



W618HAP

Wi-Fi 6 Dual-Radio Ceiling Access Point



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Foreedge

Product Overview

The W618HAP is a dual-radio Wi-Fi 6 access point (AP) launched by Foredge Networks for indoor scenarios in various sectors covering higher education, government, general education, finance, and business.

In compliance with IEEE 802.11ax, IEEE 802.11ac , and IEEE 802.11n standards, the W618HAP adopts a hardware-independent dual-radio frequency design combined with **external independent FEM design**, enabling a much wider wireless coverage range. and delivers a combined peak data rate of 3000Mbps, eliminating the performance bottleneck.

The W618HAP is designed considering factors such as wireless network security, radio control, mobile access, QoS, seamless roaming, and Internet of Things (IoT). The W618HAP can be used together with Foredge access controllers (ACs) to implement wireless user data forwarding, security, and access control.

The W618HAP supports local power supply and Power over Ethernet (PoE), which can be selected based on power supply conditions. In addition, the W618HAP can be mounted on a wall or ceiling, making it ideal for low-density scenarios including small- and medium-sized offices, small compartments, small conference rooms, and corridors.

Product Appearance



W618HAP
front view



W618HAP
back view

Product Features

Wireless network visualization

- It starts from five major dimensions, namely overview, experience, users, devices and environment, enabling users to have a clear understanding of the current operation status of the network. This includes the basic overview of the network: device stability, device health status, user stability, network signal coverage and network association conditions; user usage status: user activity level (network dependence degree), user online experience and its analysis; network saturation: network capacity utilization rate and channel utilization rate.

Multi-Service Ports

- One self-adaptive independent Ethernet WAN port, supporting standard 802.3af power reception, enabling high-speed wired access up to 2500Mbps, and realizing high-speed transmission conversion between wireless and wired networks.
- One self-adaptive independent Ethernet LAN port, supporting 1000Mbps, capable of undertaking high-speed data transmission, and adaptable to the forms of wired network links at different customer sites.

High-speed wireless connection

● 1024QAM High-speed Access Rate

The W618HAP adopts a dual-radio design and uses the new-generation Wi-Fi wireless standard 802.11ax protocol. When the two radios are turned on simultaneously, it provides a high-speed wireless connection of up to 3000Mbps, bringing a high-speed and perfect experience.

- **OFDMA High-density User Access**

OFDMA in IEEE 802.11ax enables the W618HAP to divide a WLAN channel into multiple narrower sub-channels, with each user occupying one or more sub-channels. The W618HAP can schedule services of multiple users, and receive and send packets concurrently. This reduces contention for air interface resources and backoff, shortens the network latency, and improves the network efficiency.

- **Intelligent Local Forwarding**

The W618HAP integrates intelligent local forwarding technology to eliminate the traffic bottleneck on its connected wireless access controller. The data forwarding mode of the W618HAP can be flexibly pre-configured through Foreedge's wireless access controller. Then the W618HAP determines whether data needs to be forwarded by the wireless access controller or be sent to a wired network for data exchange based on the SSID or user VLAN.

With the local forwarding technology, the W618HAP classifies the data that is sensitive to the delay and requires real-time high-performance transmission, and forwards it through a wired network. This greatly relieves the traffic burden of the wireless access controller and better adapts to heavy-traffic transmission on 802.11ax networks.

- **Abundant QoS Policies**

The W618HAP provides abundant QoS policies. It supports WLAN/AP/STA-based bandwidth limiting as well as Wi-Fi Multimedia (WMM) that defines priorities for different service data. Therefore, the W618HAP can provide timely and quantitative transmission of audio and video services, and ensure smooth application of multimedia services.

The multicast-to-unicast conversion technology supported by the W618HAP addresses the problem of video freezing caused by packet loss or high latency in Video on Demand (VoD) and other multicast applications on wireless networks, improving the user experience in multicast video services.

- **Intelligent Recognition**

The W618HAP can intelligently identify mobile clients such as iOS and Android clients and PCs. It can be used with APOLLO Cloud to implement visualized wireless network management based on the wireless client type and optimize a network in one-click mode.

High security and simple operation

- **User-level Security Access**

The W618HAP supports various user access authentication methods for customers to choose from, such as Web authentication, MAC address authentication, and local authentication. Moreover, the W618HAP supports a standard network access control system. Under multiple authentication methods, it has strictly defined network access from multiple aspects, including user access, authorization, host compliance, network behavior monitoring, and prevention of network attacks. Through this control, it has realized the construction concept of "authentication upon network access and security upon network access".

- **Multiple Authentication Methods**

The W618HAP supports various authentication and encryption technologies, including web, WEP (64/128 bits), WPA, WPA2, WPA3, voucher code, user accounts, SMS, and PSK. WPA3 includes WPA3-Personal, WPA3-Enterprise, and WPA3-OWE. In compliance with standard Network Access Control (NAC), the AC offers control policies through authentication, authorization, device compliance check, and network attack detection or prevention.

All these features guarantee high network security for authenticated users.

- **NAT**

The W618HAP supports the Network Address Translation (NAT) function to translate addresses between the LAN in the branch office and the Internet.

- **Multi-SSID Access**

Through the multi-SSID wireless access point access technology, network administrators can manage or isolate subnets using different SSIDs. Additionally, they can flexibly configure individual authentication methods, encryption mechanisms, etc. for each SSID.

Flexible device management mode

- **Web Interface Management**

The W618HAP offers Web management interfaces for both the AC (Access Controller) and APs (Access Points). It not only enables easy wireless configuration but also allows for the overall operation of the wireless network. Through the AC's Web interface, administrators can manage not only the APs but also the users connected to the APs. They can limit the network speed of users and restrict users from accessing the network, which facilitates the wireless network planning and maintenance for operation and maintenance personnel.

- **APOLLO Cloud Platform Management**

The W618HAP can interact with the Phihongda APOLLO Cloud Platform. The cloud platform enables the management of all wireless controllers and wireless APs in the network. This includes configuring and backing up devices, querying device statuses, and providing topological diagrams to display the network structure of wireless APs in the actual environment.

- **AC Management**

The W618HAP can also be managed via the Phihongda AC, which allows for centralized management of APs. It covers a wide range of functions, including managing the access list, wireless configuration, upgrade management, network mode settings, load balancing, intelligent roaming, and more.

Specifications

Hardware Specifications

Key Parameters

key parameters	W618HAP
Wireless Protocol	802.11b/g/a/n/ac/ax
Maximum Wireless Rate	3000Mbps (2.4G:574Mbps 5G:2402Mbps)
Maximum Number of Access Terminals	128
Interface	1*10/100/1000/2500Mbps WAN Port 1*10/100/1000Mbps LAN Port
Button	1*Reset Button Mesh:Press for 3 seconds to trigger the Mesh function. Reset:Press for 8 seconds to trigger the factory reset function.
LED	1*SYS LED(three-color led) 1)AC & AP networking is successful,and the device can access the Internet: blue 2)The device access the Internet: green 3)system startup: red
Power Supply	Supports PoE (Power over Ethernet),802.3at protocol.
max power consumption	16W
Wireless Spatial Stream	Dual-Radio:2.4GHz(2x2 streams), 5GHz(3x3 streams), Concurrently transmit five wireless spatial streams
WIFI Antenna	2*built-in 2.4G antennas3* built-in 5G antennas.
Dimensions (W x D x H)	194mm*194mm*44mm
Weight	about 0.5Kg
Mounting	Ceiling Mount
Color	White
Temperature	Operating temperature:-10° C to 50° C; Storage temperature:-40° C~70° C
Humidity	Operating humidity: 5% RH to 95% RH (non-condensing) Storage humidity: 5% RH to 95% RH (non-condensing)
ESD	contact discharge ±4KV,Air discharge ±8KV
Surge	Co-mode 2KV, difference mode 1KV

Wi-Fi Radio

Wi-Fi Radio	W618HAP
Radio design	Dual-radio and up to four spatial streams: ● Radio 1: 2.4 GHz, two spatial streams, 2x2 MU-MIMO ● Radio 2: 5 GHz, three spatial streams, 3x3 MU-MIMO
Operating Frequencies	Radio1: 802.11b/g/n/ax, 2.400GHz~2.483GHz Radio2: 802.11a/n/ac/ax, 5.150GHz~5.350GHz, 5.470GHz~5.725GHz, 5.725GHz~5.850GHz Note: Available frequency bands may vary with countries or regions.
Transmission Rate	Radio1: 2.4GHz, 574Mbps Radio2: 5GHz, 2402Mbps Maximum access rate of the whole machine: 2.4GHz+5GHz, 3000Mbps
Maximum Transmit Power	23dBm Note: The actual transmit power varies in accordance with the regulations of different countries and regions.
Modulation Types	802.11b: BPSK, QPSK, CCK 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
Data Rate Set	The following 802.11-compliant data rates in Mbps are supported: 2.4 GHz 802.11b: 1, 2, 5.5, 11 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 802.11n: 6.5~300 (MCS0~MCS15, NSS = 1~2, HT20~HT40) 802.11ax: 7.3~573.5 (MCS0~MCS11, NSS = 1~2, HE20~HE40) 5GHz 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 802.11n: 6.5~300 (MCS0~MCS31, NSS = 1~2, HT20~HT40) 802.11ac: 6.5~1733.3 (MCS0~MCS9, NSS = 1~2, VHT20~VHT160) 802.11ax: 7.3~2402 (MCS0~MCS11, NSS = 1~2, HE20~HE160)
Packet Aggregation	A-MPDU (Tx/Rx) , A-MSDU (Tx/Rx)
Power Increment	1dBm
Radio Technologies	802.11b: Direct-Sequence Spread-Spectrum (DSSS) 802.11a/g/n/ac: Orthogonal Frequency-Division Multiplexing (OFDM) 802.11ax: Orthogonal Frequency Division Multiple Access (OFDMA)
Modulation Types	802.11b: BPSK, QPSK, CCK 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM

Wi-Fi Radio Frequency Performance	W618HAP		
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum Receive Sensitivity per Receive Chain
2.4 GHz 802.11g	6 Mbps	24 dBm	-91 dBm
	24 Mbps	23 dBm	-85 dBm
	36 Mbps	22 dBm	-80 dBm
	54 Mbps	22 dBm	-74 dBm
2.4 GHz 802.11n (HT20)	MCS0	24dBm	-85 dBm
	MCS7	21 dBm	-67 dBm
2.4 GHz 802.11n (HT40)	MCS0	24 dBm	-82 dBm
	MCS7	21 dBm	-64 dBm
2.4 GHz 802.11ax (HE20)	MCS0	24 dBm	-85 dBm
	MCS11	17 dBm	-58 dBm
2.4 GHz 802.11ax (HE40)	MCS0	24 dBm	-82 dBm
	MCS11	17 dBm	-54 dBm
5 GHz 802.11a	6 Mbps	25 dBm	-91 dBm
	24 Mbps	24 dBm	-85 dBm
	36 Mbps	24 dBm	-80 dBm
	54 Mbps	22 dBm	-74 dBm
5 GHz 802.11n (HT20)	MCS0	23 dBm	-85 dBm
	MCS7	21 dBm	-67 dBm
5 GHz 802.11n (HT40)	MCS0	23 dBm	-82 dBm
	MCS7	21 dBm	-64 dBm
5 GHz 802.11ac (VHT20)	MCS0	23 dBm	-85 dBm
	MCS7	21 dBm	-67 dBm
5 GHz 802.11ac (VHT40)	MCS0	23 dBm	-82 dBm
	MCS9	19 dBm	-57 dBm
5 GHz 802.11ac (VHT80)	MCS0	23 dBm	-82 dBm
	MCS9	19 dBm	-56 dBm
5 GHz 802.11ax (HE20)	MCS0	23 dBm	-85 dBm
	MCS11	18 dBm	-58 dBm
5 GHz 802.11ax (HE40)	MCS0	23 dBm	-82 dBm
	MCS11	18 dBm	-54 dBm
5 GHz 802.11ax (HE80)	MCS0	23 dBm	-82 dBm
	MCS9	19 dBm	-56 dBm
	MCS11	18 dBm	-52 dBm
5 GHz 802.11ax (HE160)	MCS0	23 dBm	-79 dBm
	MCS9	19 dBm	-53 dBm
	MCS11	18 dBm	-50 dBm

Software Specifications

F/W Information

Basic information	W618HAP
Applicable software version	W618HAP-V4_V03D20250327101251_EN_B53d9b1 or later

WLAN

WLAN	W618HAP
Number of BSSID	8 (up to 4 BSSIDs per radio)
WLAN Service	Max of WLAN ID: 8
STA management	SSID hiding Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. Remote intelligent perception technology (RIPT) Intelligent client identification technology Intelligent load balancing based on the STA quantity or traffic
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	STA/SSID/AP-based rate limiting
CAPWAP	Support IPv4/IPv6 CAPWAP Support L2/L3 network topology between AP & AC. AP can automatically discover the accessible AC. AP can automatically update the software version from the AC AP can automatically download the configuration from the AC CAPWAP can penetrate the NAT. The CAPWAP tunnel supports the MTU setting and fragmentation. The CAPWAP data channel supports encryption. The CAPWAP control channel supports encryption.
Data Forwarding	Support centralized forwarding and local forwarding
Wireless Roaming	Supports Layer 2 and Layer 3 roaming
Wireless Positioning	It supports the positioning of MU devices.

Security and Authentication

Security and Authentication	W618HAP
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK, web, 802.1X, WPA, WPA2, and WPA3 authentication SMS authentication (used with the RG-WS series wireless access controller) MAB authentication (used with the RG-WS series wireless access controller) WEP (64/128 bits), WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WPA3-Personal (WPA2/WPA3 transition mode), WPA3-Enterprise (CCMP), WPA3-OWE
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Support WIDS (Wireless Intrusion Detection System) Supports user isolation. Supports the detection and countermeasures of illegal APs
ACL	Supports the following types of ACLs: standard IP ACLs, extended MAC ACLs, extended IP ACLs, expert-level ACLs, and IPv6 ACLs. Supports time-based ACLs. Supports the association of ACLs with Layer 2 interfaces. Supports the association of ACLs with Layer 3 interfaces. Supports the association of inbound ACLs with WLAN interfaces. Supports the distribution of dynamic ACLs based on 802.1x authentication (requires cooperation with the AC).
CPP	Support CPP (CPU Protect Policy, CPU protection policy)
NFPP	Support NFPP (Network Foundation Protection Policy) Support ARP, ICMP, DHCP anti-attacks

Routing and Switching

Routing and Switching	W618HAP
IPv4 service	Static IPv4 address and DHCP-assigned IPv4 address NAT ALG FTP and NAT ALG DNS
IPv6 basics	IPv6 addressing, Neighbor Discovery (ND), ICMPv6, IPv6 ping IPv6 DHCP client

IP IP routing	IPv4/IPv6 static routing
Multicast	Multicast-to-unicast conversion
VPN	PPPoE client IPsec VPN, up to four IPsec tunnels

Network Management and Monitoring

Network Management and Monitoring	W618HAP
Network Management	Support NTP Server、NTP Client Support SNTP Client Support SNMP v1/v2C/v3 Support fault detection and alarm. Support information statistics and logging.
Management Platform	Supports Web manager,APPLLO cloud platform
User Access Management	Support Console, Telnet, SSH, FTP client, FTP server, and TFTP client
Management Mode	Can be managed via the AC series wireless controllers. Can be managed via the local control port or telnet. Can be managed via the APOLLO cloud.

Advanced Features

Advanced Features	W618HAP
Network Diagnosis	ping ,Nslookup
Hardware Acceleration	Support
EasyMesh	Support

Ordering Information:

Model	Description
W618HAP	802.11ax dual-radio wall plate wireless access point Up to five spatial streams Data rate of up to 3000Mbps Compliance with IEEE 802.11a/b/g/n/ac and 802.11ax standards IEEE 802.3at-compliant power supply and DC power supply.