WiFi 6

# RG-RAP2260 Series

## Wi-Fi 6 Dual Band Ceiling Mount

## Access Point

# Product Overview



Figure 1-1 RG-RAP2260(G)



Figure 1-2 RG-RAP2260(G)

# Product Overview

Users can perform comprehensive local management or remote management of the equipment in the entire network via the Ruijie Cloud app, equipment EWEB management, Ruijie Cloud platform, etc. Users can also share the network to third party for network hosting and collaborative management, thereby achieving simpler, easier to use, more secure and convenient enterprise network operation and maintenance.

# Highlight

## 2.1 Wi-Fi 6 technology

### 2.1.1 1024-QAM High-speed Access

The RG-RAP2260(G) adopts the dual-radio dual-band design and 2G+5G is recommended. With the next-generation 802.11ax for 5G, the maximum access rate can reach 1.2Gbps. If dual-radio is enabled concurrently, the high-speed Wi-Fi can reach 1.8Gbps, offering the true high-speed experience.

### 2.1.2 OFDMA High-density User Access

The RG-RAP2260(G) supports OFDMA of 802.11ax, which divides the WLAN channel into a plurality of narrower subchannels, with each user occupying one or more subchannels. By scheduling multiple users to receive and send packets concurrently via the AP, user competition and back-off can be reduced, thereby reducing network latency and improving network efficiency. In a high-density deployment environment, the average rate per user is increased to four times of 802.11ac.

### 2.1.3 Bi-Directional MU-MIMO

Compared with the previous Wi-Fi 5 (802.11ac) with only downlink MU-MIMO support, Wi-Fi 6 supports both uplink and downlink MU-MIMO ( multi-user, multiple-input and multiple-output ) . Therefore, Ruijie RG-RAP2260 Series access points can connect clients simultaneously, significantly improving the wireless performance and experience.

# **Highlight**

### 2.1.4 TWT ( Target Wake Time )

Target wake time (TWT) is used to help minimize contention between clients and reduce the amount of time a client in power save mode to be awake. Energy consumption is reduced by up to 70% of the battery consumption, thereby improving battery life.

### 2.1.5 Spatial Reuse with BSS Color

The RG-RAP2260(G) supports spatial reuse with basic service set (BSS) color of 802.11ax to identify the BSSs of different WLANs in the network by different coloring (BSS color), and further divide them into internal and external BSS. Different packet receiving and sending thresholds can be maintained. When receiving packets, BSS coloring is used to quickly identify the packet of the external BSS. If the signal strength is lower than the receiving threshold of the external BSS, the packet will be ignored. The transmission of the internal BSS packet will be not affected. This technology can implement channel reuse in a high-density scenario, greatly reducing the impact of co-channel interference for the actual network deployment.

# Highlight

## 2.2 Auto-provisioning via Self-Organizing Network

Supports Ruijie's self-developed smart networking feature, which breaks through the product limitations and realizes auto-discovery, auto-networking and auto-configuration between gateways, switches, and wireless APs without the need for controllers or Internet access.

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## 2.3 Lifetime free Ruijie Cloud management

Remote fault alarm, one-click optimizing and maintenance on Ruijie Cloud App.

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## 2.4 More LAN Port

Two LAN interfaces are provided to support more services.

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## 2.5 Seamless layer 3 roaming

Industrial Design: Robust casing, Provide better strength and safety for products.

# Product Features

### High-speed dual-band Wi-Fi

The device supports 2.4GHz and 5GHz dual-band communication, providing access rate of 574Mbps at 2.4GHz, 1201Mbps at 5GHz and up to 1775Mbps per AP. It can provide 5GHz frequency band with less interference, wider channel, and faster speed for the terminals, allowing the users to enjoy excellent wireless experience.

### Dual LAN ports design

The device adopts the dual LAN ports design. Even for complex networking requirements, it can easily and quickly support the expansion of third-party devices, such as cameras, time and attendance devices, etc.

### Support routing and AP mode

The device supports both AP and routing mode. A wireless network can be formed with multiple APs, or it can be used as a wireless router when deployed independently. The device offers more flexible configurations, more abundant application features, and more extensive applicable scenarios.

### Support Layer 3 roaming

The device supports Layer 3 roaming for the complex Layer 3 network. When users move across the Layer 3 networks, seamless roaming can be achieved without service interruption.

# **Product Features**

## Stronger and more stable signals

An aluminum alloy antenna reflector is added to reflect interference signals and focus effective signals so as to provide stronger signal transmission and better receiving sensitivity.
The device uses FBAR to filter out most of interferences caused by the operator's base stations, microwave ovens, Bluetooth devices, etc., so as to provide cleaner wireless signals, higher transmission rate and more stable transmission quality.

## Robust casing

With the robust and flame-retardant material of the AP casing, the impact resistance is 5 times higher than that of common ABS plastic materials. The tensile and flexural strengths are increased by 30%, which is not easy to damage. Users can rest assured during usage and maintenance.

## Simple installation

It supports various installation methods including on desktop, ceiling, wall, and pole. Adopting the non-directional installation design, the equipment can be installed in one go efficiently.
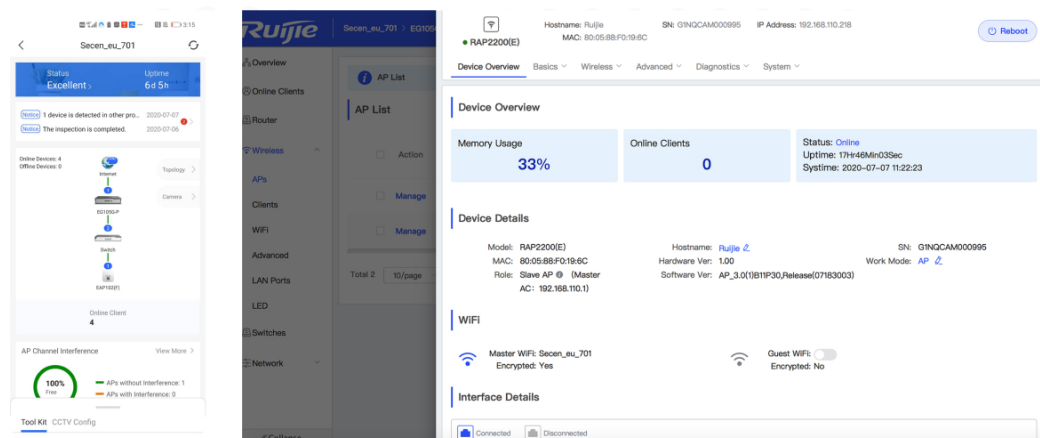
## Industrial design

The industrial product design, iconic edges and breathing light makes the product more recognizable.

# **Management Features**

## Multi-end management

The AP supports management via Ruijie Cloud app, Ruijie Cloud platform, equipment EWEB management to achieve multi-end local and remote management on PC, Ruijie Cloud app.



## Fast and smart configuration

In large-scale complex networks, the configuration of the entire network can be completed by connecting to a single gateway device. There is no need to configure the devices separately, which can greatly reduce the device configuration time.

## Scenario-based configuration

Scenario-based configurations can be performed via the web and Ruijie Cloud app, which can greatly reduce the configuration threshold of complex functions, such as visitor isolation solution, flow control solution, etc. Even novices can easily fulfill the diverse and complex requirements of the customers.

# **Management Features**

## Visualized operation and maintenance

The cloud computing network topology can comprehensively present the equipment operating status of the entire network. Through the rich information in the topology, you can quickly get the full picture of the network (network egress status, link status, device status), and quantify the user experience and network quality, so that users can master the information of the entire network.

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## Remote collaborative management

Users can perform comprehensive remote operation, management, and maintenance of the equipment in the entire network via the Ruijie Cloud app, Ruijie Cloud platform, etc. They can also share the network to third party for network hosting and collaborative management to operate and maintain the enterprise network more efficiently.

# Management Features

## AI & big data network optimization

Through artificial intelligence and cloud big data, the AP can perform comprehensive smart network operation, maintenance and optimization, including but not limited to:
1.Automatic identification of new equipment and adding it into the network, automatic system repair such as avoiding conflict of the WAN IP addresses

2.Smart system optimization such as service-based network policy configuration, RF channel and roaming adjustment
3.Diagnosis and repair suggestions for more than 30 common network anomalies including DHCP conflicts, abnormal negotiation rates, excessive traffic, AP disconnection and device interference.

# Technical Specifications

| Model | RG-RAP2260(G) |
|---|---|
| **Hardware specifications** | |
| Radio | Dual-stream dual-band |
| Protocol | Concurrent 802.11ax, 802.11ac wave2/wave1, 802.11a/b/g/n |
| Operating Bands | 802.11b/g/n/ax ： 2.4G ~ 2.4835GHz 802.11a/n/ac/ax ： 5G：5.150～5.350GHz，5.725～5.850GHz (country specific) |
| Antenna | Internal antennas ( 2.4G: 3dBi，5G: 3dBi ) |
| Spatial Streams | 2.4G 2x2MIMO  5G 2x2MIMO |
| Max Throughput | Up to 574Mbps at 2.4G Up to 1201Mbps at 5G 1.775Gbp per AP |
| Modulation | OFDM：BPSK@6/9Mbps，QPSK@12/18Mbps，16QAM@24Mbps，64QAM@48/54Mbps DSSS：DBPSK@1Mbps，DQPSK@2Mbps，and CCK@5.5/11Mbps MIMO-OFDM：BPSK，QPSK，16QAM ，64QAM，256QAM and1024QAM OFDMA |

# Technical Specifications

| Model | RG-RAP2260(G) |
|---|---|
| **Hardware specifications** | |
| Receive Sensitivity | 11b：-96dBm（1Mbps），-93dBm（5Mbps），-89dBm（11Mbps）<br>11a/g：-91dBm（6Mbps），-85dBm（24Mbps），-80dBm（36Mbps），-74dBm（54Mbps）<br> 11n：-90dBm（MCS0），-70dBm（MCS7），-89dBm（MCS8），-68dBm（MCS15）<br>11ac：20MHz：-88dBm（MCS0），-63dBm（MCS9）<br>11ac：40MHz：-85dBm（MCS0），-60dBm（MCS9）<br>11ac：80MHz：-85dBm（MCS0），-60dBm（MCS9）<br>11ax：80MHz：-82dBm（MCS0），-57dBm（MCS9），-52dBm（MCS11） |
| Maximum Transmit Power | 5.725～5.850GHz：≤20dBm (EIRP)<br>5.150～5.250GHz：≤20dBm (EIRP)<br>2.4～2.4835GHz：≤20dBm (EIRP) |
| Adjustable Power | 1dBm |
| Dimensions | 194mm×194mm×35mm (excluding mounting kits) |
| Weight | 0.56kg (excluding mounting kits) |
| Service Ports | 2 10/100/1000Base-T Ethernet ports, PoE/LAN1 port supports PoE |

# Technical Specifications

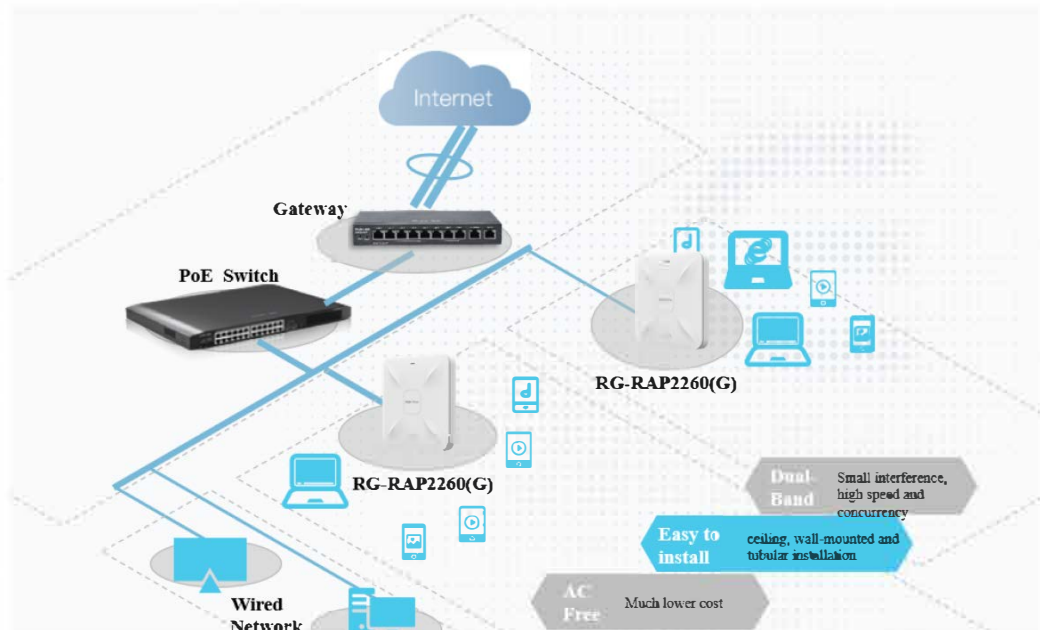| Model | RG-RAP2260(G) |
|---|---|
| **Hardware specifications** | |
| Management Port | NA |
| LED Indicator | Single indicator (green light) |
| Power Supply | Local power supply, DC 12V/1.5A (Note: The power adapter is sold as an optional accessory) 802.3af/802.3at PoE |
| Power Consumption | ≤ 15.3W |
| Environment | Operating temperature: 0°C ~ 40°C |
| | Storage temperature: -40°C ~ 70°C |
| | Operating humidity: 5% ~ 95% ( non-condensing ) |
| | Storage humidity: 5% ~ 95% ( non-condensing ) |
| Installation | Ceiling/wall-mountable |
| Safety Standard | GB4943, IEC 62368-1 |
| EMC Standard | GB9254 , EN301 489 , EN50155 , EN50121 , EN55032 , EN61000 , EN55035 |
| Vibration Standard | IEC61373 |
| Radio Standard | EN300 328, EN301 893 |
| MTBF | >400000H |

# Technical Specifications

| Model | RG-RAP2260(G) |
|---|---|
| **Software Features** | |
| Operating Mode | AP mode and routing mode |
| | Maximum number of clients: 512 |
| | Recommended number of clients: 100 |
| | Up to 8 SSIDs |
| | Support SSID hiding<br>Configuring the authentication mode, encryption mechanism, and VLAN attributes for each SSID |
| | SSID-based and radio-based STA limit |
| | Support Layer 2 user isolation |
| Roaming | Support Layer 2 and Layer 3 roaming |
| Security | Support PSK authentication |
| | Support static blacklist and whitelist |
| | Support WPA (TKIP), WPA2 (AES), and WPA-PSK data encryption |
| Routing | Support static IP address, DHCP, PPPoE Dial Up |
| Management and maintenance | Support unified networking of all network equipment<br>Support local or remote management with Ruijie Cloud app<br>Support local management with web<br>Support remote management with Ruijie Cloud platform |

# Technical Specifications

| Model | RG-RAP2260(G) |
|---|---|
| **Software Features** | |
| Platform management features | Automatic RF adjustment via the platform |
| | Unified configuration via the platform |
| | Unified monitoring via the platform |

# Typical Applications

RG-RAP2260 Series is an ideal choice for scenarios with simple building structure, no special obstructions, and relatively concentrated users, such as conference rooms, libraries, classrooms, bars, leisure centers, etc. The AP can be flexibly implemented according to different environments, and provides user access for up to maximum 512 recommened 100 terminals per AP.

# **Ordering Information**

| Model | Description | Remarks |
|---|---|---|
| RG-RAP2260(G) | Wi-Fi 6 dual-band Gigabit ceiling mount AP, dual Gigabit LAN uplink ports, built-in antennas, dual-band 2.4GHz/5GHz, 802.11ax, 802.11ac wave2/wave1, up to 1775Mbps access rate per AP; support AP and routing mode, Layer 3 roaming, Reyee unified networking and Ruijie Cloud app management; Support PoE and local power supply (PoE module and DC adapter are sold separately) | |