
# RG-AP680-O(V3)

## Wi-Fi 6 Dual-radio Access Point

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Ruijie

# Product Pictures



# Product Overview

The RG-AP680-O(V3) is a Wi-Fi 6 wireless access point that delivers dual radios, high performance, and enterprise-grade encryption. Its hybrid cloud management mode and high-density access design allow the RG-AP680-O(V3) to be flexibly deployed in high-quality outdoor network scenarios, including outdoor hotspots such as parks and streets in smart cities, sports field scenarios in the education industry, and scenarios related to energy and rail transportation industry.

# Product Highlights


## Ultra-High Performance

- Dual-band design (2.4 GHz + 5 GHz), four spatial streams, 1024-Quadrature Amplitude Modulation (QAM) high-speed access, up to 2.976 Gbps peak data rate, and built-in intelligent omnidirectional antenna, realizing high-speed wireless access experience
- Orthogonal Frequency-Division Multiple Access (OFDMA), Multi-User Multiple-Input Multiple-Output (MU-MIMO), and Wi-Fi Multimedia (WMM), increasing the average rate per user in high-density deployment environments
- RF power adjustment and intelligent channel allocation to solve the problems such as co-channel interference and adjacent channel interference, thereby improving network transmission efficiency and stability
- Packet-based power control technology and high-performance power design, saving energy while providing high-speed wireless access service

## Flexible Networking

- Local and cloud management modes, and intelligent wireless network optimization, reducing TCO and maximizing ROI
- Access through optical and Ethernet cables for flexible networking and high-speed backhaul over 2.5 Gbps optical links
- IEEE 802.11k/v/r support and roaming stickiness optimization, achieving seamless user roaming
- Rich IoT features: Bluetooth 5.1, and wireless locating

## High Security and Reliability

- IP68 rated housing, adapting to harsh outdoor environments
- Encryption and authentication technologies including Wi-Fi Protected Access 3 (WPA3), enhanced open security, 802.1X, and Private Pre-shared Key (PPSK), enhancing data security
- Dynamic Frequency Selection (DFS), optimizing the use of available RF spectrum to prevent radar channel interference
- Cyclic Delay/Shift Diversity (CDD/CSD), Maximum Ratio Combining (MRC), Space-Time Block Coding (STBC), and Low-Density Parity Check (LDPC), improving the signal quality, signal receiving, and reliability and performance of data transmission
- Transmit beam-forming (TxBF) expands the signal coverage and enhances the reliability of specific devices, thereby improving the data rate
- Intelligent identification and monitoring, multicast-to-unicast conversion, and other features, enhancing network security and reliability

# Applicable Scenarios

## Smart City

**Parks**

With Wi-Fi deployed in parks, people can enjoy high-speed mobile internet access anytime, anywhere. They can flexibly and easily enjoy Internet services, including browsing the web, watching videos, and engaging in voice and video chats with friends.

## Higher Education

**Sports Field**

You can cheer and show support for sports events on the spots field, and share moments in real time on social media. High-speed mobile Wi-Fi allows you to leave real-time memories.

# Product Features

## Multi-scenario Adaptability

The RG-AP680-O(V3) is a dual-band outdoor wireless access point designed for outdoor scenarios such as smart cities, higher education, general education, energy, and rail transportation. It can be deployed in various scenarios to meet diverse service requirements.

## Security and Scalability

The RG-AP680-O(V3) stands out with its exceptional wireless network security, RF control, mobile access, QoS guarantee, and seamless roaming. With Ruijie's wireless access controller (AC), it enables wireless user data forwarding, security, and access control to cope with diverse service needs.

## High-speed Access and Compatibility

The RG-AP680-O(V3) supports various wireless protocols, such as 802.11ax, 802.11ac Wave2, 802.11ac Wave1, and 802.11n. It features a hardware-independent dual-band design to deliver a data rate of up to 2.976 Gbps, effectively eliminating wireless performance bottlenecks. Additionally, it is compatible with an extensive array of devices, promoting seamless interconnectivity among employees and customers.

## Flexible Deployment and Power Supply

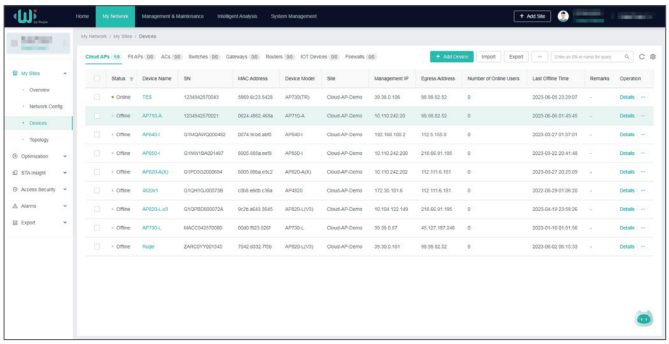
The RG-AP680-O(V3) supports both local power supply and Power over Ethernet (PoE), providing you with the flexibility to choose the power supply mode. In addition, the RG-AP680-O(V3) can be mounted against a wall or pole, making space deployment and environmental requirements less challenging. This makes the RG-AP680-O(V3) particularly suitable for scenarios such as parks, sports fields, and rail transportation scenarios.

# Solution Scalability Capabilities

Ruijie WIS Cloud Management Network Solution (WIS for short) provides full-lifecycle cloud management network services covering network procurement, planning, deployment, acceptance, and O&M. When the AP connects to WIS, it can meet various needs in multiple scenarios including planning, deployment, acceptance, and operation through cloud management, cloud O&M, cloud authentication, and other value-added services provided by WIS.

## Network-wide Cloud Management

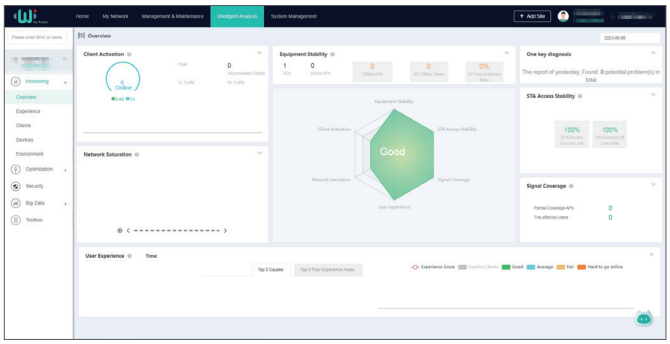
WIS supports integrated management and control of various types of devices including APs, ACs, switches, gateways, and routers. It supports remote O&M management operations such as adding or batch importing of multi-branch network devices, online status monitoring, configuration delivery, upgrade, restart, configuration backup, and restoration. It supports network-wide topology auto-discovery and topology status monitoring.



## Wireless Network Visualization

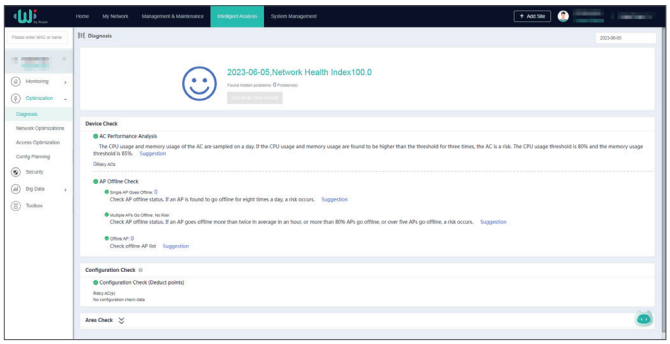
The overview function module of WIS provides a comprehensive view of the network running status from the perspective of overview, experience, users, devices, and environment. The network running information includes the following items:

- Network basic information: device stability, device health, user stability, network signal coverage, and network association.
- User usage: user activity (network dependency), and user online experience and analysis
- Network saturation: network capacity usage and channel usage




## Intelligent Network Diagnosis

With WIS, wireless network diagnosis and health index assessment can be completed in just one click, providing test results for each item. The health index provided by WIS enables you to rapidly assess the state of your live network. WIS can locate faulty areas, APs, and STAs, and provides potential risks and corresponding optimization suggestions.



# Product Specifications

## Hardware Specifications

| Hardware Specifications | RG-AP680-O(V3) |
|---|---|
| 802.11n | Four spatial streams<br>● Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams<br>● Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams<br>Channels:<br>● Radio 1 – 2.4 GHz: 20 MHz and 40 MHz<br>● Radio 2 – 5 GHz: 20 MHz and 40 MHz<br>Combined peak data rate: 600Mbps<br>● Radio 1 – 2.4 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15 )<br>● Radio 2 – 5 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15)<br>Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM)<br>Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM<br>Packet aggregation:<br>● Aggregate MAC Protocol Data Unit (A-MPDU)<br>● Aggregate MAC Service Data Unit (A-MSDU)<br>Dynamic Frequency Selection (DFS)<br>Cyclic Delay/Shift Diversity (CDD/CSD)<br>Maximum Ratio Combining (MRC)<br>Space-Time Block Coding (STBC)<br>Low-Density Parity Check (LDPC)<br>Transmit beam-forming (TxBF) |
| 802.11ac | Two spatial streams<br>● Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams<br>Channels:<br>● Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz<br>Combined peak data rate: 1.732 Gbps<br>● Radio 2 – 5 GHz: 6.5 Mbps to 1.732 Gbps (MCS0 to MCS9)<br>Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM)<br>Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM<br>Packet aggregation:<br>● Aggregate MAC Protocol Data Unit (A-MPDU)<br>● Aggregate MAC Service Data Unit (A-MSDU)<br>Dynamic Frequency Selection (DFS)<br>Cyclic Delay/Shift Diversity (CDD/CSD)<br>Maximum Ratio Combining (MRC)<br>Space-Time Block Coding (STBC)<br>Low-Density Parity Check (LDPC)<br>Transmit beam-forming (TxBF) |
| 802.11ax | Four spatial streams<br>● Radio 1 – 2.4 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams<br>● Radio 2 – 5 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams<br>Channels:<br>● Radio 1 – 2.4 GHz: 20 MHz and 40 MHz<br>● Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz<br>Combined peak data rate: 2.976 Gbps<br>● Radio 1 – 2.4 GHz: 8.6 Mbps to 0.574 Gbps (MCS0 to MCS11)<br>● Radio 2 – 5 GHz: 8.6 Mbps to 2.402 Gbps (MCS0 to MCS11) |

| Hardware Specifications | RG-AP680-O(V3) |
|---|---|
| 802.11ax | Radio technologies: uplink/downlink Orthogonal Frequency-Division Multiple Access (OFDMA)<br>Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM<br>Packet aggregation:<br>● Aggregate MAC Protocol Data Unit (A-MPDU)<br>● Aggregate MAC Service Data Unit (A-MSDU)<br>Dynamic Frequency Selection (DFS)<br>Cyclic Delay/Shift Diversity (CDD/CSD)<br>Maximum Ratio Combining (MRC)<br>Space-Time Block Coding (STBC)<br>Low-Density Parity Check (LDPC)<br>Transmit beam-forming (TxBF)<br>WPA3 |
| Antenna | Wi-Fi<br>● 2.4 GHz: two built-in omnidirectional antennas, the max. antenna gain is 4 dBi.<br>● 5 GHz: two built-in omnidirectional antennas, the max. antenna gain is 6 dBi.<br>Bluetooth<br>● One integrated vertically polarized omnidirectional antenna, the max. antenna gain is 5 dBi. |
| Port | 1 x 100/1000Base-T RJ45 Ethernet port with auto-negotiation<br>1 x 2.5GE SFP port<br>1 x RJ45 console port (serial console port)<br>1 x Bluetooth 5.0 |
| Status LED | 1 x multi-color system status LED<br>● AP power-on status<br>● Software initialization status and upgrade status<br>● Uplink service interface status<br>● Wireless user online status<br>● CAPWAP tunnel timeout<br>● Specific AP locating<br>Three single-color signal strength LEDs:<br>● Whether bridging is enabled<br>● Whether bridging is successful<br>● Wireless signal strength after successful bridging |
| Button | 1 x Reset button<br>● Press the button for shorter than 2 seconds. Then the device restarts.<br>● Press the button for longer than 5 seconds. Then the device restores to factory settings. |
| Dimensions (W x D x H) | Main unit: 251 mm x 168 mm x 64 mm (9.88 in. x 6.61 in. x 2.52 in.)<br>Shipping: 405 mm x 232 mm x 325 mm (15.94 in. x 9.13 in. x 12.80 in.) |
| Weight | Main unit: 1.0 kg (2.2 lbs)<br>Mounting bracket: 0.9 kg (1.98 lbs)<br>Shipping: 3.15 kg (6.94 lbs) |
| Mounting | Wall or Pole-mounting (a mounting bracket is delivered with the main unit) |
| Input power supply | The AP supports the following two power supply modes:<br>● 48 V DC/0.35 A power input over DC connector: The DC connector accepts the center-positive circular plug with the inner diameter of 2.0 mm (0.08 in.) or outer diameter of 6.3 mm (0.25 in.) and the length of 9.8 mm (0.39 in.). A DC power supply needs to be purchased independently.<br>● PoE input over ETH/PoE: The power source equipment (PSE) complies with IEEE 802.3af/at standard (PoE/PoE+).<br>Note: If both DC power and PoE are available, DC power is preferred. |

| Hardware Specifications | RG-AP680-O(V3) |
|---|---|
| Power consumption | Maximum power consumption: 12.95 W<br>● DC power: 12.95 W<br>● 802.3at (PoE+): 12.95 W<br>● 802.3af (PoE): 12.95 W<br>● Idle mode: 6.0 W |
| Environment | Storage temperature: –40°C to +85°C (–40°F to +185°F)<br>Storage humidity: 0% RH to 100% RH (non-condensing)<br>Storage altitude: < 5,000 m (16,404.20 ft.) at 25°C (77°F)<br>Operating temperature: –40°C to +65°C (-40°F to +149°F)<br>Operating humidity: 0% RH to 100% RH (non-condensing)<br>Operating altitude: < 5,000 m (16,404.20 ft.) at 55°C (131°F)<br>At an altitude between 3,000 m (9,842.52 ft.) and 5,000 m (16,404.20 ft.), every time the altitude increases by 166 m (546 ft.), the maximum temperature decreases by 1°C (1.8°F). |
| IP Rating | IP68 |
| Mean Time Between Failure (MTBF) | 200,000 hours (22 years) at the operating temperature of 25°C (77°F) |
| System memory | 512 MB DRAM, 128 MB flash |
| Transmit power | 2.4 GHz<br>● Max. transmit power: 28 dBm (630.96 mW)<br>● Minimum transmit power: 10 dBm (10 mW)<br>5 GHz<br>● Max. transmit power: 28 dBm (630.96 mW)<br>● Minimum transmit power: 10 dBm (10 mW)<br>Note: The transmit power adjusted in percentage. The transmit power is limited by local regulatory requirements. |

The following table lists the radio frequency performance of Wi-Fi including different frequency bands, protocols, and date rates. It is country-specific, and Ruijie Networks reserves the right of interpretation.

| Radio Frequency Performance | RG-AP680-O(V3) | | |
|---|---|---|---|
| Frequency Band and Protocol | Data Rate | Max. Transmit Power per Transmit Chain | Max. Receive Sensitivity per Receive Chain |
| 2.4 GHz, 802.11b | 1 Mbps | 25 dBm | –92 dBm |
| | 2 Mbps | 25 dBm | –82 dBm |
| | 5.5 Mbps | 25 dBm | –84 dBm |
| | 11 Mbps | 25 dBm | –78 dBm |
| 2.4 GHz, 802.11g | 6 Mbps | 25 dBm | –84 dBm |
| | 24 Mbps | 23 dBm | –74 dBm |
| | 36 Mbps | 23 dBm | –72 dBm |

| Radio Frequency Performance | RG-AP680-O(V3) | | |
|---|---|---|---|
| Frequency Band and Protocol | Data Rate | Max. Transmit Power per Transmit Chain | Max. Receive Sensitivity per Receive Chain |
| 2.4 GHz, 802.11g | 54 Mbps | 20 dBm | –67 dBm |
| 2.4 GHz, 802.11n (HT20) | MCS0 | 25 dBm | –84 dBm |
| | MCS7 | 20 dBm | –66 dBm |
| 2.4 GHz, 802.11n (HT40) | MCS0 | 25 dBm | –79 dBm |
| | MCS7 | 20 dBm | –63 dBm |
| 2.4 GHz, 802.11ax (HE20) | MCS0 | 25 dBm | –84dBm |
| | MCS11 | 18 dBm | –54 dBm |
| 2.4 GHz, 802.11ax (HE40) | MCS0 | 25 dBm | –80 dBm |
| | MCS11 | 18 dBm | –51 dBm |
| 5 GHz, 802.11a | 6 Mbps | 25 dBm | –84 dBm |
| | 24 Mbps | 23 dBm | –74 dBm |
| | 36 Mbps | 23 dBm | –72 dBm |
| | 54 Mbps | 20 dBm | –67 dBm |
| 5 GHz, 802.11n (HT20) | MCS0 | 25 dBm | –84 dBm |
| | MCS7 | 20 dBm | –66 dBm |
| 5 GHz, 802.11n (HT40) | MCS0 | 25 dBm | –81 dBm |
| | MCS7 | 20 dBm | –63 dBm |
| 5 GHz, 802.11ac (VHT20) | MCS0 | 25dBm | –84 dBm |
| | MCS9 | 19 dBm | –61 dBm |
| 5 GHz, 802.11ac (VHT40) | MCS0 | 25 dBm | –81 dBm |
| | MCS9 | 19 dBm | –56 dBm |
| 5 GHz, 802.11ac (VHT80) | MCS0 | 25 dBm | –78 dBm |
| | MCS9 | 19 dBm | –53 dBm |

| Radio Frequency Performance | RG-AP680-O(V3) | | |
|---|---|---|---|
| Frequency Band and Protocol | Data Rate | Max. Transmit Power per Transmit Chain | Max. Receive Sensitivity per Receive Chain |
| 5 GHz, 802.11ax (HE20) | MCS0 | 25 dBm | –84 dBm |
| | MCS11 | 18 dBm | –54 dBm |
| 5 GHz, 802.11ax (HE40) | MCS0 | 25 dBm | –81 dBm |
| | MCS11 | 18 dBm | –51 dBm |
| 5 GHz, 802.11ax (HE80) | MCS0 | 25 dBm | –78 dBm |
| | MCS11 | 18 dBm | –48 dBm |
| 5 GHz, 802.11ax (HE160) | MCS0 | 25 dBm | –73 dBm |
| | MCS11 | 18 dBm | –43 dBm |

## Software Specifications

| Software Specifications | RG-AP680-O(V3) |
|---|---|
| Basic Functions | |
| Applicable software version | RGOS11.9(6)W2B4 or higher |
| WLAN | |
| Max. number of associated STAs | 1,024 (up to 512 STAs per radio) |
| Max. number of BSSIDs | 32 (up to 16 BSSIDs per radio) |
| Max. number of WLAN IDs | 16 |
| STA management | SSID hiding<br>Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently.<br>Remote Intelligent Perception Technology (RIPT)<br>Intelligent STA identification<br>Intelligent load balancing based on the STA quantity or traffic |
| STA limiting | SSID-based STA limiting<br>Radio-based STA limiting |
| Bandwidth limiting | STA/SSID/AP-based rate limiting |

| Software Specifications | RG-AP680-O(V3) |
|---|---|
| CAPWAP | IPv4/IPv6 CAPWAP<br>Layer 2 and Layer 3 topology between an AP and an AC<br>An AP can automatically discover the accessible AC.<br>An AP can be automatically upgraded through the AC.<br>An AP can automatically download the configuration file from the AC.<br>CAPWAP through NAT |
| Data forwarding | Centralized and local forwarding |
| Wireless roaming | Layer 2 and Layer 3 roaming |
| Wireless locating | MU and TAG device locating |
| Security and Authentication | |
| Authentication and encryption | Remote Authentication Dial-In User Service (RADIUS)<br>PSK and web authentication<br>QR code-based guest authentication, SMS authentication, and MAC address bypass (MAB) authentication<br>Data encryption: WEP (64/128 bits), WPA (TKIP), WPA-PSK, WPA2 (AES) |
| Data frame filtering | Allowlist, static blocklist, and dynamic blocklist |
| WIDS | Rogue device discovery<br>Optimization of rogue AP containment for all STA types<br>Fuzzy containment<br>SSID-based blocklist<br>DDoS attack identification<br>Automatic detection of STA attacks, and adding STAs to the blocklist when ICMP attacks or TCP SYN attacks are detected<br>STA isolation |
| ACL | IP standard ACL, MAC extended ACL, IP extended ACL, and expert-level ACL<br>IPv6 ACL<br>Time range-based ACL<br>ACL based on a Layer 2 interface<br>ACL based on a Layer 3 interface<br>Ingress ACL based on a wireless interface<br>Dynamic ACL assignment based on 802.1X authentication (used with the AC) |
| CPP | CPU Protect Policy (CPP) |
| NFPP | Network Foundation Protection Policy (NFPP) |
| Routing and Switching | |
| MAC | Static and filtered MAC addresses<br>MAC address table size: 1,024<br>Max. number of static MAC addresses: 1,024<br>Max. number of filtered MAC addresses: 1,024 |
| Ethernet | Jumbo frame length: 1,518<br>Ethernet II<br>1000M SFP ports modules<br>2.5G ports |

| Software Specifications | RG-AP680-O(V3) |
|---|---|
| VLAN | Interface-based VLAN assignment<br>Layer 2 isolation of wired interfaces (including aggregate interfaces) within VLANs<br>Max. number of SVIs: 191<br>Max. number of VLANs: 4,094<br>VLAN ID range: 1–4,094 |
| ARP | ARP entry aging, gratuitous ARP learning, and proxy ARP<br>Max. number of ARP entries: 1,024<br>Detection of IP address conflicts among downlink hosts<br>ARP check |
| IPv4 services | Static and DHCP-assigned IPv4 addresses<br>NAT, FTP ALG and DNS ALG |
| IPv6 services | IPv6 addressing, Neighbor Discovery (ND), IPv6 ND proxy, ICMPv6, IPv6 ping<br>IPv6 DHCP client |
| IP routing | IPv4/IPv6 static route<br>Max. number of static IPv4 routes: 1,024<br>Max. number of static IPv6 routes: 1,000 |
| Multicast | Multicast-to-unicast conversion |
| VPN | PPPoE client<br>IPsec VPN |
| Network Management and Monitoring | |
| Network management | NTP server and NTP client<br>SNTP client<br>SNMPv1/v2c/v3<br>Fault detection and alarm<br>Information statistics and logging |
| Network management platform | Web management (Eweb) |
| User access management | Telnet, SSH, FTP client, FTP server, and TFTP client |
| Switchover among Fat, Fit, and cloud modes | When the AP works in Fit mode, it can be switched to Fat mode through an AC.<br>When the AP works in Fat mode, it can be switched to Fit mode through the console port or Telnet mode.<br>When the AP works in cloud mode, it can be managed through Ruijie Cloud. |

**Value-added Software**

The following value-added software functions can be achieved with the WIS solution (used with RG-iData-WIS and wireless controller).

| Value-added Software | RG-AP680-O(V3) |
|---|---|
| Intelligent O&M | |

| Value-added Software | RG-AP680-O(V3) |
|---|---|
| Experience | Network operation analysis, such as device stability and signal coverage<br>Measuring users' network experience based on indicators such as the latency, packet loss, signal strength, and channel utilization, and visualizing results of the network experience<br>Statistics on the number of online and offline failures of STAs associated with different APs, average signal strength, and other parameters<br>VIP monitoring and alarm, and custom alarm thresholds<br>STA global experience map and experience coverage evaluation based on the time range<br>STA access protocol replay and fine-grained STA fault diagnosis<br>Note: To support the preceding functions, ensure that the AP works in Fit mode. |
| Network optimization | Network performance optimization, including one-click network optimization and scenario-based optimization<br>Client steering to cope with roaming stickiness, and experience indicator comparison<br>Client steering to cope with remote association, and experience indicator comparison<br>One-click diagnosis – analyzing problems and providing suggestions |
| Big data | Baseline analysis – recording the configuration, version, and other changes, and tracking network KPI changes<br>Time capsule – analyzing the device version and configuration change history |
| Regional analysis | Batch generation of building floor information – uploading floor plans, and dragging and dropping AP positions |
| One-click report | One-click health report – generating a report on the overall operation of a network |
| Security radar | Unauthorized Wi-Fi signal location, presentation by category, and containment |
| Cloud Management | |
| Management and maintenance | Uniformly connecting, managing, and maintaining APs, ACs, and other devices, batch device configuration and upgrade, and other functions<br>Deployment through Zero Touch Provisioning (ZTP) – creating configuration templates and automatically applying configured templates<br>One-click discovery of the wired and wireless network topology and topology generation |
| Cloud Authentication | |
| Authentication mode | SMS authentication, fixed account authentication, one-click authentication, Facebook authentication, Instagram authentication, voucher authentication, and other authentication modes<br>Authentication implemented in the cloud, without the need to deploy the local authentication server |
| Customized portal | Customized Portal authentication page for mobile phones and PCs |
| SMS gateway | Interconnection with SMS gateways of GUODULINK and Alibaba Cloud |
| Platform Capabilities | |
| Big data capabilities | Mainstream persistence solutions based on Hadoop, MongoDB, and MySQL, providing distributed storage capabilities<br>Spark-based big data computing capabilities<br>Data warehouse building based on Hive, and data model conversion, integration, and other functions |
| Hierarchy and decentralization | Authorizing different applications for different users to meet service needs of different departments<br>Granting operation permissions to administrators in different scenarios |
| System management | Account operation, authorization configuration, email configuration, configuration backup, exception alarms, and other system management functions |

Note: For details, refer to the latest hybrid cloud management solution.

## Regulatory Compliance

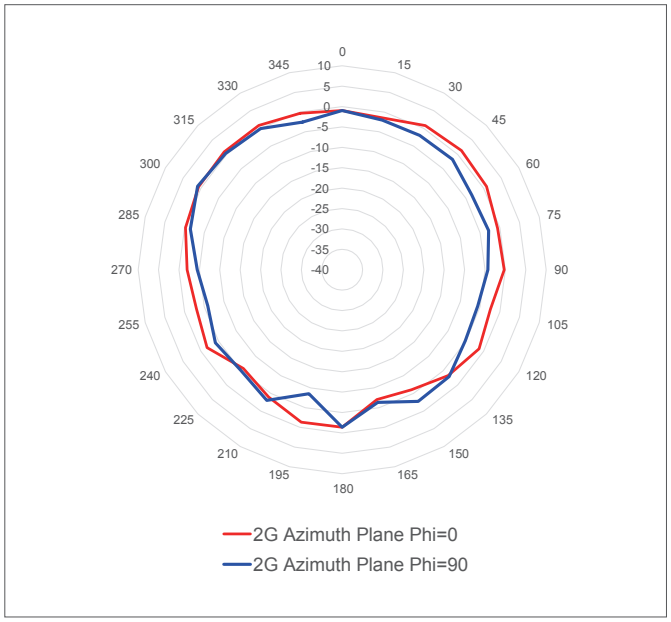
| Regulatory Compliance | RG-AP680-O(V3) |
|---|---|
| Regulatory compliance | EN 55032<br>EN 55035<br>EN 61000-3-3<br>EN IEC 61000-3-2<br>EN 301 489-1<br>EN 301 489-3<br>EN 301 489-17<br>EN 300 328<br>EN 301 893<br>EN 300 440<br>FCC Part 15<br>EN IEC 62311<br>IEC 62368-1<br>EN 62368-1<br>IEC 60950-22 |

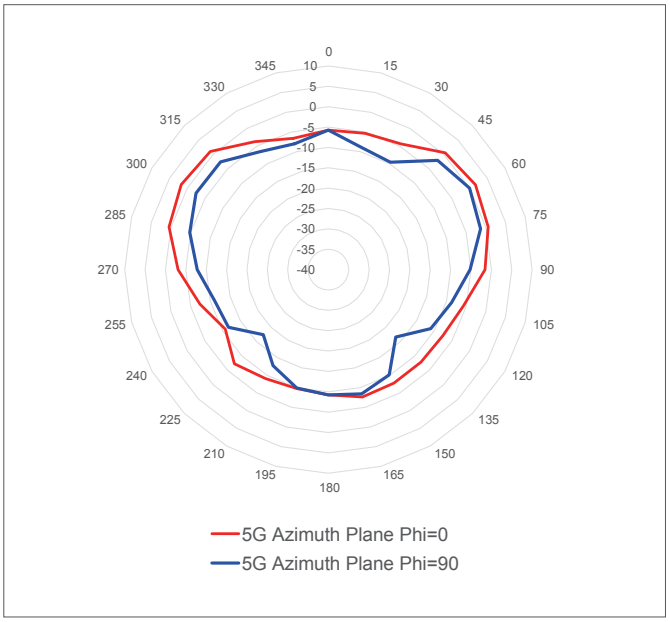
* For more country-specific regulatory information and approvals, contact your local sales agency.

# Antenna Pattern Plots

## Horizontal Planes (Top View)

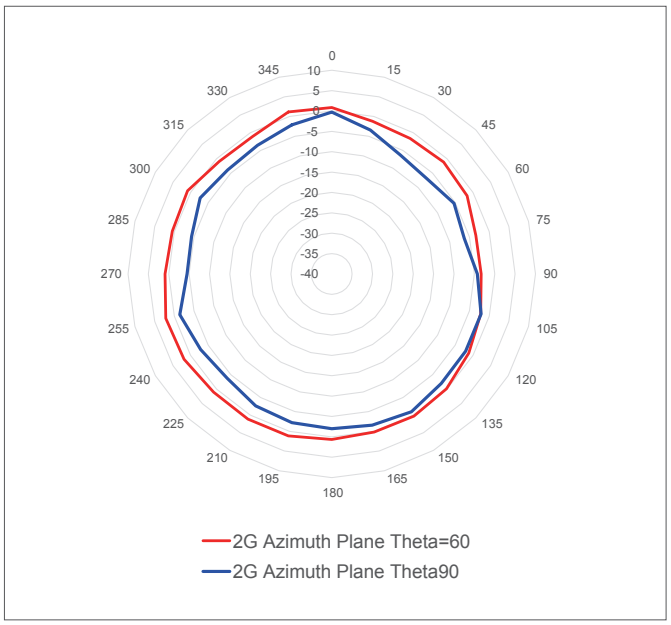
The following figures show the azimuth antenna pattern at 2.4 GHz and 5 GHz radios.

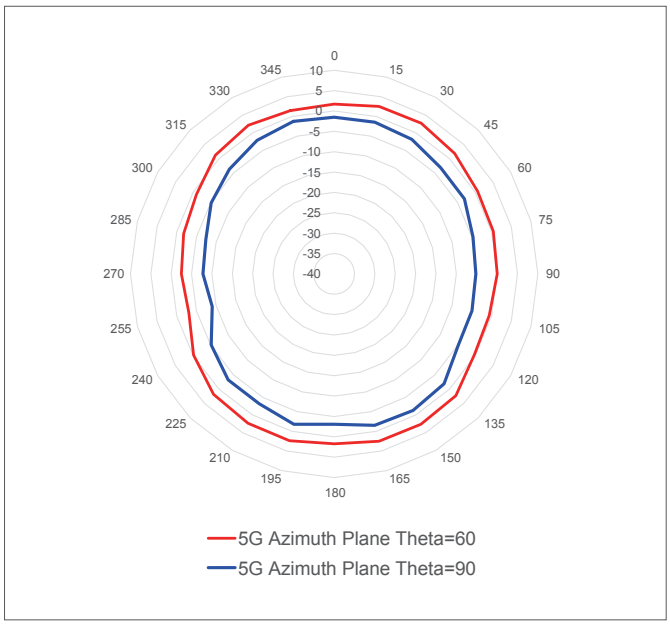


## Vertical Planes (Side View, AP Facing Down)

The following figures shows the elevation antenna pattern at 2.4 GHz and 5 GHz radios.




Note: Operating frequency bands are country-specific.

# Ordering Information

| Model | Description |
|---|---|
| RG-AP680-O(V3) | Wi-Fi 6 (802.11ax-compliant) outdoor high-density wireless access point<br>Dual radios, four spatial streams, peak data rate of 2.976 Gbps<br>● Radio 1: 2.4 GHz: two spatial streams, 2x2 MU-MIMO, peak data rate of 574 Mbps<br>● Radio 2: 5 GHz: two spatial streams, 2x2 MU-MIMO, peak data rate of 2.4 Gbps<br>802.11a/b/g/n/ac/ax, switching between Fat, Fit, and cloud modes, and 802.3at/at PoE and local DC power supply<br>Note:<br>● The power source equipment (PSE) needs to be purchased separately.<br>● The DC power supply needs to be purchased separately, and the output voltage/current must be 48 V/0.35 A. |

# Package Contents

| Item | Quantity |
|---|---|
| Chassis | 1 |
| Mounting bracket | 1 |

| Item | Quantity |
|---|---|
| Support for pole-mounted or wall-mounted installation | 1 |
| Machine tooth screw M5 | 4 |
| Machine tooth screw M8 | 2 |
| M6x50 expansion bolt | 4 |
| Metal hook | 2 |
| Waterproof PG head | 2 |
| Fiber cable waterproof connector | 1 |
| Dustproof cover | 3 |
| Ground cable | 1 |
| *Product Warranty* | 1 |
| *Hardware Installation Manual* | 1 |

# Warranty

For more information about warranty terms and period, contact your local sales agency:

- Warranty terms: https://www.ruijienetworks.com/support/servicepolicy
- Warranty period: https://www.ruijienetworks.com/support/servicepolicy/Service-Support-Summany/

Note: The warranty terms are subject to the terms of different countries and distributors.

# More Information

For more information about Ruijie Networks, visit the official Ruijie website or contact your local sales agency:

- Ruijie Networks official website: https://www.ruijienetworks.com/
- Online support: https://www.ruijienetworks.com/support
- Hotline support: https://www.ruijienetworks.com/support/hotline
- Email support: service_rj@ruijienetworks.com

Ruijie Networks Co., Ltd.

For further information, please visit our website https://www.ruijienetworks.com