

RG-AP9220(V2)

Wi-Fi 7 Dual-Radio
Indoor Access Point



01 Product Overview

The RG-AP9220(V2) is a dual-radio Wi-Fi 7 access point (AP) launched by Ruijie Networks for indoor scenarios in various sectors covering education, government, finance, healthcare, and enterprise. It provides comprehensive capabilities for security control, roaming, QoS, and related functions. It can be used with Ruijie access controllers (ACs) and RG-WIS to implement comprehensive O&M. In addition, the RG-AP9220(V2) can be mounted on a wall or ceiling, making it ideal for low-density wireless access scenarios, such as small- and medium-sized office networks, small compartments, small conference rooms, and corridors.

02 Product Appearance



RG-AP9220(V2) Front View



RG-AP9220(V2) Side View

03 Product Highlights



Multi-Service Ports

- In compliance with IEEE 802.3af/at standard, the RG-AP9220(V2) provides one 100/1000/2.5GBASE-T port with a maximum wired data rate of 2.5 Gbps to implement high-speed transmission and conversion between wireless networks and wired networks.
- The RG-AP9220(V2) also offers one 5GE SFP port, which is compatible with 2.5GE and 1GE optical transceivers. It supports auto-negotiation.

Flexible Management

- The RG-AP9220(V2) supports its local eWeb and AC's eWeb for wireless configuration, network-wide operations, downlink STA rate limiting, and access control, simplifying O&M planning.

- When working with RG-WIS, it enables device configuration backup, status monitoring, and visualized wireless management of signal heat maps.
- In small branch office scenarios, the RG-AP9220(V2) can provide both wireless access and VPN gateway functions, enabling integrated deployment, simplifying network construction, and reducing overall costs.
- It can also operate as a Point-to-Point Protocol over Ethernet (PPPoE) client, allowing direct Internet access in branch office scenarios without the need for an additional gateway.

High Security and Reliability

- The RG-AP9220(V2) supports a comprehensive range of encryption and authentication technologies, including Pre-shared Key (PSK) authentication, web-based authentication, Wi-Fi Protected Access 3 (WPA3), and 802.1X authentication, enhancing data security.
- When integrated with RG-WIS and the AC, the RG-AP9220(V2) delivers extensive wireless security capabilities, including Wireless Intrusion Detection System (WIDS), radio interference location tracking, rogue AP containment, ARP spoofing prevention, and DHCP snooping, creating a secure and reliable wireless network environment.
- It also supports MAC Authentication Bypass (MAB) to further enhance both access convenience and security.

04 Typical Scenarios

Higher-Education BU

Classroom and Lab

Deploying Wi-Fi in classrooms and labs enables students and teachers to access network resources with ease, thereby enhancing the quality of teaching and learning. Students can engage in online learning, access course materials, and collaborate with classmates, while teachers can access teaching resources and deliver multimedia lessons.



Healthcare

Outpatient Service

The Wi-Fi network provides a mobile office environment for medical staff. Medical staff can use mobile devices to view patient information in real time, which significantly improves treatment efficiency. Patients can access relevant medical information through smart devices online, resulting in improved satisfaction.



Remote Monitoring and Management of Medical Devices

With Wi-Fi deployment, remote monitoring and management of medical devices become possible. Wireless medical devices such as ECG monitors and blood pressure monitors can transmit patient data in real time, thereby improving information security. Additionally, these wireless medical devices can be easily maintained and upgraded, resulting in cost reductions.



Note: For more applicable scenarios, contact Ruijie pre-sales engineers.

05 Product Features

Multi-Scenario Adaptability

The RG-AP9220(V2) is a dual-band indoor access point designed for indoor environments such as education, government, finance, healthcare, and enterprise. It can be deployed across a wide range of scenarios to meet diverse service requirements.

High-Speed Access and Compatibility

The RG-AP9220(V2) complies with IEEE 802.11be, IEEE 802.11ax, IEEE 802.11ac Wave2, IEEE 802.11ac Wave1, and IEEE 802.11n. With a hardware-independent dual-radio design, the RG-AP9220(V2) delivers a combined peak data rate of 3.57 Gbps, eliminating the performance bottleneck.

Security and Scalability

The RG-AP9220(V2) delivers strong performance in areas such as wireless network security, RF management, mobile access, QoS, seamless roaming, and IoT module expansion. When used with the Ruijie AC, it can support wireless user data forwarding, security, access control, and IoT application expansion, further meeting evolving service needs.

Flexible Deployment and Power Supply

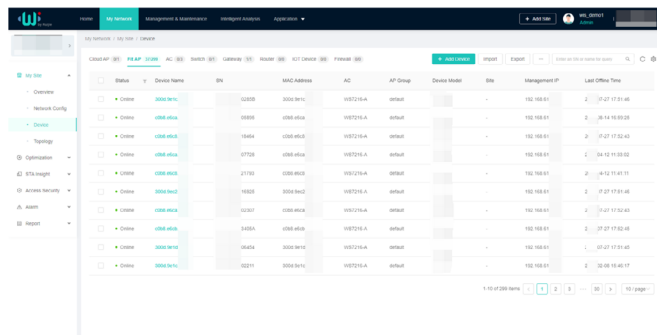
The RG-AP9220(V2) supports both local power supply and PoE, providing you with flexible power supply options. In addition, it can be mounted on a wall or ceiling, reducing constraints related to installation space and environmental conditions. These features make the RG-AP9220(V2) particularly well suited for low-density wireless access scenarios, such as small- and medium-sized office networks, small conference rooms, and corridors.

06 Solution Scalability Capabilities

Ruijie WIS Cloud Management Network Solution (WIS Cloud for short, <https://wis.ruijienetworks.com/>) provides full-lifecycle cloud management network services covering network procurement, planning, deployment, acceptance, and O&M. When the RG-AP9220(V2) is connected to WIS Cloud, it can meet various needs in multiple scenarios including planning, deployment, acceptance, and O&M through cloud management, cloud O&M, cloud authentication, and other value-added services (VASS) provided by WIS Cloud.

Network-Wide Cloud Management

WIS Cloud 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.

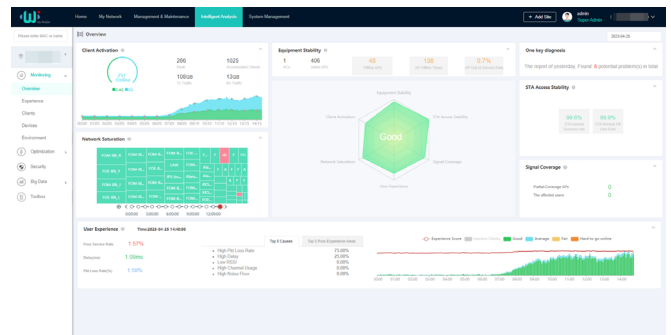


Device Name	SN	MAC Address	AP Group	Device Model	Site	Management IP	Last Offline Time
China-3000-3011	30000	3000-3011	3000-3011-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3012	30001	3000-3012	3000-3012-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3013	30002	3000-3013	3000-3013-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3014	30003	3000-3014	3000-3014-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3015	30004	3000-3015	3000-3015-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3016	30005	3000-3016	3000-3016-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3017	30006	3000-3017	3000-3017-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3018	30007	3000-3018	3000-3018-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3019	30008	3000-3019	3000-3019-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46
China-3000-3020	30009	3000-3020	3000-3020-A	RG-AP9220	+	192.168.0.1	2023-07-17 17:41:46

Wireless Network Visualization

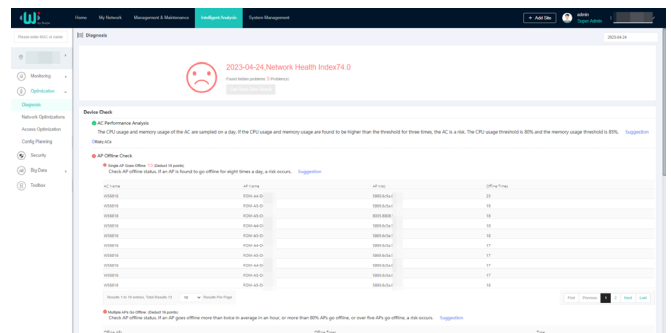
The overview function module of WIS Cloud provides a comprehensive view of the network running status from the perspective of overview, experience, users, devices, and environment. The network running information includes the following items:

- 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 Cloud, 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 Cloud enables you to rapidly assess the state of your live network. WIS Cloud can locate faulty areas, APs, and STAs, and provides potential risks and corresponding optimization suggestions.



The diagnosis report shows a red warning icon and the following details:

- 2023-04-24 Network Health Index 74.0**
- Device Check:**
 - AC Performance Analysis: The CPU usage and memory usage of the AC are sampled on a day. If the CPU usage and memory usage are found to be higher than the threshold for three times, the AC is a risk. The CPU usage threshold is 80% and the memory usage threshold is 80%.
 - AP Offline Check: If an AP is found to go offline for eight times a day, it is a risk.
- AP Performance Analysis:** A table showing performance metrics for various APs.

AP Name	AP Type	AP ID	AP MAC	AP IP	AP Status
AP001	Indoor	001	0000-0000-0000	192.168.0.1	Online
AP002	Indoor	002	0000-0000-0000	192.168.0.2	Online
AP003	Indoor	003	0000-0000-0000	192.168.0.3	Online
AP004	Indoor	004	0000-0000-0000	192.168.0.4	Online
AP005	Indoor	005	0000-0000-0000	192.168.0.5	Online
AP006	Indoor	006	0000-0000-0000	192.168.0.6	Online
AP007	Indoor	007	0000-0000-0000	192.168.0.7	Online
AP008	Indoor	008	0000-0000-0000	192.168.0.8	Online
AP009	Indoor	009	0000-0000-0000	192.168.0.9	Online
AP010	Indoor	010	0000-0000-0000	192.168.0.10	Online

07 Specifications

Hardware Specifications

Hardware Specifications	RG-AP9220(V2)
802.11n	Four spatial streams - Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams - Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams Channels: - Radio 1 – 2.4 GHz: 20 MHz and 40 MHz - Radio 2 – 5 GHz: 20 MHz and 40 MHz Combined peak data rate: 600 Mbps - Radio 1 – 2.4 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) - Radio 2 – 5 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM) Modulation types: BPSK, QPSK, 16-QAM, 64-QAM Packet aggregation: - Aggregate MAC Protocol Data Unit (A-MPDU) - Aggregate MAC Service Data Unit (A-MSDU) Dynamic Frequency Selection (DFS) Cyclic Delay/Shift Diversity (CDD/CSD) Maximum Ratio Combining (MRC) Space-Time Block Coding (STBC) Low-Density Parity Check (LDPC) Transmit beam-forming (TxBF)
802.11ac	Two spatial streams - Radio 2 – 5 GHz: 2x2 downlink MU-MIMO, two spatial streams Channels: - Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 1.733 Gbps - Radio 2 – 5 GHz: 6.5 Mbps to 1.733 Gbps (MCS0 to MCS9) Radio technologies: OFDM Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM Packet aggregation: - A-MPDU - A-MSDU DFS CDD/CSD MRC STBC LDPC TxBF
802.11ax	Four spatial streams - Radio 1 – 2.4 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams - Radio 2 – 5 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams Channels: - Radio 1 – 2.4 GHz: 20 MHz and 40 MHz - Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 2.976 Gbps - Radio 1 – 2.4 GHz: 7.3 Mbps to 574 Mbps (MCS0 to MCS11) - Radio 2 – 5 GHz: 7.3 Mbps to 2.402 Gbps (MCS0 to MCS11)

Hardware Specifications	RG-AP9220(V2)
802.11ax	Radio technologies: Uplink/Downlink Orthogonal Frequency-Division Multiple Access (OFDMA) Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM Packet aggregation: ● A-MPDU ● A-MSDU DFS CDD/CSD MRC STBC LDPC TxBF WPA3
802.11be	Four spatial streams ● Radio 1 – 2.4 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams ● Radio 2 – 5 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams Channels: ● Radio 1 – 2.4 GHz: 20 MHz and 40 MHz ● Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 3.570 Gbps ● Radio 1 – 2.4 GHz: 7.3 Mbps to 0.688 Gbps (MCS0 to MCS13) ● Radio 2 – 5 GHz: 7.3 Mbps to 2.882 Gbps (MCS0 to MCS13) Radio technologies: Uplink/Downlink OFDMA Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM Packet aggregation: ● A-MPDU ● A-MSDU DFS CDD/CSD MRC STBC LDPC TxBF WPA3
Antenna	Wi-Fi ● 2.4 GHz: Two built-in omnidirectional smart antennas, with the peak antenna gain of 4.5 dBi ● 5 GHz: Two built-in omnidirectional smart antennas, with the peak antenna gain of 5.2 dBi Bluetooth ● One built-in omnidirectional antenna, with the peak antenna gain of 4.5 dBi
Port	1 x 100/1000/2.5GBASE-T port 1 x 5GE SFP port, which is compatible with 1GE and 2.5GE transceivers 1 x RJ45 console port 1 x USB 2.0 port (Type A connector) 1 x Bluetooth 5.3
Status LED	1 x system status LED ● AP power-on status ● Software initialization status and upgrade status ● Uplink service port status ● Wireless user online status ● CAPWAP tunnel timeout ● Specific AP locating

Hardware Specifications	RG-AP9220(V2)
Button	1 x Reset button - Press the button for shorter than 2 seconds. Then the device restarts. - Press the button for longer than 5 seconds. Then the device restores to factory settings.
Dimensions (W x H x D)	Main unit: 200 mm x 200 mm x 40 mm (7.87 in. x 7.87 in. x 1.57 in.) Shipping: 500 mm x 390 mm x 260 mm (19.69 in. x 15.35 in. x 10.24 in.)
Weight	Main unit: 0.64 kg (1.41 lbs) Mounting bracket: 0.06 kg (0.13 lbs) Shipping: 12.18 kg (26.85 lbs)
Mounting	Ceiling/Wall-mount
Lock option	Kensington lock and securing latch
Input power supply	The AP supports the following power supply modes: 48 V DC/0.54 A power input over the DC connector - PoE/PoE+ input, in compliance with IEEE 802.3af/at Note: - If both DC power and PoE are available, DC power is preferred. - When 802.3af power supply is used, the AP starts up normally. In this case, the USB port is disabled, the maximum transmit power of radios is 19 dBm, and optical ports are not supported.
Maximum power consumption	Maximum power consumption: 18.5 W - DC power: 18.5 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2, maximum radio power of 23 dBm, and USB port for external power supply 802.3at (PoE+): 18.5 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2, maximum radio power of 23 dBm, and USB port for external power supply 802.3af (PoE): 12.95 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2, maximum radio power of 19 dBm, and USB port disabled - Idle mode: 5.5 W
External power supply	When 802.3at (PoE+) power supply is used, the AP can provide 5 V/0.5 A power over the USB port to supply power to or connect to an IoT module.
Environment	Storage temperature: -40°C to +70°C (-40°F to +158°F) Storage humidity: 0% RH to 95% RH (non-condensing) Storage altitude: -500 m to +5,000 m (-1640.42 ft. to +16,404.20 ft.) Operating temperature: -10°C to +50°C (14°F to 122°F) Operating humidity: 5% RH to 95% RH (non-condensing) Operating altitude: -500 m to +5,000 m (-1640.42 ft. to +16,404.20 ft.) Note: At an altitude in the range of 1,800–5,000 m (5,905.51–16,404.20 ft.), every time the altitude increases by 220 m (721.78 ft.), the maximum temperature decreases by 1°C (1.8°F).
Mean Time Between Failure (MTBF)	200,000 hours (22 years) at the operating temperature of 25°C (77°F)
System memory	512 MB DRAM, 256 MB flash
Transmit power	2.4 GHz - Maximum transmit power (802.3at): 23 dBm (199.53 mW) - Minimum transmit power (802.3af): 0 dBm (1 mW) 5 GHz - Maximum transmit power (802.3at): 23 dBm (199.53 mW) - Minimum transmit power (802.3af): 0 dBm (1 mW) Note: - Adjust the transmit power by percentage (recommended), with 1 dBm increments. - The transmit power is limited by local regulatory requirements. For details, see WLAN Country or Region Codes and Channel Compliance.

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

Wi-Fi Radio Performance		RG-AP9220(V2)		
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum Transmit Power per Transmit Chain	Maximum Receive Sensitivity per Receive Chain
2.4 GHz 802.11b	1 Mbps	23 dBm	19 dBm	-96 dBm
	11 Mbps	23 dBm	19 dBm	-89 dBm
2.4 GHz 802.11g	6 Mbps	23 dBm	19 dBm	-91 dBm
	54 Mbps	20 dBm	19 dBm	-74 dBm
2.4 GHz 802.11n (HT20)	MCS0	23 dBm	19 dBm	-88 dBm
	MCS7	21 dBm	19 dBm	-70 dBm
2.4 GHz 802.11n (HT40)	MCS0	23 dBm	19 dBm	-85 dBm
	MCS7	21 dBm	19 dBm	-67 dBm
2.4 GHz 802.11ax (HE20)	MCS0	23 dBm	19 dBm	-88 dBm
	MCS11	18 dBm	18 dBm	-58 dBm
2.4 GHz 802.11ax (HE40)	MCS0	23 dBm	19 dBm	-85 dBm
	MCS11	18 dBm	18 dBm	-88 dBm
2.4 GHz, 802.11ax (HE40)	MCS0	23 dBm	-84 dBm	-84 dBm
	MCS11	15 dBm	-56 dBm	-56 dBm
2.4 GHz 802.11be (EHT20)	MCS0	23 dBm	19 dBm	-88 dBm
	MCS13	16 dBm	16 dBm	-52 dBm
2.4 GHz 802.11be (EHT40)	MCS0	23 dBm	19 dBm	-85 dBm
	MCS13	16 dBm	16 dBm	-49 dBm
5 GHz 802.11a	6 Mbps	23 dBm	19 dBm	-91 dBm
	54 Mbps	20 dBm	19 dBm	-74 dBm
5 GHz 802.11n (HT20)	MCS0	23 dBm	19 dBm	-88 dBm
	MCS7	21 dBm	19 dBm	-70 dBm
5 GHz 802.11n (HT40)	MCS0	23 dBm	19 dBm	-85 dBm
	MCS7	21 dBm	19 dBm	-67 dBm
5 GHz 802.11ac (VHT20)	MCS0	23 dBm	19 dBm	-88 dBm
	MCS8	20 dBm	19 dBm	-65 dBm
5 GHz 802.11ac (VHT40)	MCS0	23 dBm	19 dBm	-85 dBm
	MCS9	20 dBm	19 dBm	-60 dBm
5 GHz 802.11ac (VHT80)	MCS0	23 dBm	19 dBm	-82 dBm
	MCS9	20 dBm	19 dBm	-57 dBm
5 GHz 802.11ac (VHT160)	MCS0	23 dBm	19 dBm	-79 dBm
	MCS9	20 dBm	19 dBm	-54 dBm
5 GHz 802.11ax (HE20)	MCS0	23 dBm	19 dBm	-88 dBm
	MCS11	18 dBm	18 dBm	-58 dBm
5 GHz 802.11ax (HE40)	MCS0	23 dBm	19 dBm	-85 dBm
	MCS11	18 dBm	18 dBm	-55 dBm

Wi-Fi Radio Performance	RG-AP9220(V2)			
5 GHz 802.11ax (HE80)	MCS0	23 dBm	19 dBm	-82 dBm
	MCS11	18 dBm	18 dBm	-52 dBm
5 GHz 802.11ax (HE160)	MCS0	23 dBm	19 dBm	-79 dBm
	MCS11	18 dBm	18 dBm	-49 dBm
5 GHz 802.11be (EHT20)	MCS0	23 dBm	19 dBm	-88 dBm
	MCS13	16 dBm	16 dBm	-52 dBm
5 GHz 802.11be (EHT40)	MCS0	23 dBm	19 dBm	-85 dBm
	MCS13	16 dBm	16 dBm	-49 dBm
5 GHz 802.11be (EHT80)	MCS0	23 dBm	19 dBm	-82 dBm
	MCS13	16 dBm	16 dBm	-46 dBm
5 GHz 802.11be (EHT160)	MCS0	23 dBm	19 dBm	-79 dBm
	MCS13	16 dBm	16 dBm	-43 dBm

Note: Available frequency bands may vary with countries or regions. To use the above-mentioned frequency bands, ensure that they are supported in your country or region. For details, see [WLAN Country or Region Codes and Channel Compliance](#).

Software Specifications

Basic Function	RG-AP9220(V2)
Applicable software version	RGOS11.9(6)W8 or later
WLAN	
Maximum number of associated STAs	1,024 (up to 512 STAs per radio)
Recommended number of STAs	64
Maximum number of BSSIDs	32 (up to 16 BSSIDs per radio)
Maximum number of WLAN IDs	16
STA management	SSID hiding Band steering (preferential access to the 5 GHz radio) Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. Remote intelligent perception technology (RIPT) Intelligent STA identification Intelligent load balancing based on the STA quantity, traffic, or band Intelligent STA identification (the AC is required) Rate set configuration
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	STA/SSID/AP-based rate limiting
CAPWAP	IPv4/IPv6 CAPWAP Layer 2 and Layer 3 topology between an AP and an AC An AP can automatically discover the accessible AC. An AP can be automatically upgraded through the AC. An AP can automatically download the configuration file from the AC. CAPWAP through NAT MTU setting and fragmentation over CAPWAP tunnels Encryption over CAPWAP data tunnels Encryption over CAPWAP control tunnels

Basic Function	RG-AP9220(V2)
Data forwarding	Centralized and local forwarding
Wireless roaming	Layer 2 and Layer 3 roaming
Wireless locating	Mobile unit (MU) locating
Application management	Application identification
Security and Authentication	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) EXEC authorization, specifying source IP addresses of RADIUS packets, supporting authentication of other vendors, and built-in authentication server PSK, web-based, 802.1X, WPA, WPA2, and WPA3 authentication MAB Data encryption: WEP (64/128 bits), WPA-Personal, WPA-Enterprise, WPA2-Personal (PSK, TKIP, CCMP), WPA2-Enterprise, WPA3-Personal (SAE, WPA2/WPA3), WPA3-Enterprise (CCMP)
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Wireless Intrusion Detection System (WIDS) User isolation Rogue AP detection and containment
Dynamic policy	IP standard ACL, MAC extended ACL, IP extended ACL, expert ACL, and IPv6 ACL Time range-based ACL ACL based on a Layer 2 interface ACL based on a Layer 3 interface Ingress ACL based on a wireless interface Dynamic ACL assignment based on 802.1X authentication (used with an AC)
CPP	CPU Protect Policy (CPP)
NFPP	Network Foundation Protection Policy (NFPP) ARP attack defense, ICMP attack defense, and DHCP attack defense
Routing and Switching	
MAC	Static MAC address, MAC address filtering, MAC address limiting MAC address table size: 1,024 Maximum number of static MAC addresses: 1,024 Maximum number of filtered MAC addresses: 1,024
Ethernet	Jumbo frame length: 1,518 Full-duplex and half-duplex modes of interfaces Optical transceiver information display, alarms about faults, and diagnosis parameter measurement (QSFP+/SFP+/SFP)
VLAN	Interface-based VLAN assignment Maximum number of SVIs: 256 Maximum number of VLANs: 4,094 VLAN ID range: 1–4,094
ARP	ARP entry aging, gratuitous ARP learning, and proxy ARP Maximum number of ARP entries: 1,024 ARP check
IPv4 services	Static IPv4 address and DHCP-assigned IPv4 address Maximum number of IPv4 addresses configured on each Layer 3 interface: 200 NAT, FTP ALG, and DNS ALG
IPv6 services	IPv6 addressing, Neighbor Discovery (ND), IPv6 ND proxy, ICMPv6, and IPv6 ping IPv6 DHCP client Maximum number of IPv6 addresses configured on each Layer 3 interface: 400

Basic Function	RG-AP9220(V2)
IP routing	IPv4/IPv6 static route Maximum number of static IPv4 routes: 1,024 Maximum number of static IPv6 routes: 1,000
Multicast	Multicast-to-unicast conversion
VPN	PPPoE client IPsec VPN
Network Management and Monitoring	
Network management	NTP server and NTP client SNTP client SNMPv1/v2c/v3 Fault detection and alarms Information statistics collection and logging
Network management platform	Web management (eWeb)
User access management	Console, 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. When the AP works in Fat mode, it can be switched to Fit mode through the console port or Telnet. When the AP works in Cloud mode, it can be managed through WIS Cloud.

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

Value-added Software	RG-AP9220(V2)
Intelligent O&M	
Authentication and encryption	Network operation analysis such as device stability and signal coverage Measuring user network experience based on indicators including latency, packet loss, RSSI, and channel utilization, with visualized network experience results Statistics on the number of online and offline failures of STAs associated with different APs, average RSSI, and other parameters VIP monitoring and alarm, and custom alarm thresholds STA global experience map and experience coverage evaluation based on the time range STA access protocol replay and fine-grained STA fault diagnosis Note: These functions are supported only when the RG-AP9220(V2) works in Fit mode.
Network optimization	Network performance optimization, including one-click network optimization and optimization solution setting based on different scenarios Sticky client roam steering and experience indicator comparison Remote association steering and experience indicator comparison One-click diagnosis for analyzing problems and providing suggestions
Big data	Baseline analysis, recording changes in configuration, software version, and other parameters, and tracking changes in network KPIs Time capsule for analyzing the history of device version and configuration changes
Cloud site survey	Batch generation of building floor information, floor plan upload, and drag-and-drop AP placement
One-click report	One-click health check report and generation of reports on the overall network operating status
Security radar	Unauthorized Wi-Fi signal locating and classified display, as well as countermeasure capabilities

Value-added Software	RG-AP9220(V2)
Cloud management	
Management and maintenance	Uniformly connecting, managing, and maintaining APs, ACs, and other devices Batch device configuration and upgrade ZTP deployment, creating configuration templates, and automatically applying configured templates Discovering wired and wireless network topology with one click and generating the topology
Cloud Authentication	
Authentication mode	SMS authentication, fixed account authentication, one-click authentication, Facebook authentication, Instagram authentication, voucher authentication, and other authentication modes Authentication implemented in the cloud, without the need to deploy the local authentication server
Portal authentication page	Customizing Portal authentication pages for PCs and mobile phones
SMS gateway	Interworking with Guodu and Alibaba Cloud SMS gateways
Platform Capabilities	
Big data capabilities	Mainstream persistence solutions based on Hadoop, MongoDB, and MySQL, providing distributed storage capabilities Spark-based big data computing capabilities Data warehouse building based on Hive, data model conversion, and integration
Hierarchical and role-based access control	Authorizing different applications for different users to meet service needs of different departments Administrators at different sites have different operation permissions.
System management	System management functions including account operations, authorization configuration, email configuration, configuration backup, and exception alarms

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

Regulatory Compliance	RG-AP9220(V2)
Regulatory compliance	EN 55032, EN 55035, EN 61000-3-3, EN IEC 61000-3-2, EN 301 489-1, EN 301 489-3, EN 301 489-17, EN 300 328, EN 301 893, EN 300 440, FCC Part 15, EN IEC 62311, IEC 62368-1, EN 62368-1, EN 18031-1, EN 18031-2

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

Note:

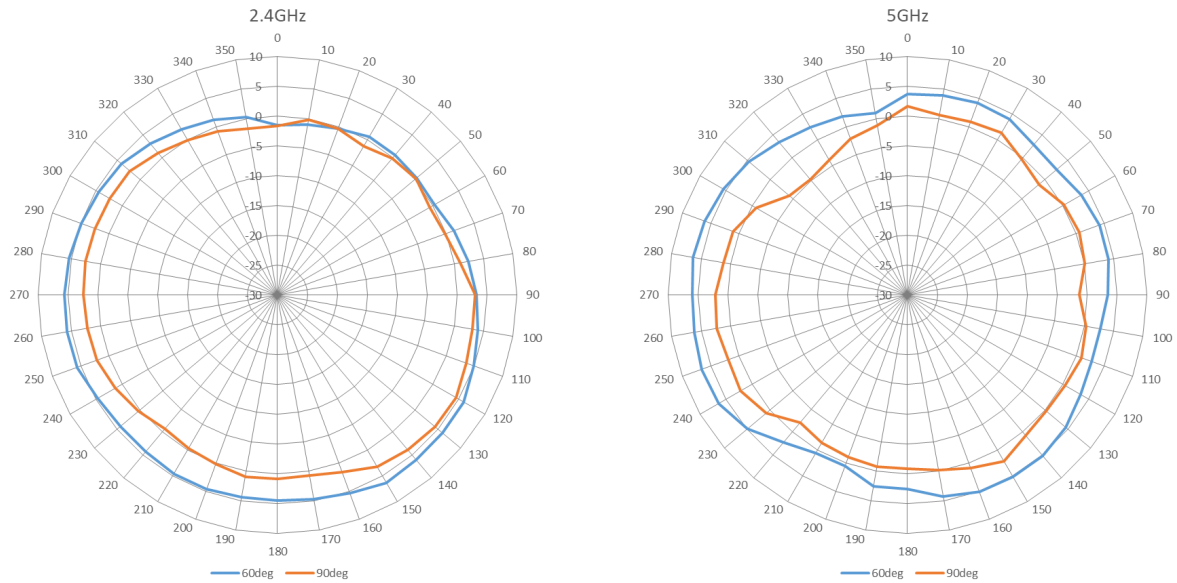
- EU simplified DoC: Hereby, [Ruijie Networks Co., Ltd.] declares that the radio equipment type [RG-AP9220(V2)] is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://www.ruijie.com/>.
- UK simplified DoC: Hereby, [Ruijie Networks Co., Ltd.] declares that the radio equipment type [RG-AP9220(V2)] is in compliance with UK Radio Equipment Regulation 2017. The full text of the UK declaration of conformity is available at the following internet address: <https://www.ruijie.com/>.
- The functions of Wireless Access Systems including Radio Local Area Networks(WAS/RLANs) within the band 5150-5350 MHz for this device are restricted to indoor use only within all European Union countries (BE/BG/CZ/DK/DE/EE/IE/EL/ES/FR/HR/IT/CY/LV/LT/LU/HU/MT/NL/AT/PL/PT/RO/SI/SK/FI/SE/TR/NO/CH/IS/LI/UK(NI))
- Ruijie wireless products provide only secure and reliable network protocols and communication ports by default. For details, see [Ruijie Default Protocols and Ports for Wireless Products](#). Proper firewall and security policies can be implemented based on this document to ensure the normal operation of wireless services.



08 Antenna Pattern Plots

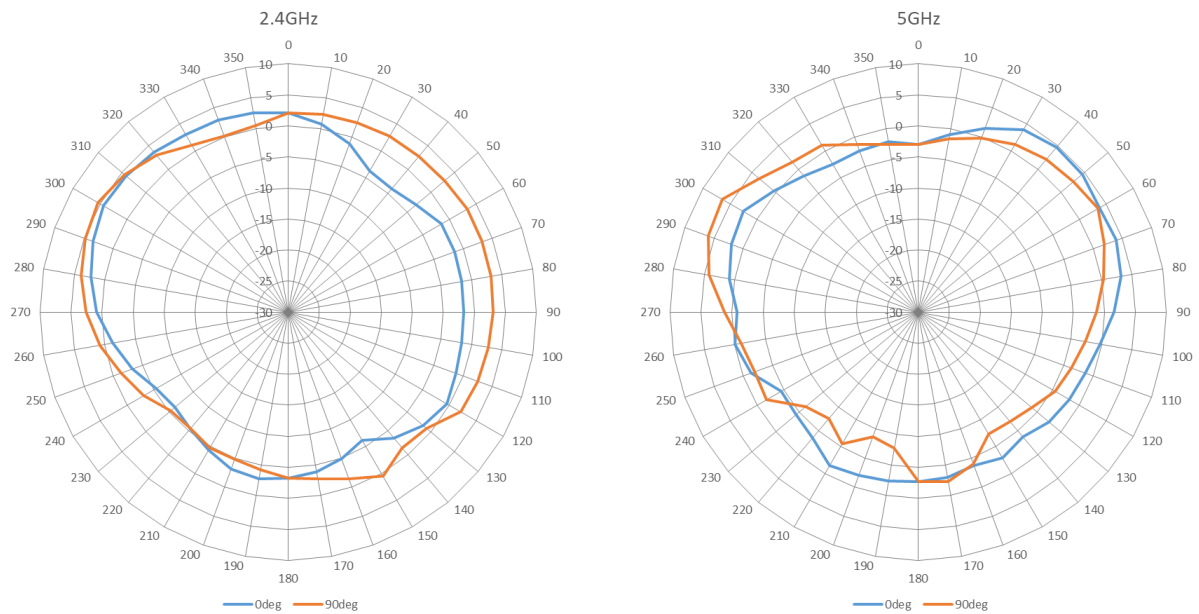
Horizontal Planes (Top View)

The following figure shows the azimuth antenna patterns at 2.4 GHz and 5 GHz radios.



Vertical Planes (Front View)

The following figures show the elevation antenna patterns at 2.4 GHz and 5 GHz radios.



Note: Operating frequency bands are country/region-specific and comply with local regulations.

09 Ordering Information

Model	Description
RG-AP820-L(V2)	Wi-Fi 7 (802.11be) dual-radio indoor access point Up to four spatial streams, peak data rate of 3.570 Gbps - Radio 1 – 2.4 GHz: Two spatial streams, 2x2 MU-MIMO, peak data rate of 688 Mbps - Radio 2 – 5 GHz: Two spatial streams, 2x2 MU-MIMO, peak data rate of 2.882 Gbps It complies with 802.11a/b/g/n/ac/ax/be, and supports switchover among Fat, Fit, and cloud modes. It provides IEEE 802.3af/at-compliant (PoE/PoE+) and DC power supply. Note: The DC power supply needs to be purchased separately, and the output voltage/current must be 48 V/0.54 A.
MINI-GBIC-SX-MM850	1000BASE-SX mini-GBIC transceiver
MINI-GBIC-LX-SM1310	1000BASE-LX mini GBIC transceiver
2.5G-SFP-LX03-SM1310-BIDI-I	2.5GBASE-LX-SFP BIDI transceiver
2.5G-SFP-LX03-SM1550-BIDI-I	2.5GBASE-LX-SFP BIDI transceiver

Note: Only some supported optical transceiver models are displayed here. For more information, contact Ruijie pre-sales engineers.

10 Package Contents

Item	Quantity
RG-AP9220(V2)	1
Mounting bracket	1
ST4.2 x 20 mm PWA Philips pan head self-tapping screw	4
Plastic expansion anchor	1
M4 x 16 mm Philips self-tapping screw	1
Quick Installation Guide	1
Warranty Card and Hazardous Substance Table	1
Ruijie wireless product management software (pre-installed on the AP)	1

Note: Currently, only some supported optical transceiver models are displayed. For more information about optical transceiver models, contact Ruijie pre-sales engineers.

11 Warranty

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

- Warranty terms: <https://www.ruijie.com/support/servicepolicy>
- Warranty period: <https://www.ruijie.com/support/servicepolicy/Service-Support-Summary/>

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

12 More Information

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

- Ruijie Networks official website: <https://www.ruijie.com/>
- Online support: <https://www.ruijie.com/support>
- Hotline support: <https://www.ruijie.com/support/hotline>
- Email support: EBGITSC@ruijie.com.cn
- WLAN Country or Region Codes and Channel Compliance:
https://www.ruijie.com/support/documents/slide_wlan-country-codes-overview
- Ruijie Default Protocols and Ports for Wireless Products:
https://www.ruijie.com/en-global/support/documents/slide_wlan-network-protocol-port/



Ruijie Networks Co., Ltd.

For more information, visit www.ruijie.com or call 86-400-620-8818.