

RG-AP7136-R

Wi-Fi 7 Quad-Radio
Indoor Access Point



01 Product Overview

The RG-AP7136-R is a Quad-radio Wi-Fi 7 access point (AP) launched by Ruijie Networks for indoor scenarios in various sectors covering higher education, government, general education, and business.

In compliance with IEEE 802.11be, IEEE 802.11ax, IEEE 802.11ac Wave2, IEEE 802.11ac Wave1, and IEEE 802.11n standards, the RG-AP7136-R adopts a hardware-independent Quad-radio design and delivers a combined peak data rate of 9.335 Gbps, eliminating the performance bottleneck.

The RG-AP7136-R integrates Ruijie AI radio design. The additional intelligent radio enables real-time full-band scanning, ensuring high security and superior user experience in the Wi-Fi environment.

The RG-AP7136-R is designed considering factors such as wireless network security, radio control, mobile access, QoS, seamless roaming, and Internet of Things (IoT). The RG-AP7136-R can be used together with Ruijie access controllers (ACs) and RG-WIS to implement wireless user data forwarding, security, and access control.

The RG-AP7136-R supports local power supply and Power over Ethernet (PoE), which can be selected based on power supply conditions. In addition, the RG-AP7136-R can be mounted on a wall or ceiling, making it ideal for scenarios including offices, conference rooms, and classrooms.

02 Product Appearance



RG-AP7136-R



RG-AP7136-R

03 Product Highlights

Ultra-High Performance

- Quad-radio design with support for the latest IEEE 802.11be standard, providing 9.335 Gbps peak data rate for high-speed wireless access.
- Wi-Fi 7 technologies and 6 GHz spectrum resources to enable a peak data rate of up to 9.335 Gbps in the 6 GHz frequency band, thereby providing users with high-performance wireless experience.
- Advanced 4096-QAM technology, delivering higher data rates and enhanced user experiences in demanding scenarios.
- Orthogonal Frequency-Division Multiple Access (OFDMA) improves network efficiency and reduces latency, enabling seamless access for high-density deployments.
- Dynamic Frequency Selection (DFS) optimizes RF spectrum usage and minimizes radar interference,

ensuring stable and efficient network performance.

High Security and Reliability

- Comprehensive wireless security features, including Wi-Fi Protected Access 3 (WPA3), 802.1X, and Private Pre-Shared Key (PPSK), delivering robust data protection.
- Multicast-to-unicast conversion and intelligent monitoring enhance the stability of multimedia services and overall network reliability.

Ease of Management

- Flexible deployment options with support for Fat, Fit, and Cloud modes, offering simplified provisioning and comprehensive remote management.
- Integration with WIS Cloud for centralized management, including device configuration, real-time monitoring, and one-click optimization for end-to-end network lifecycle management.

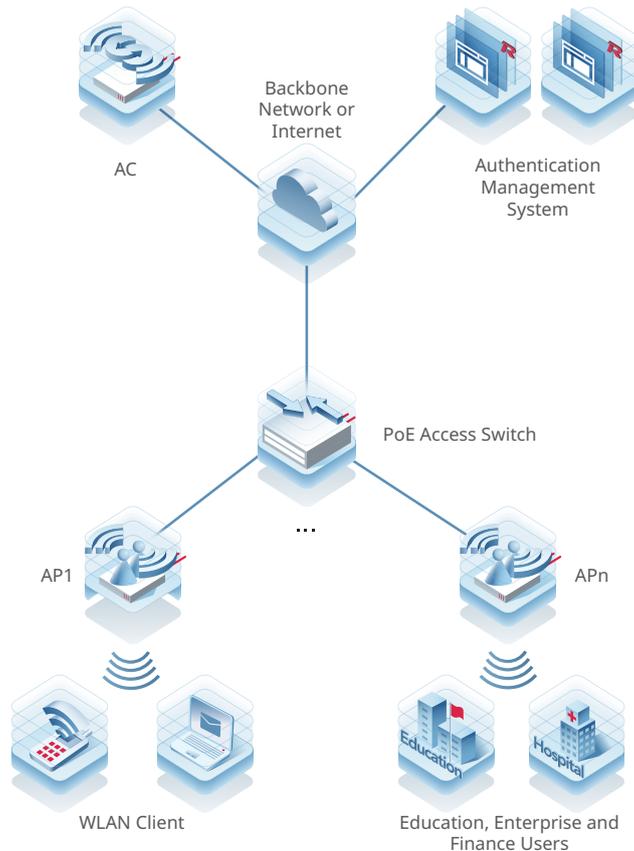
04 Typical Applications

Typical Scenarios

The RG-AP7136-R is applicable to densely populated areas, and high-capacity requirements. Such areas include offices, conference rooms, and classrooms. The

RG-AP7136-R can be flexibly deployed based on the environment.

The following figure shows the typical network topology of the RG-AP7136-R.



Higher Education

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.



Library

Wi-Fi deployment in libraries facilitates quick access to online resources such as e-books and academic papers for research and study by students and teachers.



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.



Government and Commerce

Large Conference Center

Deploying Wi-Fi in conference centers enables high-definition conference broadcasting, remote conferencing, and allows all attendees to simultaneously access wireless networks, thereby improving conference efficiency.



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

05 Product Features

Ruijie Simplified Optical Ethernet Solution

The RG-AP7136-R supports Ruijie Simplified Optical Ethernet Solution.

Ruijie Simplified Optical Ethernet Solution replaces traditional Ethernet cables with optical fibers. Featuring a flat network architecture, simple implementation, neat cabling, and elastic network upgrade, this solution is superior to traditional Ethernet networking solutions.

Independent AI Radio Design

The hardware-independent AI radio card can safeguard the security of 2.4 GHz/5 GHz radio in 24/7 mode and carry out radar scanning on wireless networks to eliminate potential risks. Better roaming policies are implemented through real-time client scanning, providing superior roaming experience for mobile office, mobile video conferencing, or network courses.

High-Speed Wireless Access, High Energy Efficiency and Reliability

4096-QAM for High Data Rate

The RG-AP7136-R adopts a Quad-radio design and complies with the next-generation IEEE 802.11be standard. When three radios are enabled, the RG-AP7136-R can provide a combined peak data rate of 9.335 Gbps, delivering high-speed access experience.

OFDMA for High-Density Client Access

The Orthogonal Frequency Division Multiple Access (OFDMA) feature in IEEE 802.11be enables the RG-AP7136-R to divide a Wireless Local Area Network (WLAN) channel into multiple sub-channels, with each client consuming one or more sub-channels. The RG-AP7136-R can implement scheduling for multiple clients to receive and send packets concurrently. This reduces contention for air interface resources and backoff, shortens network latency, and boosts network efficiency.

In a high-density deployment and access scenario, the average rate per client can be increased compared to IEEE 802.11ax.

Advanced Wi-Fi Technologies

The RG-AP7136-R supports the following radio transmission technologies:

- Dynamic frequency selection (DFS) optimizes the use of available radio spectrum to prevent radar channel interference.

- Cyclic delay/shift diversity (CDD/CSD) improves downlink radio frequency (RF) performance, and converts spatial diversity to frequency diversity to avoid intersymbol interference, thus decreasing the bit error rate (BER) and effectively reducing signal distortion.
- Maximum ratio combining (MRC) improves the signal quality at the receiver end and enhances reliability and performance of received signals.

The RG-AP7136-R supports the following radio channel coding technologies:

- Space-time block coding (STBC) increases the range and improves the signal reception, and enhances the reliability of data transmission.
- Low-density parity check (LDPC) corrects errors efficiently and improves the throughput.
- Transmit beam-forming (TxBF) expands the signal coverage and enhances the reliability of specific devices, thereby improving the data rate.

Intelligent Identification

The RG-AP7136-R is capable of identifying smart mobile terminals (such as iOS and Android terminals) and PCs. The RG-AP7136-R can be interconnected with WIS Cloud to implement visualized wireless network management based on wireless endpoint types and perform network optimization with one click.

Intelligent Local Forwarding

The RG-AP7136-R integrates the intelligent local forwarding technology of Ruijie Networks, eliminating the traffic bottleneck of ACs. The data forwarding mode of the RG-AP7136-R can be pre-configured through a Ruijie AC. The RG-AP7136-R determines whether data needs to be forwarded by the AC or be sent to a wired network for data exchange based on SSIDs or user VLANs.

The local forwarding technology enables the RG-AP7136-R to forward delay-sensitive data that requires real-time high-performance transmission over a wired network. This greatly reduces the traffic forwarding burden of the AC to better adapt to high-throughput transmission on 802.11be networks.

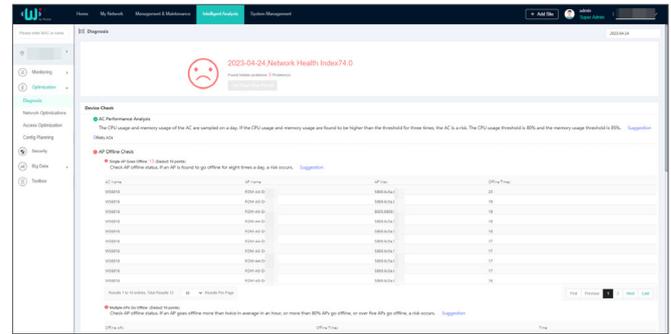
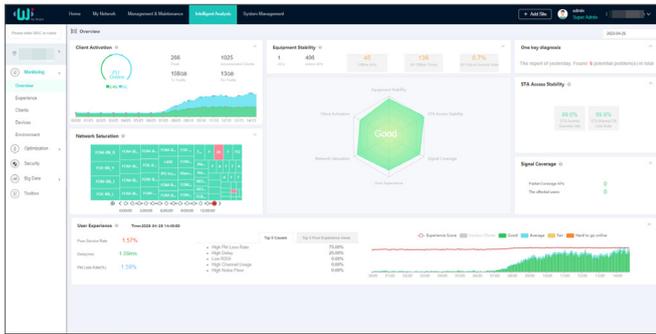
Abundant QoS Policies

The RG-AP7136-R provides abundant QoS policies. It supports WLAN/AP/STA-based bandwidth limiting as well as Wi-Fi Multimedia (WMM) that defines priorities for different service data. Therefore, the RG-AP7136-R can provide timely and quantitative transmission of audio and video services, and ensure smooth application of multimedia services.

- 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.



07 Specifications

Hardware Specifications

Hardware Specifications	RG-AP7136-R
802.11n	<p>Six spatial streams</p> <ul style="list-style-type: none"> • Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams • Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams • Radio 4 – AI Radio, 2.4 GHz/5 GHz: 2x2 MIMO, two spatial streams <p>Channels:</p> <ul style="list-style-type: none"> • Radio 1 – 2.4 GHz: 20 MHz and 40 MHz • Radio 2 – 5 GHz: 20 MHz and 40 MHz • Radio 4 – AI Radio, 2.4 GHz/5 GHz: 20 MHz and 40 MHz <p>Combined peak data rate: 600Mbps</p> <ul style="list-style-type: none"> • 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 4 – AI Radio, 2.4 GHz/5 GHz: AI Radio for scanning only <p>Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM)</p> <p>Modulation types: BPSK, QPSK, 16-QAM, and 64-QAM</p> <p>Packet aggregation:</p> <ul style="list-style-type: none"> • Aggregate MAC Protocol Data Unit (A-MPDU) • Aggregate MAC Service Data Unit (A-MSDU) <p>Dynamic Frequency Selection (DFS)</p> <p>Cyclic Delay/Shift Diversity (CDD/CSD)</p> <p>Maximum Ratio Combining (MRC)</p> <p>Space-Time Block Coding (STBC)</p> <p>Low-Density Parity Check (LDPC)</p> <p>Transmit beam-forming (TxBF)</p>

Hardware Specifications	RG-AP7136-R
802.11ac	<p>Four spatial streams</p> <ul style="list-style-type: none"> • Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams • Radio 4 – AI Radio, 5 GHz: 2x2 MIMO, two spatial streams <p>Channels:</p> <ul style="list-style-type: none"> • Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz • Radio 4 – AI Radio, 5 GHz: 20 MHz and 40 MHz <p>Combined peak data rate: 1.733 Gbps</p> <ul style="list-style-type: none"> • Radio 2 – 5 GHz: 6.5 Mbps to 1.733 Gbps (MCS0 to MCS9) • Radio 4 – AI Radio, 5 GHz: AI Radio for scanning only <p>Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM)</p> <p>Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM</p> <p>Packet aggregation:</p> <ul style="list-style-type: none"> • Aggregate MAC Protocol Data Unit (A-MPDU) • Aggregate MAC Service Data Unit (A-MSDU) <p>Dynamic Frequency Selection (DFS)</p> <p>Cyclic Delay/Shift Diversity (CDD/CSD)</p> <p>Maximum Ratio Combining (MRC)</p> <p>Space-Time Block Coding (STBC)</p> <p>Low-Density Parity Check (LDPC)</p> <p>Transmit beam-forming (TxBF)</p>
802.11ax	<p>Eight spatial streams</p> <ul style="list-style-type: none"> • Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams • Radio 2 – 5 GHz: 2x2 uplink/downlink MIMO, two spatial streams • Radio 3 – 6 GHz: 2x2 uplink/downlink MIMO, two spatial streams • Radio 4 – AI Radio, 2.4 GHz/5 GHz: 2x2 uplink/downlink MIMO, two spatial streams <p>Channels:</p> <ul style="list-style-type: none"> • Radio 1 – 2.4 GHz: 20 MHz and 40 MHz • Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz • Radio 3 – 6 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz • Radio 4 – AI Radio, 2.4 GHz/5 GHz: 20 MHz and 40 MHz <p>Combined peak data rate: 5.378Gbps</p> <ul style="list-style-type: none"> • Radio 1 – 2.4 GHz: 7.3 Mbps to 0.574 Gbps (MCS0 to MCS11) • Radio 2 – 5 GHz: 7.3 Mbps to 2.402 Gbps (MCS0 to MCS11) • Radio 3 – 6 GHz: 7.3 Mbps to 2.402 Gbps (MCS0 to MCS11) • Radio 4 – AI Radio, 2.4 GHz/5 GHz: AI Radio for scanning only <p>Radio technologies: uplink/downlink Orthogonal Frequency-Division Multiple Access (OFDMA)</p> <p>Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, and 1024-QAM</p> <p>Packet aggregation:</p> <ul style="list-style-type: none"> • Aggregate MAC Protocol Data Unit (A-MPDU) • Aggregate MAC Service Data Unit (A-MSDU) <p>Dynamic Frequency Selection (DFS)</p> <p>Cyclic Delay/Shift Diversity (CDD/CSD)</p> <p>Maximum Ratio Combining (MRC)</p> <p>Space-Time Block Coding (STBC)</p> <p>Low-Density Parity Check (LDPC)</p> <p>Transmit beam-forming (TxBF)</p> <p>WPA3</p>

Hardware Specifications	RG-AP7136-R
802.11be	<p>Six spatial streams</p> <ul style="list-style-type: none"> • Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams • Radio 2 – 5 GHz: 2x2 uplink/downlink MIMO, two spatial streams • Radio 3 – 6 GHz: 2x2 uplink/downlink MIMO, two spatial streams <p>Channels:</p> <ul style="list-style-type: none"> • Radio 1 – 2.4 GHz: 20 MHz and 40 MHz • Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz • Radio 3 – 6 GHz: 20 MHz, 40 MHz, 80 MHz, 160MHz, and 320 MHz <p>Combined peak data rate: 9.335 Gbps:</p> <ul style="list-style-type: none"> • 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 3 – 6 GHz: 7.3 Mbps to 5.765 Gbps (MCS0 to MCS13) <p>Radio technologies: uplink/downlink Orthogonal Frequency-Division Multiple Access (OFDMA)</p> <p>Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, and 4096-QAM</p> <p>Packet aggregation:</p> <ul style="list-style-type: none"> • Aggregate MAC Protocol Data Unit (A-MPDU) • Aggregate MAC Service Data Unit (A-MSDU) <p>Dynamic Frequency Selection (DFS)</p> <p>Cyclic Delay/Shift Diversity (CDD/CSD)</p> <p>Maximum Ratio Combining (MRC)</p> <p>Space-Time Block Coding (STBC)</p> <p>Low-Density Parity Check (LDPC)</p> <p>Transmit beam-forming (TxBF)</p> <p>WPA3</p>
Antenna	<p>Wi-Fi</p> <ul style="list-style-type: none"> • 2.4 GHz: two built-in omnidirectional smart antennas, with peak antenna gain of 3 dBi. • 5 GHz: two built-in omnidirectional smart antennas, with peak antenna gain of 3 dBi. • 6 GHz: two built-in omnidirectional smart antennas, with peak antenna gain of 3 dBi. <p>Bluetooth</p> <ul style="list-style-type: none"> • One integrated vertically polarized omnidirectional antenna, with peak antenna gain of 3 dBi.
Port	<p>1 x 100/1000/2.5G/5GBASE-T port, shared with one 10GE SFP+ port</p> <p>1 x 10GE SFP+ port, compatibility with 1GE/2.5GE/10GE modules, shared with one 5GE RJ45 port</p> <p>1 x 10/100/1000BASE-T port, supplying IEEE 802.3af power to an IoT unit</p> <p>1 x RJ45 console port</p> <p>1 x USB 2.0 (Type-A connector)</p> <p>1 x Bluetooth 5.3</p>
Status LED	<p>1 x multi-color system status LED</p> <ul style="list-style-type: none"> • AP power-on status • Software initialization status and upgrade status • Uplink service interface status • Wireless user online status • CAPWAP tunnel timeout • Specific AP locating
Button	<p>1 x Reset button</p> <ul style="list-style-type: none"> • 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)	<p>Main unit: 220 mm x 220 mm x 42.7 mm (8.66 in. x 8.66 in. x 1.68 in.)</p> <p>Shipping: 495mm x 379mm x 261mm (19.49 in. x 14.92 in. x 10.28 in.)</p>
Weight	<p>Main unit: 1.2 kg (2.65 lbs.)</p> <p>Mounting bracket: 0.05 kg (0.11 lbs.)</p> <p>Shipping: 13.98 kg (30.82 lbs.)</p>

Hardware Specifications	RG-AP7136-R
Mounting	Ceiling/Wall-mount (a mounting bracket is delivered with the main unit)
Lock option	Kensington lock and securing latch
Input power supply	<p>The AP supports the following power supply modes:</p> <ul style="list-style-type: none"> 54 V DC/1.25 A power input over DC connector PoE/PoE+/PoE++ input, in compliance with IEEE 802.3af/at/bt standard <p>Note: if both DC power and PoE are available, DC power is preferred.</p>
Maximum power consumption	<p>Maximum power consumption: 51 W</p> <ul style="list-style-type: none"> DC power: 51 W, Radio 1 (2.4 GHz) 2x2, Radio 2 (5 GHz) 2x2, Radio 3 (6 GHz) 2x2, Radio 4 (AI Radio) 2x2, LAN 1 for PoE power supply (48 V/12.95 W), USB port for external power supply (5 V/2.5 W) 802.3bt (PoE++): 51 W, Radio 1 (2.4 GHz) 2x2, Radio 2 (5 GHz) 2x2, Radio 3 (6 GHz) 2x2, Radio 4 (AI Radio) 2x2, LAN 1 for PoE power supply (48 V/12.95 W), USB port for external power supply (5 V/2.5 W) 802.3at (PoE+): 25.5 W, Radio 1 (2.4 GHz) 2x2, Radio 2 (5 GHz) 2x2, Radio 3 (6 GHz) 2x2, Radio 4 (AI Radio) is disabled, LAN 1 supports data transmission but does not provide PoE output. The USB port is disabled and does not supply power to external devices. 802.3af (PoE): 12.95 W, Radio 1 (2.4 GHz) 2x2, Radio 2 (5 GHz), Radio 3 (6 GHz), Radio 4 (AI Radio) is disabled, LAN 1 supports data transmission but does not provide PoE output. The USB port is disabled and does not supply power to external devices. Idle mode: 12.2 W
External power supply	<p>When powered by 802.3bt (PoE++), the AP can supply power to an external device.</p> <ul style="list-style-type: none"> The USB port can source 5 V/2.5 W power to an attached device. The LAN 1 port can source IEEE 802.3af power to an IoT unit.
Environment	<p>Storage temperature: -40°C to +70°C (-40°F to +158°F)</p> <p>Storage humidity: 5% RH to 95% RH (non-condensing)</p> <p>Storage altitude: -500 m to +5,000 m (-1640.42 ft. to +16,404.20 ft.)</p> <p>Operating temperature: -10°C to +50°C (14°F to 122°F)</p> <p>Operating humidity: 5% RH to 95% RH (non-condensing)</p> <p>Operating altitude: -500 m to +5,000 m (-1640.42 ft. to +16,404.20 ft.)</p> <p>Note: At an altitude in the range of 3,000–5,000 m (9,842.52–16,404.20 ft.), every time the altitude increases by 220 m (721.78 ft.), the maximum temperature decreases by 1°C (1.8°F).</p>
Mean Time Between Failure (MTBF)	200,000 hours (22 years) at the operating temperature of 25°C (77°F)
System memory	1024 MB DRAM, 256 MB flash
Transmit power	<p>2.4 GHz</p> <ul style="list-style-type: none"> Maximum transmit power: 23 dBm (199.53 mW) Minimum transmit power: 6 dBm (3.98 mW) <p>5 GHz</p> <ul style="list-style-type: none"> Maximum transmit power: 23 dBm (199.53 mW) Minimum transmit power: 6 dBm (3.98 mW) <p>6 GHz</p> <ul style="list-style-type: none"> Maximum transmit power: 22 dBm (158.49 mW) Minimum transmit power: 6 dBm (3.98 mW) <p>Note:</p> <ul style="list-style-type: none"> Adjusting the transmit power by percentage (recommended) and in 1dBm 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.

Radio Frequency Performance	RG-AP7136-R		
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum Receive Sensitivity per Receive Chain
2.4 GHz 802.11g	6 Mbps	23 dBm	-91 dBm
	24 Mbps	23 dBm	-85 dBm
	36 Mbps	23 dBm	-80 dBm
	54 Mbps	21 dBm	-74 dBm
2.4 GHz 802.11n (HT20)	MCS0	23 dBm	-85 dBm
	MCS7	20 dBm	-67 dBm
2.4 GHz 802.11n (HT40)	MCS0	23 dBm	-82 dBm
	MCS7	20 dBm	-64 dBm
2.4 GHz 802.11ax (HE20)	MCS0	23 dBm	-85 dBm
	MCS11	17 dBm	-58 dBm
2.4 GHz 802.11ax (HE40)	MCS0	23dBm	-82 dBm
	MCS11	17dBm	-54 dBm
2.4 GHz 802.11be(EHT20)	MCS0	23 dBm	-85 dBm
	MCS13	16 dBm	-52 dBm
2.4 GHz 802.11be (EHT40)	MCS0	23dBm	-82 dBm
	MCS13	16dBm	-49 dBm
5 GHz 802.11a	6 Mbps	23 dBm	-91 dBm
	24 Mbps	23 dBm	-85 dBm
	36 Mbps	23 dBm	-80 dBm
	54 Mbps	21 dBm	-74 dBm
5 GHz 802.11n (HT20)	MCS0	23 dBm	-85 dBm
	MCS7	20 dBm	-67 dBm
5 GHz 802.11n (HT40)	MCS0	23 dBm	-82 dBm
	MCS7	20 dBm	-64 dBm
5 GHz 802.11ac (VHT20)	MCS0	23 dBm	-85 dBm
	MCS9	18 dBm	-60 dBm
5 GHz 802.11ac (VHT40)	MCS0	23 dBm	-82 dBm
	MCS9	18 dBm	-57 dBm
5 GHz 802.11ac (VHT80)	MCS0	23 dBm	-82 dBm
	MCS9	18 dBm	-56 dBm
5 GHz, 802.11ac (VHT160)	MCS0	23 dBm	-79 dBm
	MCS9	18 dBm	-53 dBm

Radio Frequency Performance	RG-AP7136-R		
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum Receive Sensitivity per Receive Chain
5 GHz 802.11ax (HE20)	MCS0	23 dBm	-85 dBm
	MCS11	17 dBm	-58dBm
5 GHz 802.11ax (HE40)	MCS0	23 dBm	-82dBm
	MCS11	17 dBm	-54dBm
5 GHz 802.11ax (HE80)	MCS0	23 dBm	-82 dBm
	MCS9	18 dBm	-56 dBm
	MCS11	17 dBm	-52dBm
5 GHz 802.11ax (HE160)	MCS0	23 dBm	-79 dBm
	MCS9	18 dBm	-53 dBm
	MCS11	17 dBm	-50 dBm
5 GHz 802.11be (EHT80)	MCS0	23 dBm	-82 dBm
	MCS9	18 dBm	-56 dBm
	MCS11	17 dBm	-52 dBm
	MCS13	15 dBm	-46 dBm
5 GHz 802.11be (EHT160)	MCS0	23 dBm	-79 dBm
	MCS9	18 dBm	-53 dBm
	MCS11	17 dBm	-50 dBm
	MCS13	15 dBm	-44 dBm
6 GHz, 802.11ax (HE20)	MCS0	23 dBm	-88 dBm
	MCS11	18 dBm	-58dBm
6 GHz, 802.11ax (HE40)	MCS0	23 dBm	-85dBm
	MCS11	18 dBm	-55dBm
6 GHz, 802.11ax (HE80)	MCS0	23 dBm	-82 dBm
	MCS9	20 dBm	-57 dBm
	MCS11	18 dBm	-52 dBm
6 GHz, 802.11ax (HE160)	MCS0	23 dBm	-79 dBm
	MCS9	20 dBm	-54 dBm
	MCS11	18 dBm	-49 dBm
6 GHz, 802.11be (EHT20)	MCS0	23 dBm	-88 dBm
	MCS11	18 dBm	-58dBm
6 GHz, 802.11be (EHT40)	MCS0	23 dBm	-85dBm
	MCS11	18 dBm	-55dBm

Radio Frequency Performance	RG-AP7136-R		
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum Receive Sensitivity per Receive Chain
6 GHz, 802.11be (EHT80)	MCS0	23 dBm	-82 dBm
	MCS9	20 dBm	-57 dBm
	MCS11	18 dBm	-52 dBm
	MCS13	16 dBm	-46 dBm
6 GHz, 802.11be (EHT160)	MCS0	23 dBm	-79 dBm
	MCS9	20 dBm	-54 dBm
	MCS11	18 dBm	-49 dBm
	MCS13	16 dBm	-43 dBm
6 GHz, 802.11be (EHT320)	MCS0	23 dBm	-76 dBm
	MCS9	20 dBm	-51 dBm
	MCS11	18 dBm	-46 dBm
	MCS13	16 dBm	-40 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-AP7136-R
Applicable software version	RGOS 11.9(6)W5B10 or later
WLAN	
Maximum number of associated STAs	768 (up to 256 STAs per radio)
Practical maximum client count indication (per device)	100
Maximum number of BSSIDs	48 (up to 16 BSSIDs per radio)
Maximum number of WLAN IDs	16
STA management	SSID hiding Band steering Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. Remote intelligent perception technology (RIPT) Intelligent load balancing based on the STA quantity, traffic, or band Intelligent STA identification technology Rate set settings
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	STA/SSID/AP-based rate limiting

Basic Function		RG-AP7136-R
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
Data forwarding		Centralized and local forwarding
Wireless roaming		Layer 2 and Layer 3 roaming
Wireless locating		MU and TAG device 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, PPSK, Web, 802.1X, WPA, WPA2, and WPA3 authentication QR code-based guest authentication, SMS-based authentication, and MAC address bypass (MAB) authentication Data encryption: WEP (64/128 bits), WPA-Personal, WPA-Enterprise, WPA2-Personal (PSK, TKIP, CCMP), WPA2-Enterprise, WPA3-Personal (SAE, WPA2/WPA3 transition mode), WPA3-Enterprise (CCMP, GCMP), WPA3-OWE
Data frame filtering		Allowlist, static blacklist, and dynamic blacklist
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-level 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: 4,096 Maximum number of static MAC addresses: 2,048 Maximum number of filtered MAC addresses: 2,048
Ethernet		Jumbo frame length: 1,518 Full-duplex and half-duplex modes of interfaces IEEE802.1p and IEEE802.1Q Optical module information display, alarms about faults, and diagnosis parameter measurement (QSFP+/SFP+/SFP)

Basic Function	RG-AP7136-R
VLAN	Interface-based VLAN assignment VLAN Group (dynamic VLAN assignment based on the MAC address and 802.11 key) Maximum number of SVIs: 200 Maximum number of VLANs: 4,094 VLAN ID range: 1-4,094
ARP	ARP entry aging, gratuitous ARP learning, and proxy ARP Identification of IP address conflict among downlink users Maximum number of ARP entries: 2,048 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
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 SNMP v1/v2c/v3 Fault detection and alarming 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.

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-AP7136-R
Intelligent O&M	
Experience	Network operation analysis, such as device stability and signal coverage 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 Statistics on the number of online and offline failures of STAs associated with different APs, average signal strength, 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: To support the preceding functions, ensure that the AP works in Fit mode.

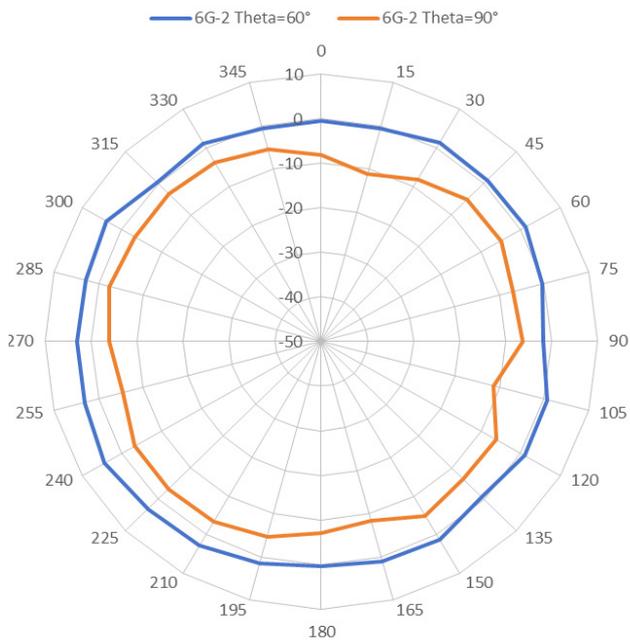
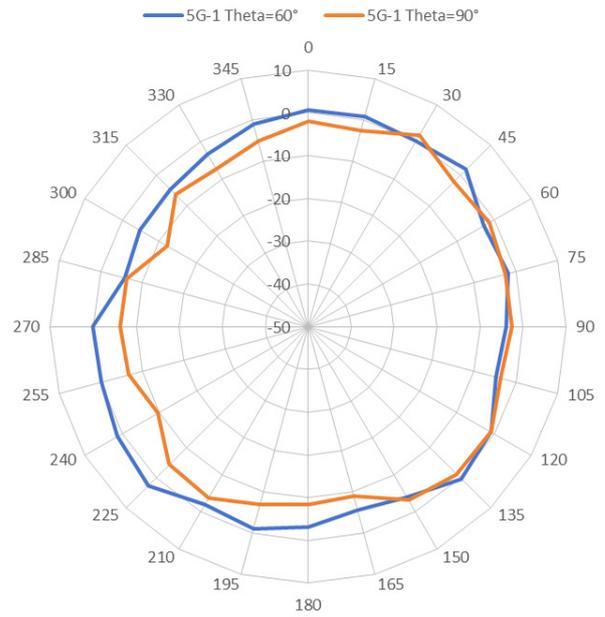
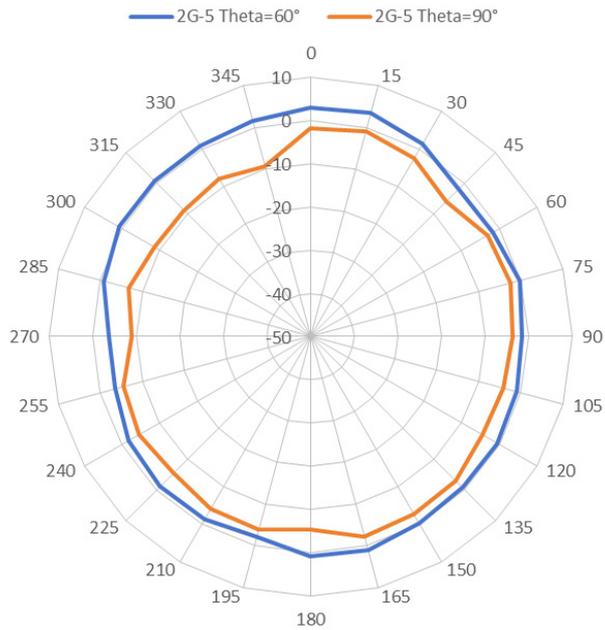
Value-added Software	RG-AP7136-R
Network optimization	Network performance optimization, including one-click network optimization and scenario-based optimization Client steering to cope with roaming stickiness, and experience indicator comparison Client steering to cope with remote association, and experience indicator comparison One-click diagnosis – analyzing problems and providing suggestions
Big data	Baseline analysis – recording the configuration, version, and other changes, and tracking network KPI changes 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 Deployment through Zero Touch Provisioning (ZTP) – creating configuration templates and automatically applying configured templates 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 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 Spark-based big data computing capabilities 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 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.

Note: 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.

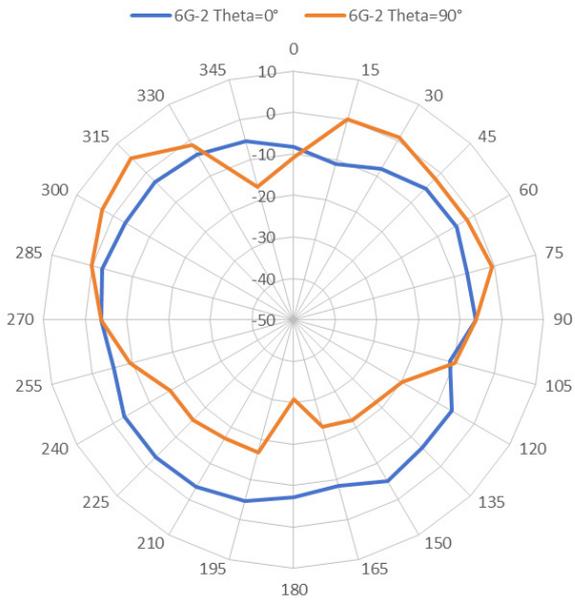
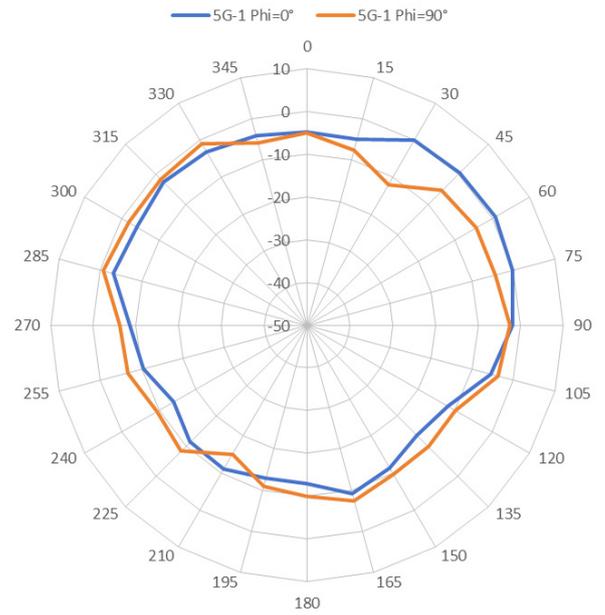
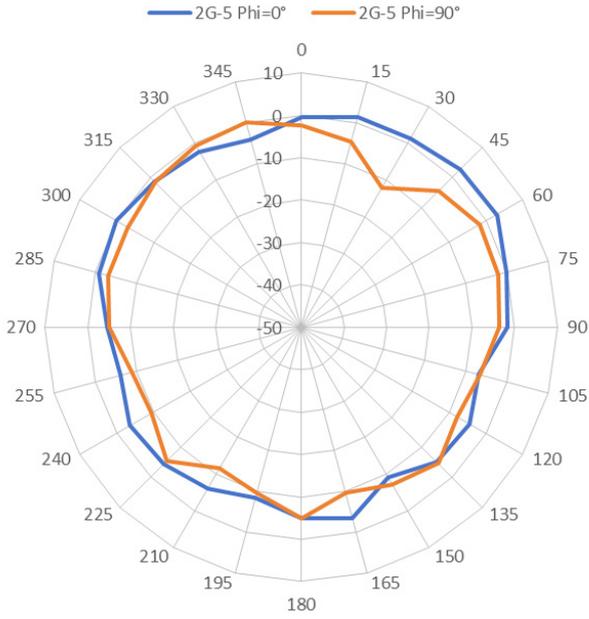
08 Antenna Pattern Plots

Horizontal Planes (Top View)



08 Antenna Pattern Plots

Vertical Planes (Front View)



09 Order Information

Model	Description
RG-AP7136-R	<p>Wi-Fi 7 Quad-radio indoor access point Up to eight spatial streams, peak data rate of 9.335 Gbps</p> <ul style="list-style-type: none"> • Radio 1: 2.4 GHz: two spatial streams, 2x2 MIMO, peak data rate of 0.688 Gbps • Radio 2: 5 GHz: two spatial streams, 2x2 uplink/downlink MIMO, peak data rate of 2.882 Gbps • Radio 3: 6 GHz: two spatial streams, 2x2 uplink/downlink MIMO, peak data rate of 5.765 Gbps • Radio 4: AI Radio, 2.4 GHz/5 GHz: 2 spatial streams, 2x2 MIMO, for scanning only <p>The AP consumes one license of an AC. In compliance with IEEE 802.11a/b/g/n/ac/ax/be standard Fat/Fit/Cloud mode switching. IEEE 802.3af/at/bt-compliant (PoE/PoE+/PoE++) and DC power supply</p> <p>Note:</p> <ul style="list-style-type: none"> • The power source equipment (PSE) needs to be purchased separately. • The DC power supply needs to be purchased separately, and the output voltage/current must be 54 V/1.25 A.
GE-SFP-LX20-SM1550-BIDI	SFP BIDI Transceiver-TX1550/RX1310, 20km, LC
2.5G-SFP-LX03-SM1550-BIDI	SFP 2.5G BIDI Transceiver-TX1550/RX1310, 3km, LC
XG-SFP-LR10-SM1330-BIDI-I	SFP+ BIDI Transceiver-TX1330/RX1270, 10km, LC
XG-SFP-LR-SM1310	10GBASE-SR, SFP+ Transceiver (1310nm, 10km, LC)

10 Package Contents

Item	Quantity
RG-AP7136-R AP	1
Mounting bracket	1
ST4.2 x 20 mm PWA Philips pan head self-tapping screw	4
Plastic expansion anchor	4
M4 x 16 mm Philips self-tapping screw	1
<i>Quick Installation Guide</i>	1
<i>Warranty Card and Hazardous Substance Table</i>	1
Ruijie wireless product management software (pre-installed on the AP)	1

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 Ruijie website 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/

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Ruijie Networks Co., Ltd.

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