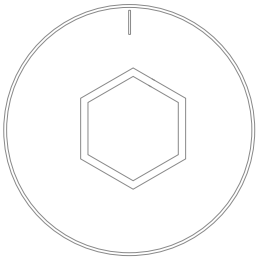


Dual-Band Gigabit ceiling wireless AP
VAC Self-Organizing Network Quick Installation Guide
V1.0

Thank you for purchasing our product. Hope you will have fun using it!
Please read this user manual thoroughly before using, and keep it properly.

I. Product Overview

Supports the IEEE 802.11ax (WiFi 6) standard, with a dual-band simultaneous transmission rate of up to 3000 Mbps (2.4GHz: 1200 Mbps + 5GHz: 1800 Mbps). The ceiling-mounted design is optimized for enterprise scenarios including office buildings, hotels, exhibition halls and meeting rooms, delivering a signal coverage radius of 15-25 meters and the ability to penetrate 3-4 non-load-bearing walls. It supports simultaneous connection of up to 128 devices; WiFi6 OFDMA and MU-MIMO technologies optimize the concurrent performance of multiple terminals, reduce freezes and latency, and satisfy enterprise high-speed network demands such as HD video conferences, wireless office work and IoT device interconnection. Compatible with Fat/Thin dual operating modes, it supports centralized management of up to 16 APs via the VAC self-organizing network, as well as centralized management of more APs via an AC controller, adapting to various batch deployment scenarios for multiple APs.

Notes:

1. In a LAN without an AC controller, the AP with the largest MAC address will be automatically elected as the Master role to manage other APs.
2. If there is only one AP in the LAN, the AP will operate in Slave role by default.
3. This guide does not include instructions for use with an AC controller. For AC-related configuration and usage, please contact the sales team.

II. Pre-Installation Preparation

Optimal Placement

Install at the geometric center of the ceiling in office areas, central ceiling of meeting rooms, or top of corridors to ensure uniform signal coverage of the target area and minimize blind spots. For multi-AP deployment, maintain the signal overlap rate of adjacent APs at 20%-30% to avoid interference.

Installation Cautions

Keep a minimum distance of 3 meters from equipment/areas that cause signal interference or shielding, including air conditioner outdoor units, refrigerators, microwaves, elevator shafts, power distribution shafts, large server rooms (strong electromagnetic interference), metal ceilings/keels, ventilation ducts (signal shielding), and Bluetooth speakers (frequency interference).

Do not install in humid, dusty or high-temperature areas (e.g., toilets, top of equipment rooms) to ensure long-term stable operation of the device.

Installation Requirements

1. The ceiling must be flat and stable with a load-bearing capacity of at least 2kg.
2. A pre-routed PoE network cable port is required (embedded CAT5 or higher specification cable is recommended to improve transmission stability).
3. The installation position should allow easy post-installation maintenance (e.g., avoid enclosed ceiling areas).

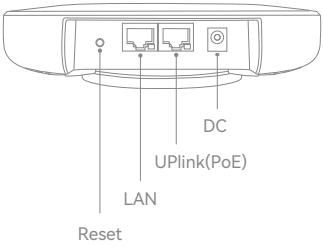
Power Supply Method

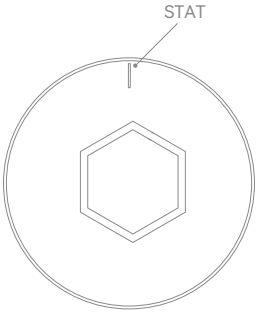
The AP supports 48V PoE and 12V DC power supply; select the appropriate power supply mode based on the on-site environment.

Network Environment

1. Configure the uplink bandwidth rationally according to the number of APs and concurrent connection requirements.
2. Plan the IP address segments properly and assign static IP addresses to all APs for convenient subsequent management.

III. Interfaces, Buttons & Indicators Description





Interfaces	Description
DC	12V DC Power Supply Port, for power supply via a 12V 1.5A or higher adapter.
UPlink(PoE)	WAN/LAN port: default LAN port, supports PoE power and 10/100/1000Mbps auto-negotiation.

LAN	LAN port, support 10/100/1000Mbps auto-negotiation.

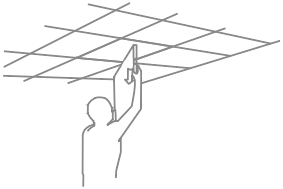
Button	Description
Reset	Factory Reset Button: long press for 5+ seconds to reset to factory settings and reboot.

Indicators	Description
STAT	Function Indicator Lights: 1. Start-up phase: Red, blue and green lights flash alternately. 2. Unnetworked & no internet: Red light flashes; Unnetworked & internet: Green light flashes. Networked & no internet: Red light stays solid; Networked & internet: Blue light stays solid. 3. WAN port negotiated speed below 1000 Mbps: Red, green and blue lights flash slowly in a cycle.
LAN	LAN Port Indicator: Green steady on when connected; flashes during data transfer.
UPlink(PoE)	Uplink Port Indicator: Green steady on when connected; flashes during data transfer.

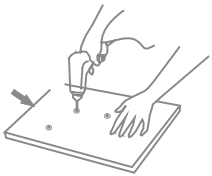
IV. **Installation Guide**

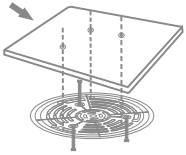
1. Confirm the AP installation location. Route the network cable from the 48V PoE switch port to the AP's position, and terminate the switch-side end with an RJ45 connector following the T568B standard.

2. Remove the ceiling panel at the AP installation position.

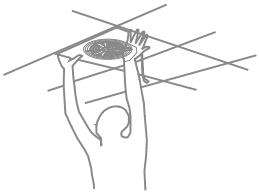


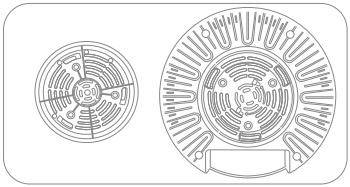
3. Use the included accessories to secure the mounting bracket to the ceiling.



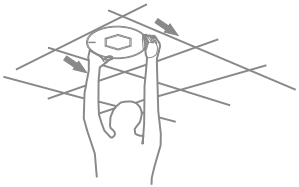


4. Route the network cable through the ceiling aligned with the AP's port position, then reattach the ceiling panel in place.





5. Terminate the network cable with an RJ45 connector per the T568B standard, plug it into the AP's Uplink Port, then align the AP's mounting slot with the mounting bracket and twist to snap it into place.



V. Preparation

1. Power on the PoE switch. The AP finishes booting in 120 seconds.
2. Connect via computer or phone to the AP's default WiFi. SSID: "@twifi-XXXX" or "@twifi-XXXX-5G" (XXXX = last 4 digits of the device's MAC address; for easier identification, 0 → G, 8 → G, B → K, 1 → J). Default WiFi password: "9876543210".

VI. Mobile Setup

1. Once WiFi is connected, enter the AP management URL "apc630.tech" in the browser and tap [Go]. The browser will redirect to the device authentication page. Enter the default password "admin", tap [Login] to access the device management

page. On first login, the system will automatically redirect to the setup wizard (see Figure 1 below).

2. To manage other LAN APs: Toggle on "Enable Controller Function", tap [Next Step] to enter the WiFi setup page (see Figure 2 below).

By default, "Dual-Frequency In One" is disabled: 2G and 5G WiFi have different names but the same password.Customize WiFi name and password as needed. "Set WiFi password as login password?" is checked by default—adjust based on your needs.

After setup, tap [Next Step].

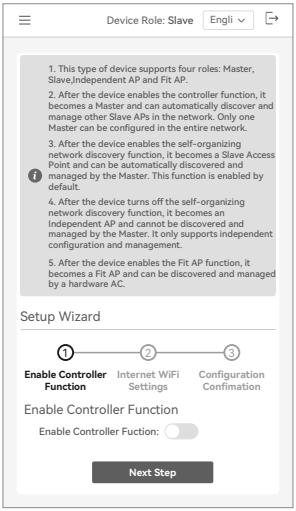


Figure1

Figure 2

3. Go to the configuration confirmation page (see Figure 3 below):

- To view the password, toggle the eye icon to display it.
- Confirm settings are correct, tap [Finished]—the device will apply new settings and reboot.
- If incorrect, tap [Previous Step] to return and adjust.

4. For non-first login:

- Tap [Login] to enter the device overview page, then tap the top-left hamburger menu icon (☰)—a menu bar will pop up (see Figure 4 below).
- Tap [Setup Wizard] and follow the above steps.

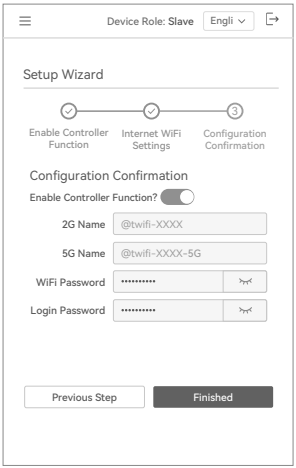


Figure 3

Figure 4

Wait a moment—all AP devices will gradually apply the new settings. Connect to the newly configured WiFi, enter the password, and enjoy outdoor high-speed WiFi6!

VII. Role Description

The AP supports 4 working roles—choose based on usage scenarios to meet different deployment needs:

1. Master: Includes basic AP functions, The AP with the largest MAC address will automatically switch to the Master role auto-discovers and manage all other Slave APs in the LAN.
2. Slave: Basic AP functions; auto-discovered and managed by the Master. Default role; ideal for bulk deployment with the Master.
3. Independent AP: Only basic AP functions; not discoverable/managed by controllers. Requires separate configuration; ideal for single-device use.
4. Fit AP: Basic AP functions; only discoverable/managed by hardware AC. Does not support standalone use; ideal for bulk deployment with hardware AC.

VIII. Mode Description

The AP supports Router Mode and AP Mode, compatible with different working roles for various scenarios. Details:

1. AP Mode:
   - Core: Converts between wired and WiFi networks, enabling quick connection of WiFi devices to wired networks.
   - Limitations: No network sharing or DHCP IP allocation.
   - Supported roles: Master, Slave, Independent AP, Fit AP.
2. Router Mode:
   - Core: Adds network sharing and DHCP IP allocation to AP Mode features.
   - Supported roles: Master, Independent AP.

- Special capability: In "Master" role, can bypass-manage other Slave APs in the LAN.

IX. FQA

1. Q: How to set Router Mode?

A: 1) Log in to the AP management page, go to [WLAN- AP List]. Locate the AP labeled "Local", click [Manage] to access its overview page.

2) In "Overview", check the current “Work Mode”, click [Change], select "Router Mode".

3) Enable/disable features based on the role:

- For "Master" role: Enable "Enable AC" and "VAC Parallel Networking" to bypass-manage other Slave APs.
- For "Independent AP" role: Disable "Enable AC", "Self-Organizing Network", and "VAC Parallel Networking".

4) Click [Confirm]; the device will restart the network to apply settings.

5) Reconnect to the device’s WiFi, log in, go to the overview page, and click [WAN].

6) Select "Connection Type" based on your scenario and enter parameters.

7) Click [Save]; the device will restart the network to apply settings.

2. Q: How to manage multi-APS?

A: 1) Initialize & connect: APs at factory status , power on, and connect them to the same LAN. Ensure no VLAN port isolation is enabled and VLAN 2024 is unused.

2) Automatic Election: Wait for approximately 2 minutes. The AP with the largest MAC address will be automatically elected and switch to Master Role to manage all other APs; all APs will automatically sync the controller’s WiFi configuration.

3) View and Manage APs: Connect to the WiFi and log in to the management page. Click [WLAN] > [AP List] to view and manage all devices.

4) Modify Wireless Configuration: Click [WLAN] > [WiFi] > [Wireless Network], then modify the WiFi name, authentication method and WiFi password as prompted on

the page.

3. Q: How to optimize roaming for multi-APS deployment?
A: 1) Adjust channel bandwidth (for poor signal/AP-dense environments):
- If auto channel selection is insufficient (e.g., heavy interference, dense deployment), go to [WLAN] > [AP List], select the target device, click [Manage] to access its overview.
- Go to [RF Settings] for details; reduce channel bandwidth in "2.4G Configuration" and "5G Configuration" to minimize interference.
2) Test roaming & record data:
- Connect to the WiFi, play online videos on mobile devices (simulate real roaming).
- Go to [Online Clients] in the management page, record "edge signal strength" for reference.
3) Adjust roaming parameters:
Go to [WLAN] > [Roaming]. For "2.4G Configure" and "5G Configure", adjust:
- Access threshold: Minimum signal strength for client access
- Exclusion threshold: Signal strength to disconnect from current AP
- Roaming sensitivity: Response speed for client switching
4) Repeat verification & optimization:
After adjusting parameters, repeat step 2. Compare edge signal strength, and roaming smoothness. Fine-tune and verify repeatedly to find optimal settings for best roaming performance.

4. Q: How to change the AP login password?
A: The default login password is "admin". Choose one of the two methods below:
1) Link to WiFi password via Setup Wizard:
When configuring WiFi in [Setup Wizard], check "Set WiFi password as login password". After setup, the login password will automatically match the WiFi

password—no manual adjustment needed.

2) Manual modification:

To change the login password separately, log in to the management page, go to [System Admin] > [Password], enter and confirm the new password as prompted. All managed APs will sync the new password after modification.

X. FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receivingantenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

IC Warning

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-ex-empt RSS(s). Operation is
subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.
Cet appareil contient des émetteurs/récepteurs sans licence qui sont conformes aux RSS sans licence d'Innovation, Sciences et Développement économique Canada.
L'exploitation est soumise aux deux conditions suivantes: (1) Cet appareil ne doit pas causer d'interférences.
(2) Cet appareil doit accepter toute interférence, y compris les interférences qui pourraient causer un fonctionnement indésirable de l'appareil.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. Tous les changements ou modifications non expressément approuvée par le responsible de la conformité pourrait vider l’utilisateur est habilité à exploiter l’équipemen.

ISEDC Radiation Exposure Statement:
This equipment complies with ISEDC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
This equipment should be installed and operated with minimum distance 20cm between the radiator&your body.
Cet appareil est
Conforme aux limitesd’exposition de rayonnement RF ISEDC établiespour un environnement non contrôlé. Cetémetteur ne doit pas être co-implanté oufonctionner en onjunction avec toute autreantenne ou transmetteur.
Cet équipement doit être installé et utilisé avec une distance minimale de 20cm entre le radiateur et votre corps.
The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.
L'appareil destiné à fonctionner dans la bande 5150-5250 MHz est uniquement destiné à une utilisation à l'intérieur afin de réduire le risque d'interférence nuisible aux systèmes mobiles par satellite dans le même canal.