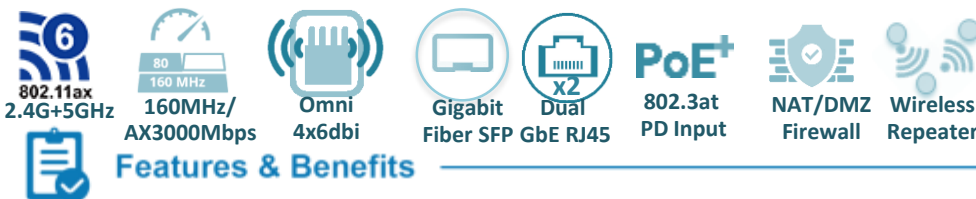**WoMaster**

Waterproof Wi-Fi 6 11ax 3000Mbps Wireless AP

WAC855G

Waterproof WLAN6 11ax 3000M Wireless Access Point

The WAC855G is a high-performance, dual-band Wi-Fi 6 (802.11ax) Access Point designed to deliver seamless wireless connectivity. It supports dual band 2.4GHz (up to 574 Mbps) and 5GHz (up to 2402 Mbps), with a concurrent throughput of up to 3000 Mbps. The WAC855G features dual Ethernet for LAN/WAN gateway and one fiber port for long distance connection from the upper switch. The WAC835 also features an 802.3at compliant PoE+ port for power input. Four antenna sockets for 2.4G and 5GHz radios, allowing for extended wide or long-distance coverage with optional outdoor antenna.

The WAC855 supports wall/pole mounting, it offer Wireless AP and Repeater mode, 802.11k/v, wireless isolation, multiple SSID, max. 128 clients, time watchdog for automatic recovery, a user-friendly Web GUI setup wizard simplifies configuration. In gateway mode, it provides NAT and firewall functionality. Its rugged metal housing and IP67-rated protection makes it ideal for industrial field wireless applications.

802.11ax **2.4G+5GHz**	**160MHz/** **AX3000Mbps**	**Omni** **4x6dbi**	**Gigabit** **Fiber SFP**	**Dual** **GbE RJ45**	**PoE⁺** **802.3at** **PD Input**	**NAT/DMZ** **Firewall**	**Wireless** **Repeater**

CE

Features & Benefits

Dual Bands Wi-Fi 6 Wireless LAN
- Equipped with a Dual-Core 1GHz Qualcomm Processor for efficient wireless network.
- Dual Band Concurrent Performance: Up to 3000 Mbps bandwidth across 2.4G and 5GHz radios, providing 2400Mbps/160MHz for 5GHz and 574Mbps for 2.4GHz.
- Powerful Wi-Fi 6 with OFDMA, BSS Coloring, Downlink/Uplink Multiple Input Multiple Output (MU-MIMO) and TWT, provides high speed, high capacity, less interference, optimizing network efficiency and performance.
- Wi-Fi 6(802.11ax) WLAN backward compatible Wi-Fi 5/4 (11ac/n)
- One Fiber SFP port and Dual Ethernet RJ45 ports allows for uplink and daisy chaining to next AP
- One 802.3at PoE/PD Ethernet port for power input

Wireless AP Features Summary
- Multiple SSID Support: Up to 4 SSIDs for both 2.4GHz and 5.8GHz bands.
- SSID Hiding: Hide SSIDs for added security.
- VLAN Setting for Virtual AP SSID.
- Wireless Repeater Mode extends Wi-Fi coverage without needing cables, allowing client devices to roam quickly across repeater APs.
- Wireless Client Isolation to improve wireless stability by isolating clients
- 5G Prioritization: Enhances Ethernet performance on the 5GHz band.
- Wireless Security: Supports Open, WPA, WPA2 PSK (TKIP/AES), WPA2 EAP, and WPA3 encryption for user data security
- Wi-Fi Time Scheduling to save energy.
- Adjustable RF Power based on the environment.
- User Limitation: Maximum of 128 users.

Management Features
- Working Modes: Supports Gateway and AP modes.
- Gateway mode allows for WLAN/LAN to Eth-WAN NAT routing and firewall features
- DHCP Server service in Gateway mode
- NAT Routing, DMZ and MAC/IP/URL Filtering in gateway mode
- DHCP or PPPoE client for internet WAN access
- Configuration Backup and Restore: Options to back up and restore settings.
- Factory Reset: Ability to reset to factory defaults through web
- Periodic Device Reboot by Day/Hours
- Admin Management: Modify admin password, perform firmware upgrades, configuration backup/restore and access system logs.
- Management Interfaces: Supports GUI web management, AC controller management*.

Rugged, Waterproof IP67 for Industrial Applications
- Includes 4x 6dbi 2.4G/5GHz omni-antenna for wide-range coverage
- 4x N-Type antenna sockets provides the flexibility to connect optional long-distance antennas.
- Delivers strong transmission power for outdoor and industrial applications, ensuring robust signal strength over long distances.
- The enclosure features IP67 waterproof protection, resistant to dust, water, and harsh environment.
- Each Ethernet and fiber port is equipped with a cable gland, providing secure, weatherproof connections.
- Easy visible LED one the outdide of the enclosure
- Wide -40°C to 70°C opeating temperature, performs reliably in extreme industrial conditions, ensuring uninterrupted operation in demanding environments.
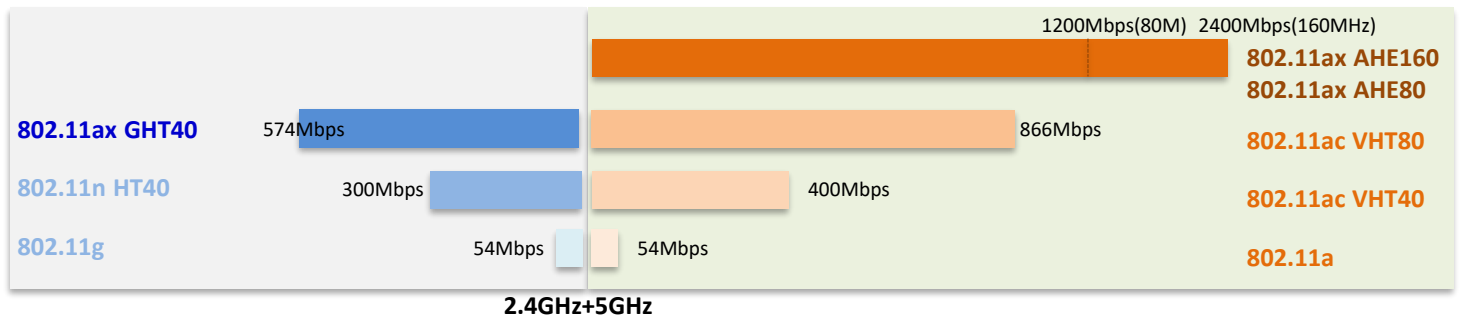
✓ **Dual Band Dual Concurrent 3000Mbps:**
- IEEE 802.11ax, compatible with 802.11ac/n/g/b/a
- Dual Band Dual Concurrent (DBDC) 2.4G+5GHz radio, up to 574Mbps + 2400Mbps @160MHz Bandwidth
- Failsafe in either 2.4GHz or 5GHz Radio failed

Max. PHY Rate:
- 802.11ax 5GHz is **2.77** times than 802.11ac, 2.4GHz is **1.91** times than 802.11n.
- 802.11ax 5GHz+2.4GHz DBDC is **2.5** times than 5GHz 802.11ac + 2.4GHz 802.11n DBDC.

	1200Mbps(80M) 2400Mbps(160MHz)	**802.11ax AHE160**
		802.11ax AHE80
802.11ax GHT40 574Mbps	866Mbps	**802.11ac VHT80**
802.11n HT40 300Mbps	400Mbps	**802.11ac VHT40**
802.11g 54Mbps	54Mbps	**802.11a**

2.4GHz+5GHz

✓ **OFDMA**

  OFDMA is applied in Wi-Fi 6 (IEEE 802.11ax). It is a user access technology that allows spectrum to be simultaneously allocated to multiple users or devices, enabling the transmission of multiple data streams on the same frequency band, thereby enhancing network efficiency.

  It can also be adjusted according to demand or priority, achieving more flexible network resource management. By dividing the spectrum into small subcarriers, OFDMA can also reduce interference between adjacent users, making the signal more reliable and stable. This is one of the latest key technologies in Wi-Fi 6.

OFDM

| User 1 (Line) |
| User 2 (IG · FB) |
| User 3 (You Tube) |

OFDMA

| User 1 |
| User 2 |
| User 3 |
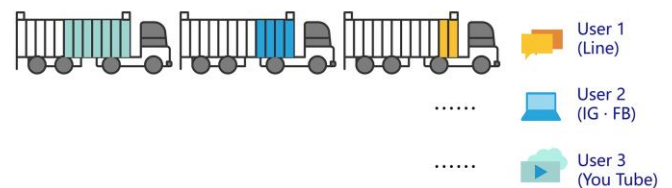
✓ **BSS Coloring**

  BSS Coloring is a feature introduced in the 802.11ax Wi-Fi standard, which helps reduce interference from neighboring Access Points (APs) and improves coexistence between multiple APs.

  The basic idea behind BSS Coloring is that each BSS or AP is assigned a unique color, which is added to the preamble of each transmitted data packet. When a client device receives a packet, it can check the color of the received preamble and use this information to differentiate signals from different APs.

  BSS Coloring helps prevent unnecessary retransmissions and conflicts caused by neighboring networks, thereby improving overall network efficiency and potentially extending the available range of IoT devices.
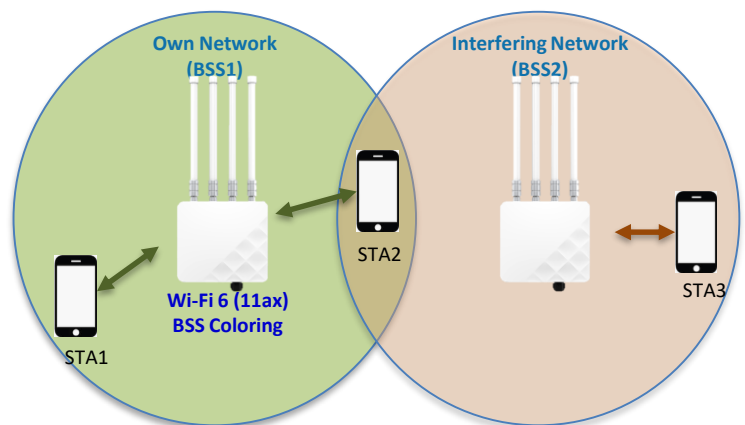
Each AP is assigned a unique color.
STA2 can check the color to reduce interfering…

✓ **Downlink & Uplink MU-MIMO**

  In Wi-Fi 6, MU-MIMO technology has been further developed to communicate simultaneously with multiple devices in both the Downlink and Uplink directions.

  This means that whether sending data from the access point to devices or from devices to the access point, multiple device data streams can be processed simultaneously. This enables faster and more reliable wireless connections, while also improving network throughput and efficiency..

✓ **WPA3 Data Encryption**
- WPA3 (Wi-Fi Protected Access 3) is a latest standard used to protect Wi-Fi network security, and it's also implemented in Wi-Fi 6 networks.
- WPA3 adopts advanced encryption algorithms such as Simultaneous Authentication of Equals (SAE) to replace the Pre-Shared Key (PSK) mode used in WPA2, thus resisting password cracking and dictionary attacks.
- WPA3 also includes some improved security configurations and protocols to enhance network security and protection levels, providing a more secure Wi-Fi network protection.

✓ Flexible Fiber Ethernet & Power Input Source

Power Input:
- Equipped with an **802.3at-compliant PoE+** port, enabling power delivery and data transmission over a single Ethernet cable. The AP can be powered by POE Switch or PoE Injector, such as our DP412-LV or DP208-LV (supporting 12-24VDC Input), or DP420(supporting 48V/54VDC input).
- Includes a **DC 12V input,** offering an alternative power source for flexible deployment options. For example, the Solar power source typically provides 12V power through an invertor. Solar power can acts as backup power for both AP and PoE Switch(with 12-24V booster design) to ensure uninterrupted wireless transmission in the field.

Ethernet Features:
- Equipped with **dual Ethernet ports** for LAN/WAN gateway functionality, enabling versatile network configurations.
- Features a **fiber SFP** port for long-distance connections, ideal for linking to an upper switch in industrial or outdoor environments.
- **Daisy Chaining**: In AP mode, the Ethernet ports operate in bridge configuration, allowing APs to be connected in daisy chain via Ethernet to extend coverage. This setup is typically used in applications requiring omni-directional wireless coverage.
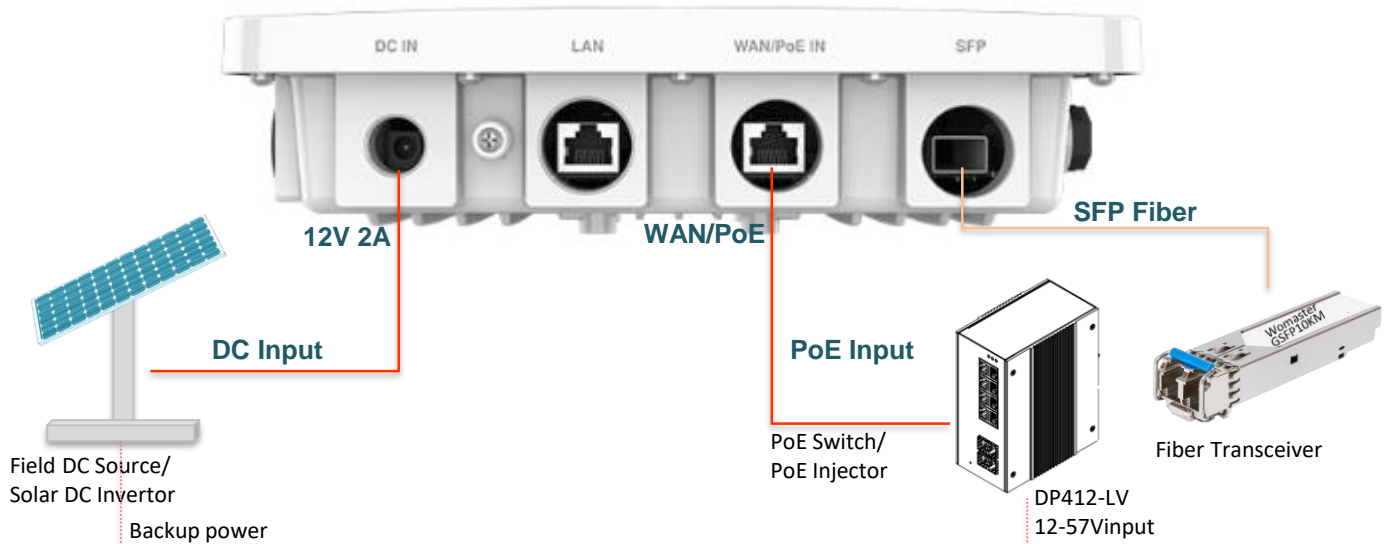

✓ Wireless Client Isolation

- **Virtual AP:** Allows a single access point to broadcast multiple SSIDs, creating separate virtual networks with distinct settings and security policies, like guest and internal networks.
- **Wireless Isolation:** Restricts communication between devices on the same SSID, enhancing privacy and security—especially useful for public or guest networks.
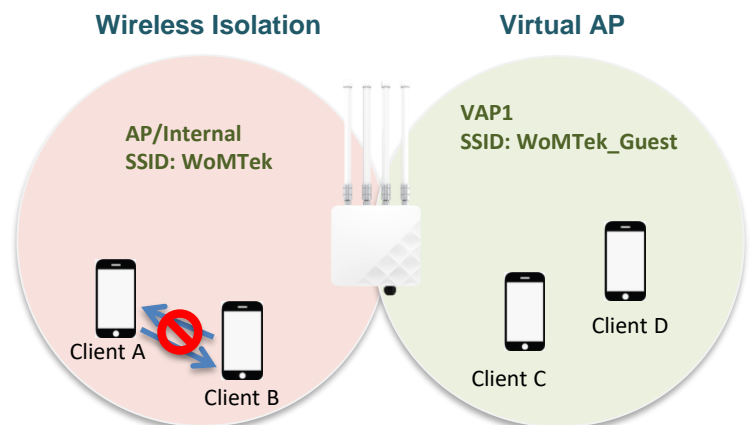
✓ 3-Step Setup Wizard in Web GUI
- Configure LAN IP Address mode (DHCP in Gateway mode)
- Configure 2.4G Wi-Fi Setup: SSID, Channel, Encrypt type & password, periodic reboot
- Configure 5G Wi-Fi Setup: SSID, Channel, Encrypt type & password, periodic reboot
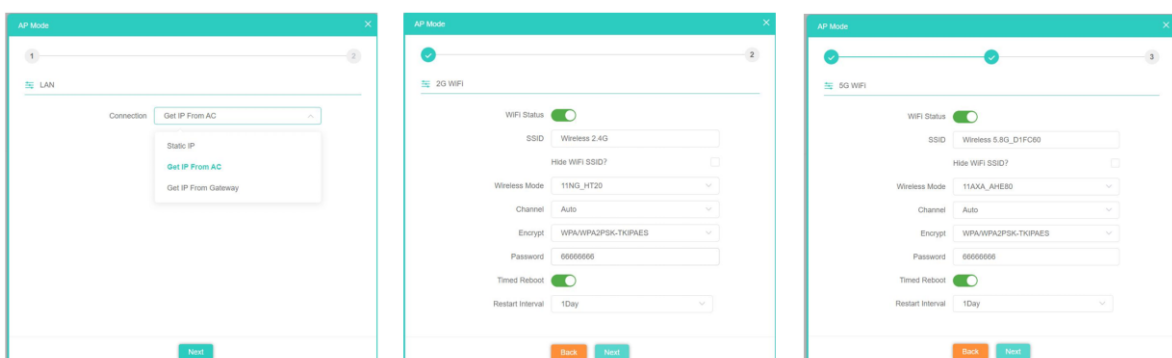
WAC855G

Front

External Ant.
- **4x N-Type Antenna sockets**
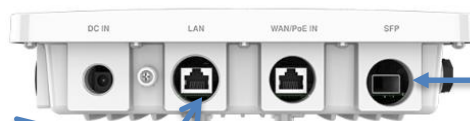- **Include 4x6dbi 2.4G/5GHz Fiberglass Omni-Ant.**

Wall/Pole-mount

Vent.

Interface

DC IN   LAN   WAN/PoE IN   SFP

LED

DC12V

GbE LAN
- 10/100/1000 RJ45
- Waterproof cable gland
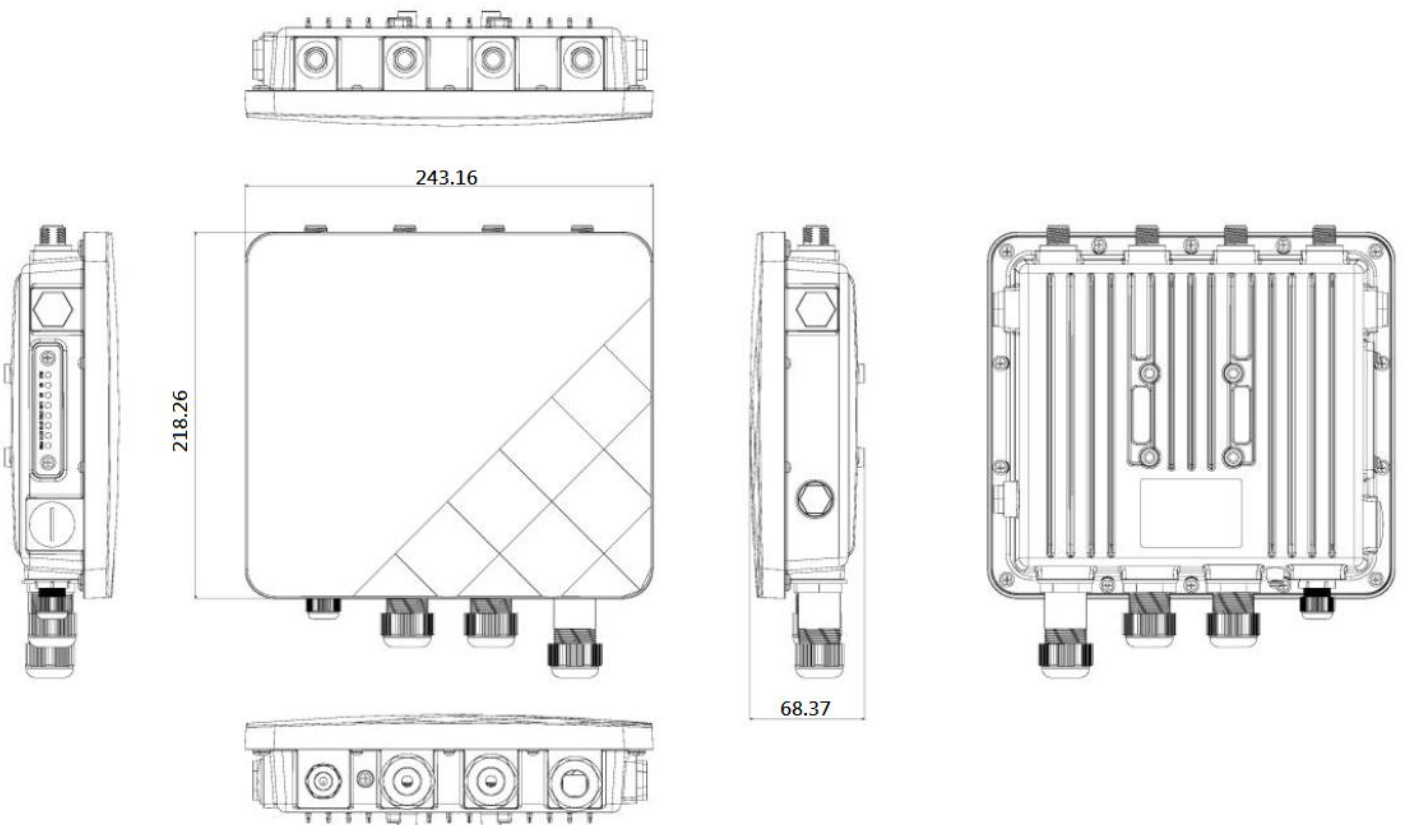
GbE Fiber
- 1000M SFP
- Waterproof cable gland

GbE WAN/PD Input
- 802.3at PD PoE Ethernet
- 10/100/1000 RJ45
- WAN/LAN configurable
- Waterproof cable gland

Dimensions

WAC855G

243.16

218.26

68.37

(mm)

Specifications

Technology	
Standard	IEEE 802.11ax wireless local area network (WLAN), Backward support 802.11ac/n/g/b/a Wireless LAN
	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3ab 1000Base-T Gigabit Ethernet Copper
	IEEE 802.3bz 2.5GBase-T Ethernet Copper
	IEEE 802.3af PoE

Interface	
Ethernet Port	1 x 10/100/1000/2500MBase-T RJ45, Auto Negotiation, Auto-MDI/MDIX, Plug-n-Play, LAN/WAN mode, 802.3at/af PD compliant power input 1x 10/100/1000MBase-T RJ45, Auto Negotiation, Auto-MDI/MDIX, Plug-n-Play, LAN mode 1x 1000Base-X SFP port AP Mode(Default): 1x 10/100/1000/2500Mbps LAN/PoE, 1x 10/100/1000Mbps LAN Gateway Mode: 1x 10/100/1000/2500Mbps WAN/PoE, 1x 10/100/1000Mbps LAN
System LED	PWR: Power On: Green ON, No Power: OFF ETH1: Link: Green On, Activity: Green Blinking ETH2: Link: Green On, Activity: Green Blinking ETH3: Link: Green On, Activity: Green Blinking 2.4GHz Radio: Enabled: Green On, Activity: Green Blinking, Disabled: Green Off 5GHz Radio: Enabled: Green On, Activity: Green Blinking, Disabled: Green Off
Reset	System Reset(2~6 Seconds) / Default Settings Reset(over 7 Seconds)

Power Requirement	
Power Input	Ethernet-WAN/PD: 802.3at/af compliance PD(48-57VDC) Input or Passive 48V Input (Default Attached injector) DC Input: 12VDC/2A DC Jack **Warming:** Do not use default passive 48V PoE injector to power on other devices. Not sure whether the 3rd party device can compatible with it or not.
Power Consumption	Max. 18W full traffic, suggest to reserve 15% tolerance

WLAN Properties	
Processor	Qualcomm Dual-Core ARM A53 1GHz CPU
Standard	IEEE 802.11ax/ac/n/a 5GHz and IEEE 802.11ax/n/g/b 2.4GGHz, also known as Wi-Fi 6 802.11ax: OFDMA, OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM)
Frequency	ISM Band, 2.4GHz: 2.4GHz ~ 2.484GHz 5GHz: 5.150GHz ~5.850GHz
Operation Channel	Channel Bandwidth: 20MHz, 40MHz, 80MHz, 160MHz 2.4GHz: Europe ETSI: CH1~13, US/FCC: CH1~11 5GHz Non-DFS: Band 1: 36, 40, 44, 48, Band 4: 149,153,157,161,165 *5GHz channel and DFS may difference in different countries. *Wi-Fi 6 with 160 MHz bandwidth may utilize DFS (Dynamic Frequency Selection) bands. Ensure DFS band availability to comply with regional regulatory requirements.
Data Rate	802.11ax 5GHz: MCS0 ~ MCS11 max. 2402Mbps(160MHz)/1200Mbps(80MHz), 802.11ax 2.4GHz: MCS0 ~ 9, max. 574Mbps, 802.11ac 5GHz: MCS0 ~ 9, max. 866Mbps, 802.11n 2.4GHz: MCS0 ~ 7, max. 300Mbps 802.11a 5GHz/11g 2.4GHz: max. 54Mbps
MU-MIMO	2.4G 2T2R/5GHz 2T2R Downlink & Uplink MU-MIMO DBDC (Dual Band Dual Concurrent) Embedded antenna for simultaneous dual bands concurrent
Max. E.I.R.P. (CE)	≤20db(2.4GHz) /≤23db(5GHz), compliant with EU CE regulatory requirements for 2.4G/5G bands Support TX Power support up to 25±2dBm per regional regulatory *Check other detail TX/RX information in User Manual or contact our technical service
Antenna	4x N-Type Antenna Sockets, allows to connect optional directional antennas Includes 4x 6dbi 2.4G/5GHz Antennas within the package

Software

Device Management	WebGUI, Quick Setup Wizard, Dashboard-like Device info in webGUI, IPv4, DHCP server/client, Backup/Restore the configuration, Reset to Factory Default, Reboot, Periodic Auto Reboot, Admin Password Modification, Firmware GUI upgrade, System Log, DDNS, PPPoE Client
Network Mode	AP(Ethernet-Bridge), Gateway(Ethernet-Router), Repeater mode(Ethernet-Bridge)
Wireless Function	WLAN Basic Settings: Radio on/off, Wireless AP/Client mode, 802.11ax/ac/n/g/b mode, Band and Frequency selection, SSID/Multi-SSID(VAP) configuration, up to 8xSSID (4 for 2.4G, 4 for 5G), SSID broadcast(SSID Hidden), RF power adjustable, Wireless client isolation, 802.11k/v(enabled by default), 802.11r(future release), user quantity limit, max 64 users to access each band
Security	IEEE 802.1X/RADIUS, TLS v1.2, HTTPs/SSH, First login password management AP Security: Share Key, WPA/WPA2-PSK(Pre-Shared Key), WPA/WPA2 Enterprise, WPA3-PSK Encryption: 64/128-bit WEP(Wired Equivalent Privacy), TKIP(WPA-PSK, WPA3-PSK), AES(WPA2-PSK, WPA3-PSK)
Time Management	NTP, Wi-Fi Time on/off to save energy
WAN/Routing/NAT/Firewall	NAT, DMZ, IP Filter, MAC Filter , Port Forwarding, URL Filtering

Mechanical

Installation	Wall-/Pole- Mount
Enclosure Material	Metal
Dimension	243.2 x 218.3 x 68.3 mm(W x H x D) / without mounting accessory
Ingress Protection	IP67 (Note: We recommend using the device for non-submersible applications. Although the enclosure is IP67 waterproof, proper sealing of the cable glands with adhesive is required to ensure waterproof performance when submerged.)
Weight	2.5kg

Environmental

Operating Temperature & Humidity	-40°C~70°C 5%~95% Non- Condensing
Storage Temperature	-40°C~85°C
MTBF	>200,000 hours at 40º full cycle
Warranty	3 years

Approval

CE	CE RED Compliance

*By Request/Future Release
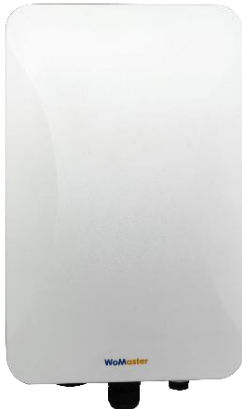
Ordering Information

Model Name	Description
WAC855G-EU	Waterproof 2.4G+5GHz WLAN6 11ax 3000M Wireless Access Point, IP67, 4xN Ant, SFP, 2xRJ45, 802.3at, 48V_Injector-EU
WAC855G-US	Waterproof 2.4G+5GHz WLAN6 11ax 3000M Wireless Access Point, IP67, 4xN Ant, SFP, 2xRJ45, 802.3at, 48V_Injector-US
	Package List
	Product Unit (with built-in antenna)
	Quick Installation Guide
	Passive PoE Injector & Power cord
	3x Cable Gland
	Wall/Pole Mounting Kit

Product Series

Outdoor Model	Description
WAC835G-OMN-EU	Waterproof 2.4G+5GHz WLAN6 11ax 3000M Wireless Access Point, IP66, 5/6dbi Omni-Ant, 2.5GbE 802.3at PD, 48V_Injector-EU
WAC835G-OMN-US	Waterproof 2.4G+5GHz WLAN6 11ax 3000M Wireless Access Point, IP66, 5/6dbi Omni-Ant, 2.5GbE 802.3at PD, 48V_Injector-US
WAC835G-DSA-EU	Waterproof 2.4G+5GHz WiFi 6 11ax 3000M Wireless Access Point, IP66, 8dbi 120° Ant, 2.5GbE 802.3at PD, 48V_Injector-EU
WAC835G-DSA-US	Waterproof 2.4G+5GHz WiFi 6 11ax 3000M Wireless Access Point, IP66, 8dbi 120° Ant, 2.5GbE 802.3at PD, 48V_Injector-US

WAC855G	WAC835G-OMN	WAC835G-DSA
243.2x218.3x68.3mm(W x H x D) Metal IP67, 4xN-Type Ant., 1xFiber, 2xEth, -40-70℃	181 x 304 x 88mm (W x H x D) IP66, 5/6dbi Omni-Ant., 2xEth, -20-55℃	181 x 304 x 88mm (W x H x D) IP66, 8dbi 120° Sector Ant,, 2xEth, -20-55℃