB 17625.2 • AS/NZS CISPR 32 • CISPR 24 • CISPR 32 • CISPR 35	• IEC/EN 61000-4-2 • IEC/EN 61000-4-3 • IEC/EN 61000-4-4 • IEC/EN 61000-4-5 • IEC/EN 61000-4-6 • 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 standards	• EN 62311	• EN 50385	
RoHS standards	• Directive 2002/95/EC & 2011/65/EU • (EU) 2015/863		
Reach standards	• Regulation 1907/2006/EC		
WEEE standards	• Directive 2002/96/EC & 2012/19/EU		

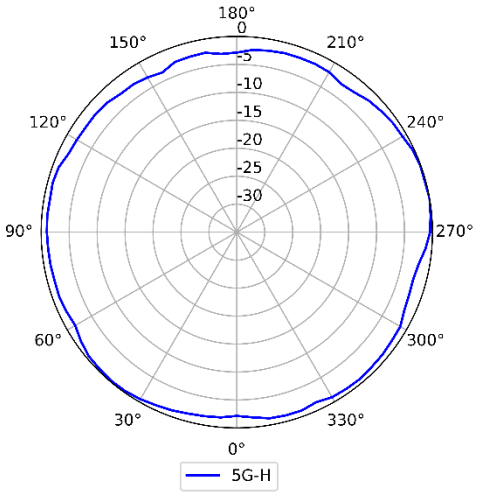
Antennas Pattern



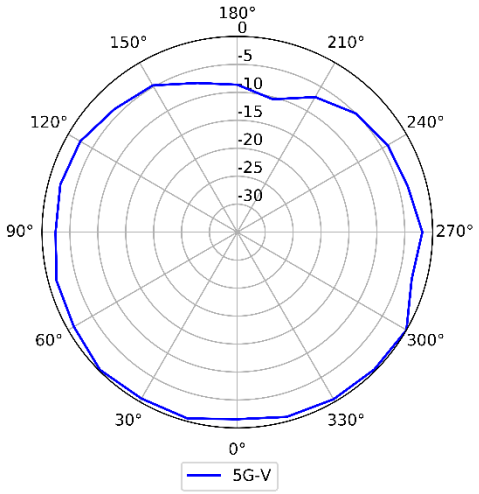
2.4GHz (Horizontal)



2.4GHz (Vertical)



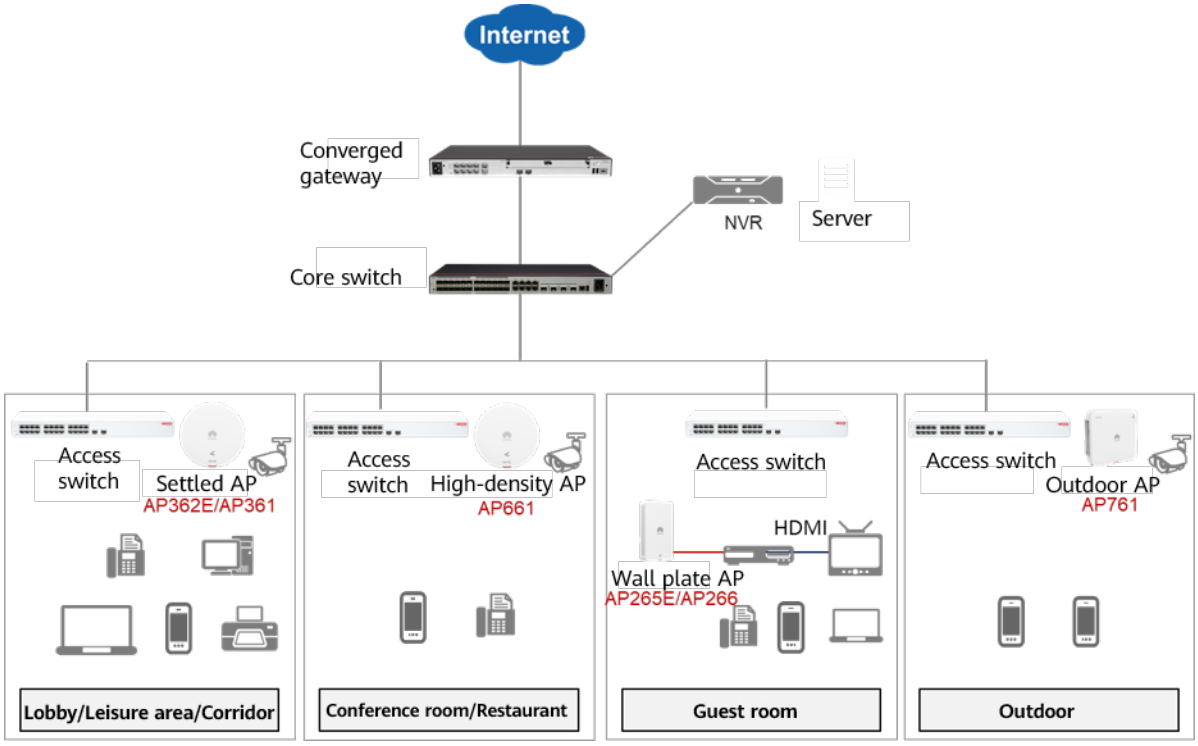
5GHz (Horizontal)



5GHz (Vertical)

Typical Networking

Budget hotel scenario



More Information

For more information about Huawei eKitEngine WLAN products, visit http://ekit.huawei.com or contact Huawei's local sales office.

Alternatively, you can contact us through one of the following methods:

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

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