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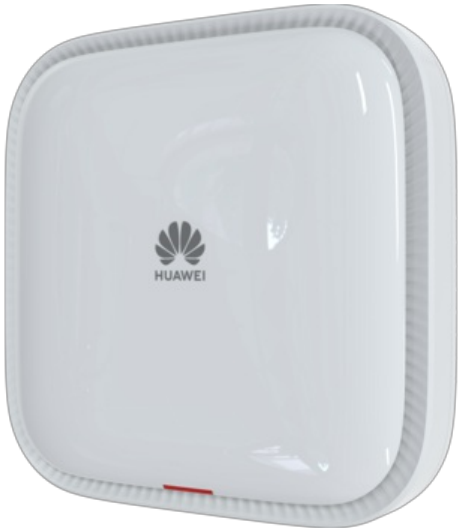

Точка доступа Huawei AirEngine 8760-X1-PRO

8760-X1-PRO

Описание

Ключевые особенности:

- 2 порта 10G с поддержкой PoE
- 1 порт 10G SFP+
- Пропускная способность 10,75 Гбит/с
- MU-MIMO 2,4 ГГц: 4x4:4 и 5 ГГц: 12x12:8 или 2,4 ГГц: 4x4:4, 5 ГГц-0: 8x8:8 и 5 ГГц-1: 4x4:4
- До 1152 пользователя

Флагманская модель точки доступа стандарта **Wi-Fi 6 (802.11ax)** для установки в помещениях AirEngine 8760-X1-PRO оснащена **16 адаптивными антеннами**. Устройство можно применять в местах с большой плотностью пользователей, а также для обеспечения работы приложений, которым требуется широкая полоса пропускания.

Уникальным преимуществом данного устройства стали 16 встроенных двухдиапазонных адаптивных антенн — технология **Smart Antenna**, разработанная компанией Huawei благодаря обширным исследованиям в области 5G, которая позволяет добиться скорости беспроводного доступа, сопоставимой со скоростью передачи по оптоволокну — **10,75 Гбит/с**. Адаптивные антенны эффективно усиливают сигнал, который стабильно доходит до перемещающихся пользователей, обеспечивая высокое качество покрытия с полным отсутствием «слепых» зон.

Точка доступа оснащена функцией программно-конфигурируемой радиосистемы (SDR) и способна гибко переключаться между **тремя режимами работы:** два канала в двух диапазонах, три канала в двух диапазонах, два канала в двух диапазонах + один канал сканирования. Устройство предназначено для установки в местах с большой плотностью пользователей и наличием источников высокого уровня помех. Эти достоинства делают данное решение оптимальным для работы в офисах компаний, государственных организациях, учреждениях начального, среднего и высшего образования.

Общие

Частотный диапазон Wi-Fi, ГГц	2.4 5
Поддержка MIMO, в диапазоне 2.4ГГц	4x4
Поддержка MIMO, в диапазоне 5ГГц	12x12
SFP	Да

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PoE	802.3at 802.3bt
Портов LAN	3
Стандарты Wi-Fi IEEE 802.11	802.11g 802.11ac (Wi-Fi 5) 802.11n (Wi-Fi 4) 802.11a 802.11ax (Wi-Fi 6) 802.11b
Роуминг	802.11k/v/r
Уличный корпус	Нет
Порт USB	USB 3.0
Тип антенны	интегрированная

Доп. описание

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 Flexible switchover between triple-radio and dual-radio modes, 16 spatial streams, providing up to 10.75 Gbps Maximum ratio combining (MRC) Space time block code (STBC) Cyclic Delay Diversity (CDD)/Cyclic Shift Diversity (CSD) Beamforming Huawei AirEngine 8760-X1-PRO Access Point Datasheet 6 Item Description DL/UL MU-MIMO DL/UL OFDMA Compliance with 1024-QAM and compatibility with 256-QAM/64-QAM/16-QAM/8-QAM/QPSK/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, and 160 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 Compliance Table. Automatic channel scanning and interference avoidance Separate service set identifier (SSID) hiding configuration for each AP, supporting Chinese SSIDs Signal sustain technology (SST) Unscheduled automatic power save delivery (U-APSD)

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	Unscheduled automatic power save delivery (U-APSD) Control and Provisioning of Wireless Access Points (APs) in Fit AP mode Automatic login in Fit AP mode Extended Service Set (ESS) in Fit AP mode Multi-user 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 Uplink VLAN trunks on Ethernet ports Management channel of the AP's 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 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 Soft Generic Routing Encapsulation (GRE) IPv6 Source Address Validation Improvements (SAVI) Multicast Domain Name Service (mDNS) gateway protocol
QoS features	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
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 edition) WPA2-802.1X authentication and encryption (WPA2 enterprise edition) WPA3-SAE authentication and encryption (WPA3 personal edition)* WPA3-802.1X authentication and encryption (WPA3 enterprise edition)* WPA-WPA2 hybrid authentication WPA2-WPA3 hybrid authentication* WPA2-PPSK authentication and encryption in Fit AP mode Wireless intrusion detection system (WIDS) and wireless intrusion prevention system (WIPS),

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	including rogue device detection and countermeasure, 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 (PMFs)
Maintenance features	Unified management and maintenance on the AC 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 STelnet using SSHv2 SFTP using SSHv2 Remote wireless O&M through the Bluetooth console port Web system-based AP management in Fat AP mode, login through HTTP or HTTPS Real-time configuration monitoring and fast fault location 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. Device type identification according to the organizationally unique identifier (OUI) in the MACaddress Device type identification according to the user agent (UA) information in an HTTP packet Device type identification 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.
Location service	NOTE The AP supports the location service only in Fit AP mode. STA location Working with the location server to locate rogue devices Bluetooth location
Spectrum analysis	NOTE The AP supports spectrum analysis only in Fit AP mode. Identification of more than eight 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 the location server to locate interference sources and perform spectrum analysis on them

Cloud-based management mode

Item	Description
WLAN features	Compliance with IEEE 802.11a/b/g/n/ac/ac Wave 2/ax Flexible switchover between triple-radio and dual-radio modes, 16 spatial streams, providing up to 10.75 Gbps Maximum ratio combining (MRC) Space time block code (STBC)

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	Space time block code (STBC) Beamforming 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 packet scheduling based on a Wi-Fi Multimedia (WMM) profile to implement priority-based data processing and forwarding WLAN channel management and channel rate adjustment NOTE For detailed management channels, see the Country Code & Channel Compliance Table. Automatic channel scanning and interference avoidance Service set identifier (SSID) hiding Signal sustain technology (SST) Unscheduled automatic power save delivery (U-APSD) Automatic login
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 Huawei AirEngine 8760-X1-PRO Access Point Datasheet 9 Item Description 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 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 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 Soft Generic Routing Encapsulation (GRE) IPv6 Source Address Validation Improvements (SAVI) Multicast Domain Name Service (mDNS) gateway protocol
QoS features	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 Application acceleration for VR and mobile gaming 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 edition) WPA2-802.1X authentication and encryption (WPA2 enterprise edition) WPA3-SAE authentication and encryption (WPA3 personal edition)* WPA3-802.1X authentication and encryption (WPA3 enterprise edition)* WPA-WPA2 hybrid authentication WPA2-WPA3 hybrid authentication*

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	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 Agile Controller Automatic login and configuration loading, and plug-and-play (PnP) Batch upgrade Telnet STelnet using SSH v2 SFTP using SSH v2 Remote wireless O&M through the Bluetooth console port Web local AP management through HTTP or HTTPS Real-time configuration monitoring and fast fault location using the NMS System status alarm Network Time Protocol (NTP)

Antennas Pattern