Outdoor IP67 Ruggedized Wireless 802.11AX Fast Roaming WiFi 6 Wireless AP/Router

WA512G-AX-IP67 / WA512G-AX-4N-IP67

Outdoor IP67 802.11AX WiFi 6 AP/Router

The WA512G-AX-IP67 is an industrial-grade Wi-Fi 6 access point, housed in a durable IP67-rated metal enclosure for waterproof protection. Featuring 802.11ax Wi-Fi 6 and MESH technology, it is designed for robust industrial wireless networks. Powered by a high-performance quad-core 1.2GHz processor, it supports dual-band concurrent 5GHz and 2.4GHz radios, delivering up to 1200Mbps + 576Mbps of throughput. It also supports fast roaming protocols such as 802.11k, 802.11v, and 802.11r, ensuring smooth handovers without re-authentication. With advanced security features, including OpenVPN, IPSec, and L2TP, along with wide operating temperature range of -40°C to 70°C and PoE power input, the WA512G-AX-IP67 is a reliable solution for industrial wireless applications.

802.11ax MESH 802.11r Fast Roaming VPN -40~70°C IP67 PoE+ ViewMaster NetMaster

Features & Benefits

Dual Bands Wireless LAN

- Quad-Core 1.2GHz ARM Processor
- Wi-Fi 6(802.11ax) WLAN solution, backward compatible Wi-Fi 5/4 (11ac/n)
- Concurrent dual-band 2.4G+5GHz radio, up to 1774Mbps Bandwidth, 1.5 times than 802.11ac
- Powered by Qualcomm Wi-Fi 6 with QAM1024, OFDMA, Uplink/Downlink MU-MIMO, BSS Coloring and TWT
- Dual 2.4G+5GHz Radio in One Antenna
- Optional to support 2.4GHz and 5GHz separated stream for long distance Daisy Chain connectivity(model with 4xN-Type Antenna)
- Dual Gigabit Ethernet ports in Router mode for WLAN/LAN to Eth-WAN routing
- Max. 128 Wireless Clients

Enhanced Cyber Security & Redundancy

- Support Firewall for inbound/outbound traffic
- OpenVPN Server/Client and Key Generation
- IPsec VPN for secure remote connection
- IPSec Performance >150Mbps @256-bit encryption
- Support L2TP with PPP, PAP, CHAP(LCP, IPCP)
- HTTPs/SSH secure login
- Support TACACS+ multi-user authentication for privileged user management*

Qualcomm® Wi-Fi SON MESH * (WA512GM-AX-IP67)

- Self-Healing auto rerouting through multi-hop
- Self-Configuring Plug-and-play via Wireless network with ViewMaster utility
- Easy MESH setup and Group MESH setup
- MESH Network Status Monitoring
- Autonomous performance optimization
- Interference management via band steering
- Seamless roaming

Management Features

- 802.11k, 802.11v, 802.11r Fast Roaming for seamless transitions between access points
- Various configuration paths, including Web GUI, Telnet, LAN Utility (ViewMaster) and NMS (NetMaster)
- Support First login password management
- Web GUI for Wireless LAN Setting, Radio On/Off, Band and Frequency selection, SSID/Multiple SSID, SSID Broadcast On/Off
- 1:1 NAT, port forwarding for local traffic protection
- Support SNMPv3, MIB II (RFC1213)
- NTP v3 time management
- Wireless Client Router mode for LAN to Wireless WAN NAT
- WPA3 encryption ensuring user data security

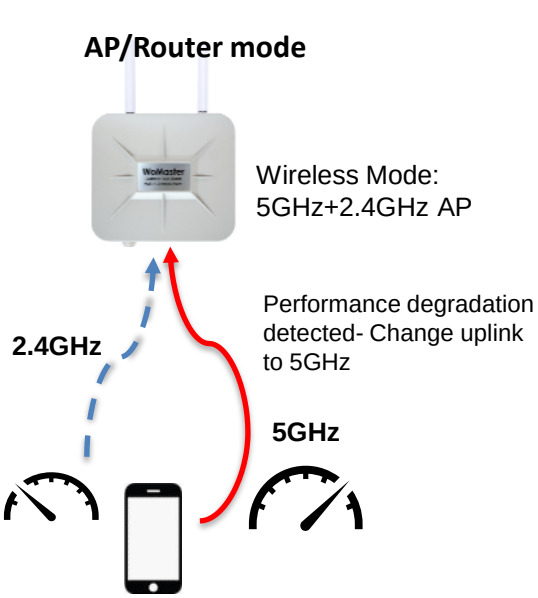
Waterproof IoT Application

- Waterproof Metal IP67 Production enclosure
- Waterproof cable gland for dual Ethernet ports and console, protective cap for LED+Reset
- Effective heat dissipation design for operating in the -40~70°C(-IP67) environments
- Power Input 802.3at PD by Industrial PoE switch as a complete wire/wireless solution
- Dual radio in one antenna to save cost for antenna, RF cabling and space of the field.

✓ Dual Band Dual Concurrent

- IEEE 802.11ax, compatible with 802.11ac/n/g/b/a
- Dual Band Dual Concurrent (DBDC) 2.4G+5GHz radio, up to 1200Mbps + 574Mbps Bandwidth
- Failsafe in either 2.4GHz or 5GHz Radio failed
- Dual 2.4G+5GHz Radios consolidated in One Antenna
- Supports Wireless AP, Client modes

AP/Router mode



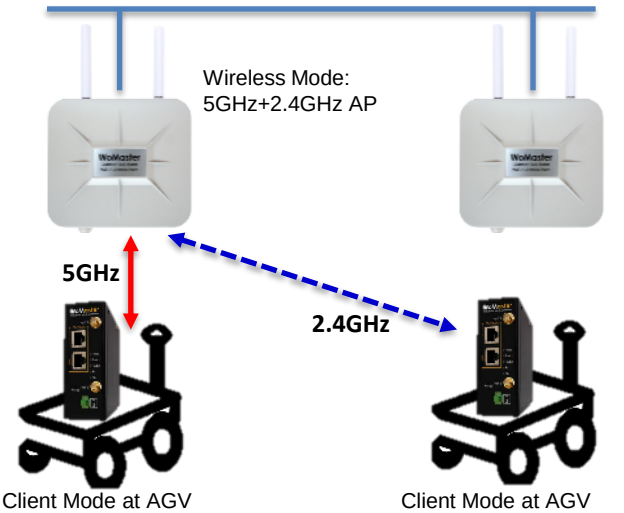
Model	WA512G-IP67 (WiFi 5)	WA512G-AX-IP67 (WiFi 6)
Processor	Quad-core 700MHz	**Quad-core 1.2GHz**
Standard	802.11ac/n	**802.11ax**
Frequency	5GHz 802.11ac + 2.4GHz 11n	**5GHz+2.4GHz 802.11ax**
Max. Rate	866Mbps+ 300Mbps	**1200Mbps + 574Mbps**
DBDC	DBDC	**DBDC**
MIMO	DL MIMO	**UL+DL MIMO**
PHY	QAM 256	**QAM 1024**
Modulation	OFDM	**OFDMA**
Bandwidth	20/40/80	**20/40/80**
BSS	-	**BSS Coloring**
TWT time	-	**Yes**
MESH	Wi-Fi SON	**- (by request)**
Roaming	WOM Fast Roaming	**802.11r Fast Roaming 802.11k/v**

AP to Client Device

Wireless Mode:
5GHz AP +
2.4GHz Client

2.4GHz or
5GHz Client

AP to Multi-Client Fast Roaming

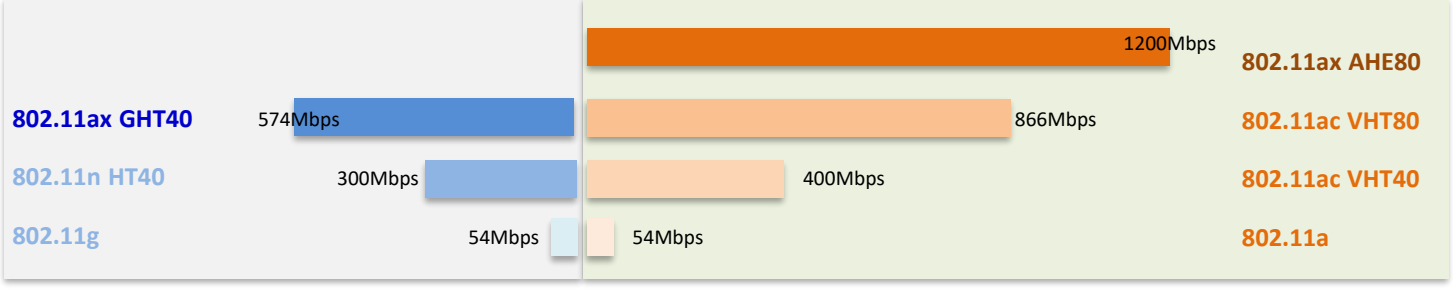


Client Mode at AGV
802.11r Fast Roaming*

Client Mode at AGV
802.11r Fast Roaming*

Max. PHY Rate:

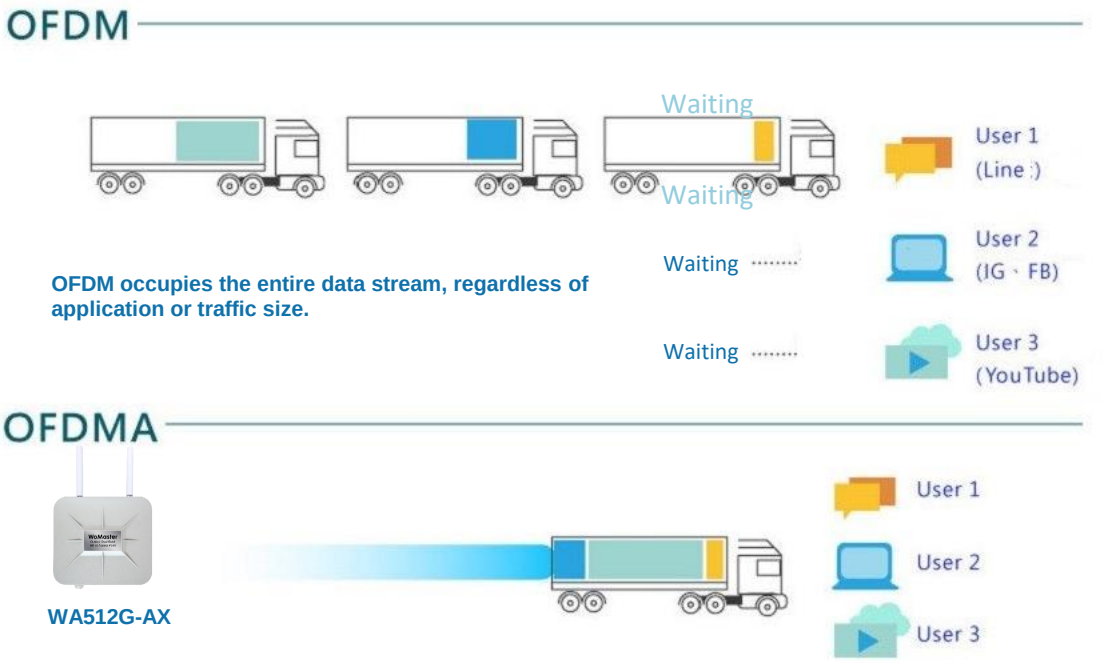
802.11ax 5GHz is **1.37** times higher than 802.11ac, 2.4GHz is **1.91** times higher than 802.11n.
802.11ax 5GHz+2.4GHz DBDC is **1.52** times higher than 5GHz 802.11ac + 2.4GHz 802.11n DBDC.



✓ 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.



(Source: Qualcomm, will update soon)

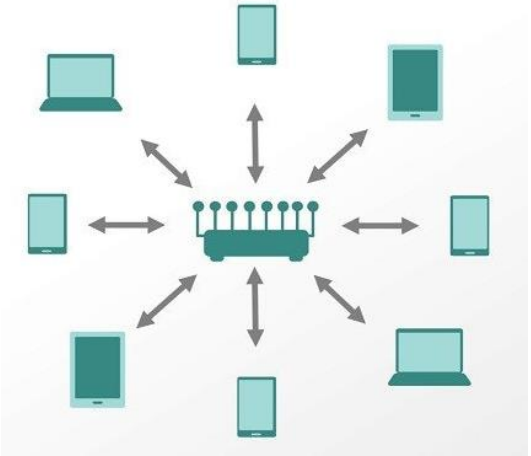
✓ Downlink & Uplink MU-MIMO

In 802.11ac, basic Downlink MU-MIMO was introduced, allowing wireless access points (such as routers) to simultaneously transmit data to multiple client devices.

However, 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..



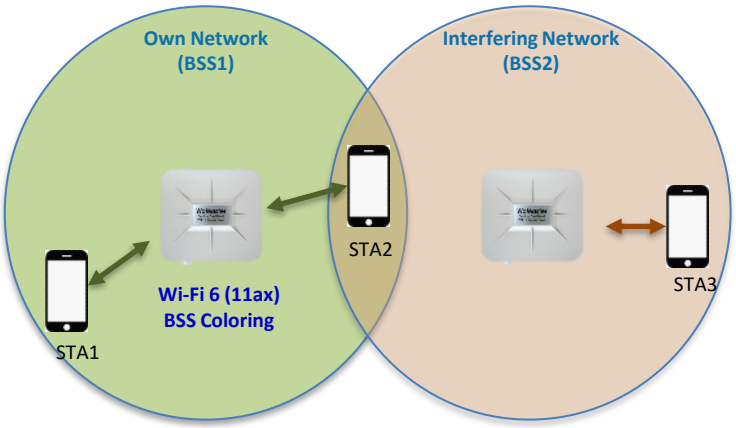
(Source: Qualcomm, will update soon)

✓ 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.

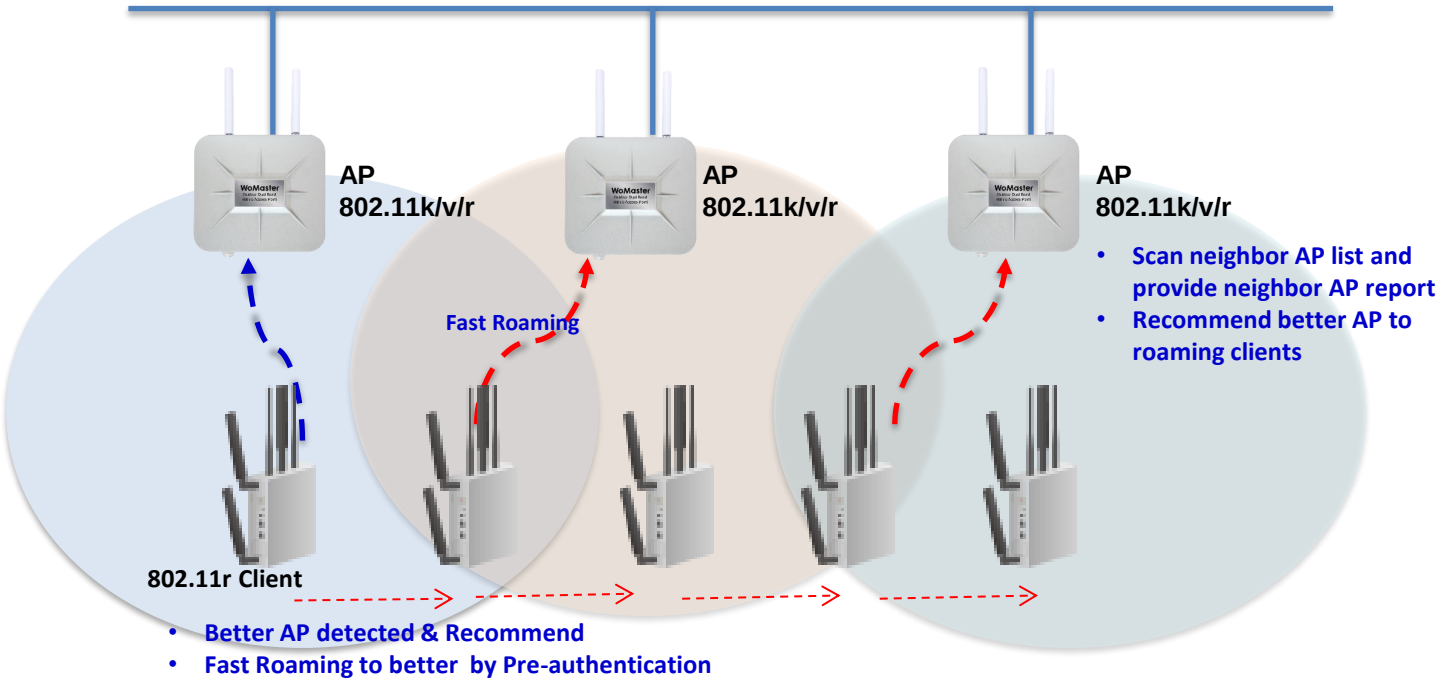
BSS Coloring helps prevent unnecessary retransmissions and conflicts caused by neighboring networks, thereby improving overall network efficiency and potentially extending the available range of IoT devices.



Each AP is assigned a unique color.
STA2 can check the color to reduce interfering.

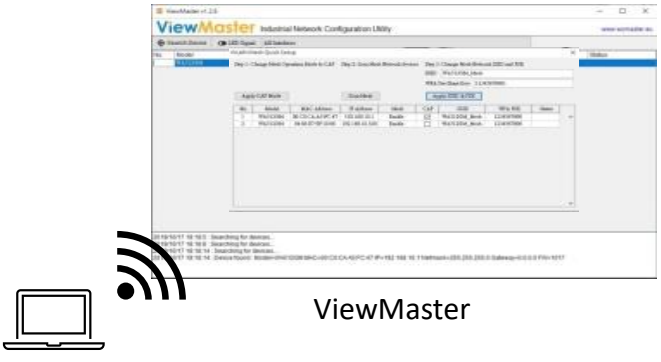
✓ 802.11k/v/r Fast Roaming Technology

- **Radio Resource Management (802.11k)**: 802.11k enhances network efficiency by enabling devices to gather information about neighboring APs. This data allows devices to make informed decisions when selecting the best AP for connection, improving overall network performance and user experience.
- **Network Assisted Roaming (802.11v)**: 802.11v allows the network to assist devices in making better roaming decisions. The APs can communicate with the client devices to steer them toward the most optimal AP. This helps maintain a balanced network and ensures consistent performance.
- **Fast Roaming (802.11r)**: This standard enables mobile devices to transition rapidly from one access point (AP) to another within a network without requiring full re-authentication. This fast roaming capability ensures a seamless experience as users move around, reducing connection interruptions and maintaining continuous network access.
- **Seamless Switching (802.11r)**: By minimizing re-authentication requirements, 802.11r provides a seamless roaming experience. Users can automatically connect to APs with stronger signals or better quality as they move, without the need to manually reconnect or re-enter credentials.
- **Pre-authentication (802.11r)**: Before actual movement occurs, mobile devices can pre-authenticate to potential target APs, enabling quick switching to the AP when needed, further reducing connection interruption time during the handoff process.



✓ Discover & Configuring by ViewMaster Utility

- Discovery & Configuring IP Address
  1. Select the Network Interface Card
  2. Auto discovery
  3. One AP: Change IP, DHCP Client Enable
     Multi-AP: Auto Assign IP, DHCP Client Enable
- Firmware Upgrade
- Configuration Backup/Restore
- Open Web GUI
- Reboot



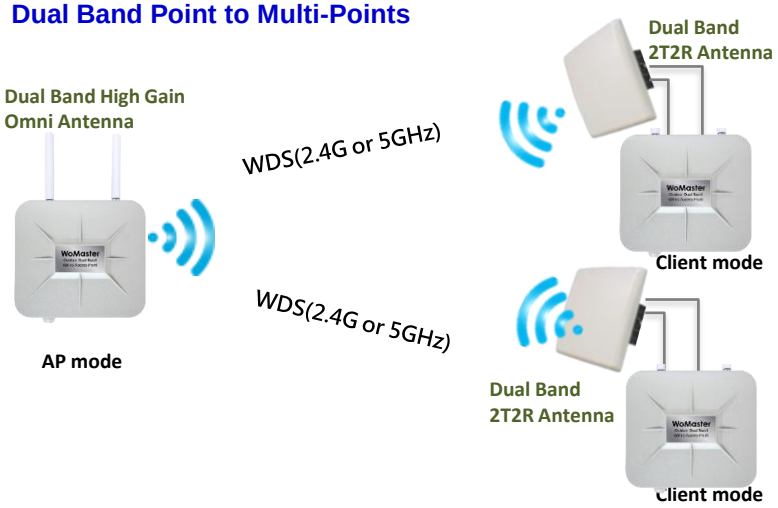
Dual Band Point to Point / Point to Multiple Point

Dual Band Point to Points

Point to point (P2P)

WA512G is equipped with 2x N-Type antenna sockets, allowing user to attach external dual-band 2T2R antenna (**A-D2T2R-2.4G+5GHZ-10DB-1KM-NF**) on both side. The WA512G supports AP, Client, and WDS modes. Users can configure one device in AP mode and the other in client mode to establish a point to point connection. The setup provides an easy way to extend the wireless range and create long-distance high-throughput wireless connectivity.

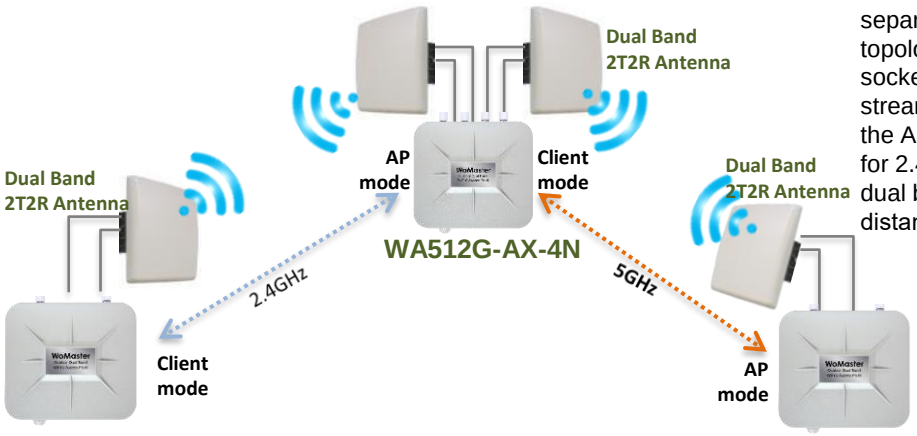
Dual Band Point to Multi-Points



Point to Multiple ports (P2MP)

For scenarios with multiple sites requiring traffic to be sent to a central point wirelessly, the central point can be set as AP/WDS AP mode while the other points are set to Client/WDS Client mode. At the central point, a high-gain dual-band omni antenna can be attached for wide coverage, and a dual-band 2T2R directional antenna can be used at the client station sites. This setup allows for building long-distance high-throughput point to multiple point wireless connectivity.

Dual Band “Daisy-Chain” topology



“Daisy-Chain” topology

The WA512G-AX-4N support 2.4GHz and 5GHz separated streams for long-distance Daisy Chain topology. It is equipped with four N-Type antenna sockets, two for 2.4GHz streams and two for 5GHz streams. By installing the WA512G-AX-4N between the APs and attaching the appropriate 2.4G antenna for 2.4G stream and 5G antenna for 5G stream, or dual band antennas, user can extend the wireless distance by “Daisy-Chain” topology.

IP67 weatherproof for Industrial field applications

IP6X Dust test
(2kPa, 8h duration of test)

IP7X protection against water
(1000mm below the water, 30min)

IP67 weatherproof enclosure

The WA512G-IP67 supports IP67 weatherproof enclosure which compliant with IEC60529 standard. The IP67 rating indicates that the device is fully dust-tight and water-resistant. Specifically, the device must withstand a dust test, ensuring no dust ingress, and can be submerged in water up to 1 meter deep for 30 minutes without any water damage. This means the AP is well-protected against the poor environment.

Interfaces

WA512G-AX-IP67

N-Type Antenna
- 2x N-type
- 4x N-type (Model wit 4N)

IP67 Housing

Wall-mounting

System LED and Reset Button

Vent

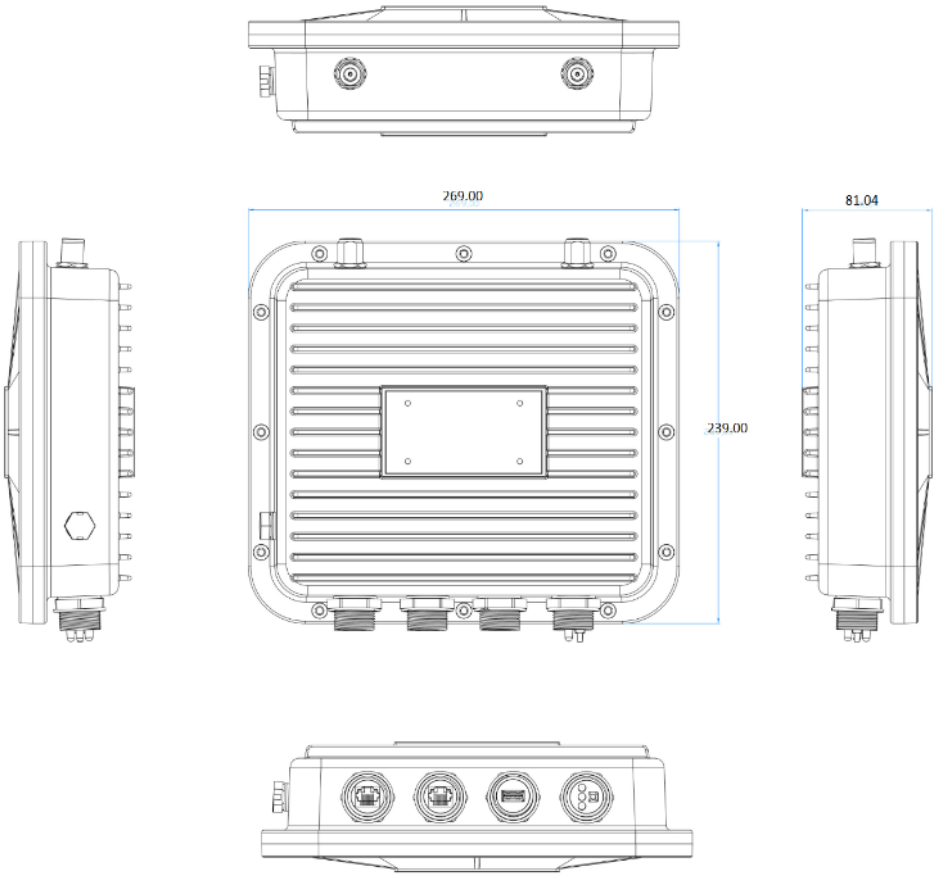
Console (USB type)

Gigabit Ethernet

Gigabit Ethernet
- IEEE 802.3af P.D.

Dimensions

(mm)



Specifications

Technology	
Standard	IEEE 802.11ax wireless local area network (WLAN), Backward support 802.11ac/n/g/a/b Wireless LAN
	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3ab 1000Base-T Gigabit Ethernet Copper
	IEEE 802.3at PoE+
Interface	
Ethernet Port	1x 10/100/1000Base-T Gigabit WAN PoE (P.D.) port, RJ45 water-proof cable gland 1x 10/100/1000Base-T Gigabit LAN, RJ45 water-proof cable gland
System LED + Reset	Water-proof cable gland, with 1x Power (Red) 1x 2.4G (Yellow) 1x 5G (Green) 1x Reset button
External Antenna Socket	2x N-Type Female 4x N-Type Female (WA512G-AX-4N-IP67)
USB	Console (1x USB type A water-proof cable gland)
Power Input	802.3at/af PD
WLAN Properties	
Processor	Quad-Core CPU, 4x ARM Cortex A53 at 1.2GHz
Standard	Dual Band 2x2 2.4GHz + 2x2 5GHz 802.11ax Radios Backward compatible: 5GHz with IEEE 802.11ac/n/a, 2.4GHz with IEEE 802.11b/g/n 802.11ax: OFDMA (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM)
Data Rate	802.11ax 5GHz: MCS 0~11, max. 1200Mbps, 802.11ax 2.4GHz: MCS 0~11, max. 574Mbps 802.11ac: MCS0 ~ 9, max. 866Mbps / 802.11n: MCS0 ~ 15, max. 300Mbps 802.11b: 11Mbps / 802.11a/g: 54Mbps Check detail TX/RX information in User Manual
Frequency	ISM Band, 2.4GHz: 2.412GHz ~ 2.472GHz 5GHz: 5.180MHz ~ 5.240MHz, 5.745 ~ 5.825MHz(CE: Band 1, FCC: Band 1, 4) 802.11ax/ac 80MHz@5210MHz/5770MHz 2x SMA connector for simultaneous dual bands concurrent
MIMO	2.4/5GHz: 2T2R MU-MIMO DBDC (Dual Band Dual Concurrent)
Max. E.I.R.P.	≦20db, compliant with CE request
Power Requirement	
Input Voltage	IEEE 802.3at PD Powered Device
Power Consumption	Max. 10W full traffic peak, suggest to reserve 15% tolerance
Antenna	
WLAN Default Antenna	**Frequency:** 2400~2500/ 4900~5900 MHz
	Peak Gain: 2.4GHz: 3.5 dBi, 5GHz: 5dBi
	Direction: Omni-directional
	Connector: SMA Male
	Dimension: 196xΦ13 mm

Software	
Management	CGI WebGUI, Command Line Interface (CLI), Telnet, SNMP v1/v2c/v3, DDNS, DHCP server/client, DHCP Relay*, TFTP*, System Log, Proxy ARP, DNS (client/proxy)
Traffic Management	Traffic shaping
Security	IEEE 802.1X/RADIUS, TLS v1.2, HTTPs/SSH, First login password management WLAN AP Security: Share Key, WPA/WPA2-PSK(Pre-Shared Key), WPA/WPA2 Enterprise Encryption: 64/128-bit WEP(Wired Equivalent Privacy), TKIP(WPA-PSK), AES(WPA2-PSK, WPA3)
Advanced Security	TACACS+*, Mutli-user authentication
Time Management	NTP, SNTP
WAN/Routing/NAT/Firewall/ VPN	Routing: RIPv2, OSPFv2 NAT: 1-1 NAT, NAPT(SNAT/DNAT), Port Forwarding, DMZ Firewall: Stateful Inspection firewall, DMZ, IP/Port Filter, MAC ACL VPN: IPSec, OpenVPN, L2TP, GRE, >150Mbps IPSec Performance @256-bit encryption Wireless WAN for LAN to Wireless WAN NAT
Fast Roaming	802.11k/v/r
IIoT Industrial Protocol	MQTTS
Private Cloud	ThingMaster OTA
MIB	MIB-II, WoMaster Private MIB*
Utility	ViewMaster, NetMaster, Ping, Traceroute
WLAN Configuration	WLAN Basic Settings: Radio on/off, 2.4GHz/5GHz 11ax Band and Frequency selection, SSID/Multi-SSID configuration, SSID broadcast and advanced WLAN settings
MESH Wi-Fi* (Model with MESH)	Qualcomm® Wi-Fi SON Technology, Self-healing by auto rerouting through multi-hop, Self-configuring Plug-and-play via ViewMaster, Mesh SSID/WPA PSK Mesh Network Status/Monitor (signal/channel/uplink)
Mechanical	
Installation	Ceiling/Wall/Pole mount
Enclosure Material	Steel Metal
Dimension	239mm(H) x 269mm(H) x 81mm(D) (not include mounting plate)
Ingress Protection	IP67
Weight	≒2.4Kg
Environmental	
Operating Temperature & Humidity	-40˚C~70˚C 5%~95% Non- Condensing Note: Power the device by Industrial PoE Switch for high temperature environment.
Storage Temperature	-40˚C~85˚C
MTBF	>200,000 hours at 40º full cycle
Warranty	3 years
Attached PoE Injector	Input: 90~264Vac, 47~63Hz, Max. 0.55A Output: 56V, 500mA (RJ45 Output Pin 1/2: V+, Pin 3/6: V-) Operating Temperature: 0~40˚C Storage Temperature: -20~85˚C CE/FCC/UL compliant
Approval	
CE	CE RED Compliance Safety: IEC/EN 62368-1 EN 55032/55035/EN51000-3-2/EN61000-3-3 EN 301 489-1/17 EN 300 328/ EN 301 893 EN 62311 MPE
FCC	EMC: Part 15B

*By Request

Ordering Information

Model Name	Description
WA512G-AX-IP67-U	Industrial Dual Radio 2.4G +5GHz Concurrent Wi-Fi 6 Wireless AP, 802.11ax WLAN, 2GE, USB, IP67 Enclosure, US-plug
WA512G-AX-IP67-E	Industrial Dual Radio 2.4G +5GHz Concurrent Wi-Fi 6 Wireless AP, 802.11ax WLAN, 2GE, USB, IP67 Enclosure, EU-plug
WA512G-AX-4N-IP67-U	Industrial Dual Radio 2.4G +5GHz 2T2R Wi-Fi 6 Wireless AP, 802.11ax WLAN, 2GE, USB, 4 N-Type Antenna, IP67 Enclosure, US-plug
WA512G-AX-4N-IP67-E	Industrial Dual Radio 2.4G +5GHz 2T2R Wi-Fi 6 Wireless AP, 802.11ax WLAN, 2GE, USB, 4 N-Type Antenna, IP67 Enclosure, EU-plug
WA512GM-AX-IP67-U	Industrial Dual Radio 2.4G +5GHz Concurrent Wi-Fi 6 Wireless MESH AP, 802.11ax WLAN, 2GE, USB, IP67 Enclosure, US-plug
WA512GM-AX-IP67-E	Industrial Dual Radio 2.4G +5GHz Concurrent Wi-Fi 6 Wireless MESH AP, 802.11ax WLAN, 2GE, USB, IP67 Enclosure, EU-plug
	Package List
	1x Product Unit
	1x Quick Installation Guide
	1x PoE Injector
	1x Mounting kit
	2x Antennas (4x Antennas for WA512G-AX-4N)

Optional Accessory

Outdoor Long-Range Antenna	
Dual Band 2T2R	(longer length RF cable by request)
A-D2T2R-2.4G+5GHZ-10DB-1KM-NF	2.4G+5GHz Directional Antenna, 2T2R, 8/10Dbi, 1KM, N-Type Female, Pole Mounting, 220*170*25mm (LxWxH), IP65
A-D2T2R-2.4G+5GHZ-10DB-1KM-NF-2x1M	2.4G+5GHz Directional Antenna, 2T2R, 8/10Dbi, 1KM, N-Type Female, Pole Mounting, 220*170*25mm (LxWxH), IP65, 2pcs 1m N Male RG58 Cable
Single Band/1T1R	
A-D1T1R-2.4GHZ-14DB-6KM-NF	2.4Ghz Directional Antenna, 1T1R, 14Dbi, 6KM, vertical polarization, N-Type Female, Pole Mounting, 190*190*30mm (LxWxH), IP65, with RF Cable (C-RF-LMR200-NM_NM-1M)
A-D1T1R-5GHZ-12DB-5KM-NF	5Ghz Directional Antenna, 1T1R, 12Dbi, 5KM, vertical polarization, N-Type Female, Pole Mounting, 190*190*30mm (LxWxH), IP65, with RF Cable (C-RF-LMR200-NM_NM-1M)
A-D2T2R-5GHZ-15DB-6KM-NF	5Ghz Directional Antenna, 2T2R, 15Dbi, 6KM, vertical polarization, N-Type Female, Pole Mounting, 190*190*30mm (LxWxH), IP65, with 2 RF Cables (C-RF-LMR200-NM_NM-1M)
A-D2T2R-5GHZ-19DB-8KM-NF	5Ghz Directional Antenna, 2T2R, 19Dbi, 8KM, vertical polarization, N-Type Female, Pole Mounting, 190*190*30mm (LxWxH), IP65, with 2 RF Cables (C-RF-LMR200-NM_NM-1M)

Product Series

WA512G-AX-IP67	WA512G-AX-D	WA512G-AX-C
		
269 x 239 x 81mm (W x H x D) IP67 Enclosure, -40-70℃	40 x 110 x 107 mm(W x H x D) Din-Rail Mount, -40-70℃	195 x 195 x 40mm (W x H x D) Ceiling-mount, -10-45℃

2.4G/5GHz 2T2R Outdoor Directional Panel 8/10dBi Pole Mount Antenna

A-D2T2R-2.4G+5GHZ-10DB-1KM-NF

- 2.4Ghz + 5GHz Wireless Antenna for Point to Point
- High Gain 10dBi 2T2R with 2 N-Female connector
- Long Range Distance up to 1KM
- Wide coverage up to 60˚ Horizontal Beam Width
- IP65 Protection Enclosure and Prevention of Rust
- -40˚C ~ +70˚C operation temperature

2.4GHz 802.11ax/n/g/b 5GHz 802.11ax/ac/a

Specifications

Electrical	
Frequency Range	2.4G+5GHz (2400-2500/5150-5850MHz)
Transmission	2T2R
Network	Wireless 2.4G+5GHz Wi-Fi 4/5/6 Network
Gain	2.4GHz 8±0.5/ 5GHz 10±0.5dBi
Max. Distance	1KM
V.S.W.R	≦ 2
Horizontal Beam Width	60˚
Vertical Beam Width	30˚
Polarization	Horizontal Vertical
Input Impedance	50Ω
Lightning Protection	DC Grounded
Mechanical	
Connector	N-Type Female
Wind Resistance	36.9m/s
Mount	Pole Mounting Kit (U-Clamps)
Op. Temperature	-40˚C – +70˚C
Ingress Protection	IP65
Dimension	220 * 170* 25 mm (L x W x H)

Ordering Information

Model Name	Description
A-D2T2R-2.4G+5GHZ-10DB-1KM-NF	2.4G+5GHz Directional Antenna, 2T2R, 8/10Dbi, 1KM, N-Type Female, Pole Mounting, 220*170*25mm (LxWxH), IP65
A-D2T2R-2.4G+5GHZ-10DB-1KM-NF-2x1M	2.4G+5GHz Directional Antenna, 2T2R, 8/10Dbi, 1KM, N-Type Female, Pole Mounting, 220*170*25mm (LxWxH), IP65, 2pcs 1m N Male RG58 Cable
	Package List
	1 x Product Unit
	1 x Pole Mounting Kit
	2 x RF Cable (A-D2T2R-2.4G+5GHZ-10DB-1KM-NF-2x1M)

2.4GHz 1T1R Outdoor Directional Panel 14dBi Pole Mount Antenna

A-D1T1R-2.4GHZ-14DB-6KM-NF

- 2.4Ghz Wireless Access Point to Point
- High Gain 14dBi, 30˚ for Horizontal Plane and 28˚ Vertical Plane long distance coverage
- Long Distance up to 6KM coverage
- IP65 Protection Enclosure and Prevention of Rust
- -40˚C ~ +60˚C operation temperature

2.4GHz 802.11b/g/n

Specifications

Electrical	
Frequency Range	2.4 GHz
Transmission	1T1R
Network	Wireless 2.4Ghz Network IEEE 802.11n , IEEE 802.11b/g
Gain	14dBi
Max. Distance	6Km
V.S.W.R	≦ 1.5
Beam Width-H Plane	30˚
Beam Width-E Plane	28˚
Polarization	Vertical
Input Impedance	50Ω
Lightning Protection	DC Grounded
Mechanical	
Connector	N-Type Female
Wind Resistance	60km/h
Mount	Pole Mounting Kit (U-Clamps)
Pole Mounting Kit Angle	Up 30˚ and Down Up 30˚
Op. Temperature	-40˚C – + 60˚C
Ingress Protection	IP65
Dimension	190 * 190*30 mm (L x W x H)

Ordering Information

Model Name	Description
A-D1T1R-2.4GHZ-14DB-6KM-NF	2.4Ghz Directional Antenna, 1T1R, 14Dbi, 6KM, vertical polarization, N-Type Female, Pole Mounting, 190*190*30mm (LxWxH), IP65
	Package List
	1 x Product Unit
	1 x Pole Mounting Kit
	1 x RF Cable (C-RF-LMR-NM_NM-1M)

Outdoor Directional Antenna

5GHz 1T1R Outdoor Directional Panel 12dBi Pole Mount Antenna

A-D1T1R-5GHZ-12DB-5KM-NF

- 5.8Ghz Wireless Access Point to Point
- High Gain 12dBi, 40˚ for Horizontal Plane and 38˚ Vertical Plane long distance coverage
- Long Distance up to 5KM coverage
- IP65 Protection Enclosure and Prevention of Rust
- -40˚C ~ +60˚C operation temperature

5GHz 802.11a/n/ac

Specifications

Electrical	
Frequency Range	5150~5875MHz
Transmission	1T1R
Gain	12dBi
V.S.W.R	≦ 2
Distance	5km
Beam Angle Horz.	40˚
Beam Angle Vert.	38˚
Polarization	Vertical
Input Impedance	50Ω
Max Input Power.	50W
Lightning Protection	DC Grounded
Mechanical	
Connector	N-Type Female
Wind Resistance	60m/s
Mount	Pole Mounting Kit
Pole Mounting Kit Angel	Up 30˚ and Down 30˚
Op. Temperature	-40˚C ~ +60˚C
Ingress Protection	IP65
Dimension	190*190*30mm (LxWxH)

Ordering Information

Model Name	Description
A-D1T1R-5GHZ-12DB-5KM-NF	5.8Ghz Directional Antenna, 1T1R, 12Dbi, 5KM, vertical polarization, N-Type Female, Pole Mounting, 190*190*30mm (LxWxH), IP65
	Package List
	1 x Product Unit
	1 x Pole Mounting Kit
	1 x RF Cable (C-RF-LMR-NM_NM-1M)

Outdoor Directional Antenna

5GHz 2T2R Outdoor Directional Panel 15dBi Pole Mount Antenna

A-D2T2R-5GHZ-15DB-6KM-NF

- 5.8Ghz Wireless Access Point to Point, 2T2R Transmission
- High Gain 15dBi, 35˚ for Horizontal Plane and 16˚ Vertical Plane long distance coverage
- Long Distance up to 6KM coverage
- IP65 Protection Enclosure and Prevention of Rust
- -40˚C ~ +60˚C operation temperature

5GHz

Specifications

Electrical	
Frequency Range	5150~5875MHz
Transmission	2T2R
Gain	15dBi
V.S.W.R	≦ 2
Distance	6km
Beam Angle Horz.	35˚
Beam Angle Vert.	16˚
Polarization	±45°
Input Impedance	50Ω
Max Input Power.	50W
Lightning Protection	DC Grounded
Mechanical	
Connector	2 × N-Type Female
Wind Resistance	60m/s
Mount	Pole Mounting Kit
Pole Mounting Kit Angel	Up 30˚ and Down 30˚
Op. Temperature	-40˚C ~ +60˚C
Ingress Protection	IP65
Dimension	190*190*30mm (LxWxH)

Ordering Information

Model Name	Description
A-D2T2R-5GHZ-15DB-6KM-NF	5.8Ghz Directional Antenna, 2T2R, 15Dbi, 6KM, vertical polarization, N-Type Female, Pole Mounting, 190*190*30mm (LxWxH), IP65
	Package List
	1 x Product Unit
	1 x Pole Mounting Kit
	2 x RF Cable (C-RF-LMR-NM_NM-1M)

Outdoor Directional Antenna

5GHz 2T2R Outdoor Directional Panel 19dBi Pole Mount Antenna

A-D2T2R-5GHZ-19DB-8KM-NF

- 5.8Ghz Wireless Access Point to Point, 2T2R Transmission
- High Gain 19dBi, 90˚ for Horizontal Plane and 4˚ Vertical Plane long distance coverage
- Long Distance up to 8KM coverage
- IP65 Protection Enclosure and Prevention of Rust
- -40˚C ~ +60˚C operation temperature

5GHz

Specifications

Electrical	
Frequency Range	5150~5875MHz
Transmission	2T2R
Gain	19dBi
V.S.W.R	≦ 1.5
Distance	8km
Beam Angle Horz.	90˚
Beam Angle Vert.	4˚
Polarization	±90°
Input Impedance	50Ω
Max Input Power.	50W
Lightning Protection	DC Grounded
Mechanical	
Connector	2 × N-Type Female
Wind Resistance	60m/s
Mount	Pole Mounting Kit
Pole Mounting Kit Angel	10˚
Op. Temperature	-40˚C ~ +60˚C
Ingress Protection	IP65
Dimension	190*190*30mm (LxWxH)

Ordering Information

Model Name	Description
A-D2T2R-5GHZ-19DB-8KM-NF	5.8Ghz Directional Antenna, 2T2R, 19Dbi, 8KM, vertical polarization, N-Type Female, Pole Mounting, 190*190*30mm (LxWxH), IP65
	Package List
	1 x Product Unit
	1 x Pole Mounting Kit
	2 x RF Cable (C-RF-LMR-NM_NM-1M)