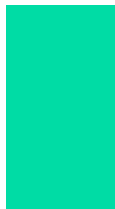
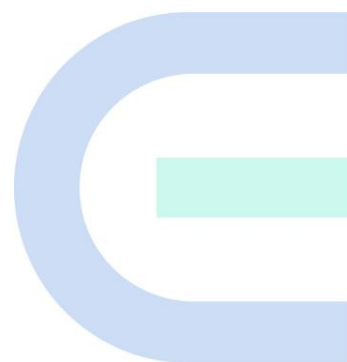


Ruijie Reyee RG-RAP2260(H) Access Point

Hardware Installation and Reference Guide



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Preface

Intended Audience

This document is intended for:

- Network engineers
- Technical support and servicing engineers
- Network administrators

Technical Support

- The official website of Ruijie Reyyee: <https://www.ruijienetworks.com/products/reyyee>
- Technical Support Website: <https://www.ruijienetworks.com/support>
- Case Portal: <https://caseportal.ruijienetworks.com>
- Community: <https://community.ruijienetworks.com>
- Technical Support Email: service_rj@ruijienetworks.com

Conventions

1. GUI Symbols

Interface symbol	Description	Example
Boldface	1. Button names 2. Window names, tab name, field name and menu items 3. Link	1. Click OK . 2. Select Config Wizard . 3. Click the Download File link.
>	Multi-level menus items	Select System > Time .

2. Signs

The signs used in this document are described as follows:

Danger

An alert that calls attention to safety instruction that if not understood or followed can result in personal injury.

Warning

An alert that calls attention to important rules and information that if not understood or followed can result in data loss or equipment damage.

Caution

An alert that calls attention to essential information that if not understood or followed can result in function failure or performance degradation.

 **Note**

An alert that contains additional or supplementary information that if not understood or followed will not lead to serious consequences.

 **Specification**

An alert that contains a description of product or version support.

3. Note

This manual provides installation steps, troubleshooting, technical specifications, and usage guidelines for cables and connectors. It is intended for users who want to understand the above and have extensive experience in network deployment and management, and assume that users are familiar with related terms and concepts.

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1 Product Overview

1.1 About the RG-RAP2260(H) Access Point

The RG-RAP2260(H) AX6000 is a ceiling-mount dual-radio access point designed to cover a large indoor area. The access point adopts either IEEE 802.3at/bt PoE power supply or 48 V DC/1 A local power supply. Compliant with the IEEE 802.11a/b/g/n/ac/ax standard, the access point can work in the 2.4 GHz and 5 GHz bands at the same time and supports quad-stream MU-MIMO. The access point delivers a combined data rate of about 6000 Mbps, with up to 1148 Mbps in the 2.4 GHz band and 4804 Mbps in the 5 GHz band. With two 2.5GE Ethernet ports, the access point offers high-speed Internet access and meets diversified networking needs.

1.2 Package Contents

Table 1-1 Package Contents

Item	Quantity
RG-RAP2260(H) Access Point	1
User Manual	1
Certificate of Quality	1
Screws and Wall Anchors	4
Mounting Bracket	1
Key to Security Lock	1

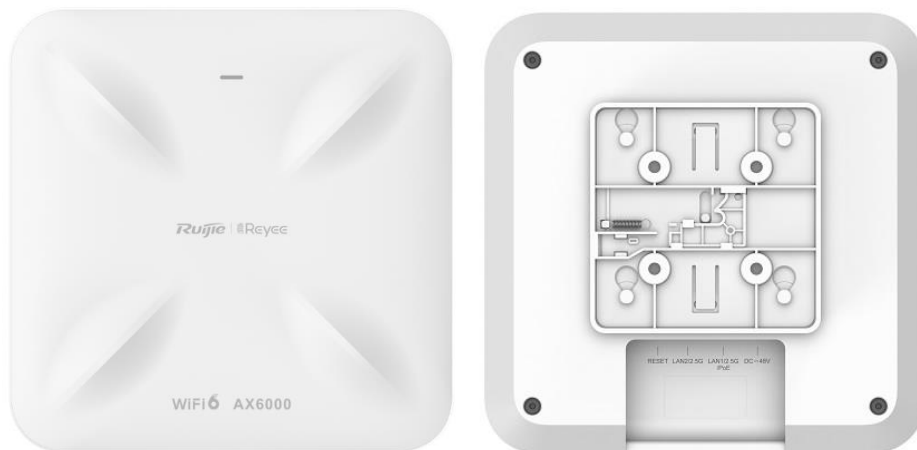
Note

The package contents generally contain the above items. The actual delivery is subject to the order contract. And please check your goods carefully against the order contract. If you have any questions, please contact the distributor.

1.3 Hardware Features

1.3.1 Top Panel

The RG-RAP2260(H) provides two Ethernet ports (LAN1/PoE port is PoE-capable) and one DC input plug .

Figure 1-1 Access Point**Table 1-2 LED**

Status	Description
Off	The access point is not receiving power.
Slow Blinking	The access point is operating normally but there is an alarm generated.
Fast blinking	Possible cases: <ul style="list-style-type: none"> ● Restoring the access point to factory settings. ● Upgrading the firmware. ● Handling alarms automatically. ● Starting up the access point.
Solid blue	The access point is operating normally with no alarms.

1.3.2 Bottom Panel

Figure 1-1 Ports

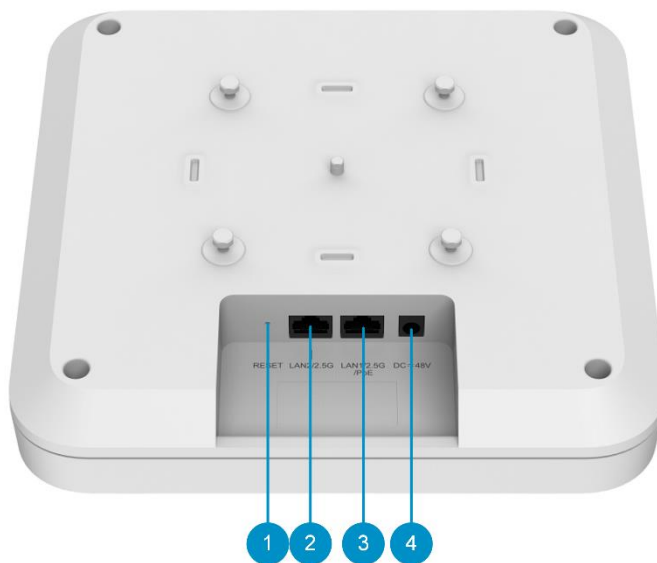


Table 1-3 Bottom Panel

No.	Item	Description
1	RESET Hole	<p>The RESET hole is near the 2.5G/LAN2 port.</p> <ul style="list-style-type: none"> Press and hold the pin to the RESET hole for less than 2 seconds: Restart the access point. Press and hold the pin to the RESET hole for 2 seconds to 5 seconds: There is no action on the access point. Press and hold the pin to the RESET hole for more than 5 seconds: Restore the access point to factory settings.
2	2.5G/LAN2 Port	2.5GE LAN Port
3	2.5G/LAN1/PoE Port	2.5GE LAN Port (PoE-Capable)
4	DC Input Plug	48 V DC/1 A power supply

⚠ Caution

If the access point adopts PoE power supply, make sure that the power source equipment (PSE) connected to the LAN1/PoE port is compliant with the IEEE 802.3at/bt standard.

1.4 Technical Specifications

Table 1-4 Technical Specifications

RF Design	2.4 GHz: 4 spatial streams 5 GHz: 4 spatial streams
Standard & Protocol	Concurrent 802.11ax, 802.11ac wave2/wave1 and 802.11a/b/g/n
Operating Radio	802.11b/g/n/ax: 2.4 GHz to 2.4835 GHz 802.11a/n/ac/ax: 5.150 GHz to 5.350 GHz, 5.470 GHz to 5.725 GHz, 5.725 GHz to 5.850 GHz
Antenna	Omni-directional antenna (2.4 GHz: 3 dBi, 5 GHz: 4 dBi)
Spatial Streams	2.4 GHz: 4 x 4 MIMO 5 GHz: 4 x 4 MIMO
Max Data Rate	2.4 GHz: 1148 Mbps 5 GHz: 4804 Mbps Combined: 5952 Mbps
Modulation	OFDM: BPSK@6/9 Mbps, QPSK@12/18 Mbps, 16QAM@24 Mbps, 64QAM@48/54 Mbps DSSS: DBPSK@1 Mbps, DQPSK@2 Mbps, CCK@5.5/11 Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM OFDMA
Receive Sensitivity	11b: -96 dBm (1 Mbps), -93 dBm (5 Mbps), -89 dBm (11 Mbps) 11a/g: -91 dBm (6 Mbps), -85 dBm (24 Mbps), -80 dBm (36 Mbps), -74 dBm (54 Mbps) 11n: -90 dBm (MCS0), -70 dBm (MCS7), -89 dBm (MCS8), -68 dBm (MCS15) 11ac: 20 MHz: -88 dBm (MCS0), -63 dBm (MCS9) 11ac: 40 MHz: -85 dBm (MCS0), -60 dBm (MCS9) 11ac: 80 MHz: -85 dBm (MCS0), -60 dBm (MCS9) 11ax: 80 MHz: -82 dBm (MCS0), -57 dBm (MCS9), -52 dBm (MCS11) 11ax: 160 MHz: -80 dBm (MCS0), -55 dBm (MCS9), -49 dBm (MCS11)
Transmit Power	EIRP: ≤ 35 dBm (2.4 GHz) ≤ 36 dBm (5 GHz) country-specific restrictions apply Myanmar: 2400 MHz to 2483.5 MHz: ≤ 20 dBm 5150 MHz to 5350 MHz: ≤ 23 dBm

	<p>5470 MHz to 5850 MHz: ≤ 25 dBm</p> <p>Thailand:</p> <p>2400 MHz to 2483.5 MHz: ≤ 20 dBm</p> <p>5150 MHz to 5350 MHz: ≤ 23 dBm</p> <p>5470 MHz to 5725 MHz: ≤ 25 dBm</p> <p>5725 MHz to 5850 MHz: ≤ 30 dBm</p>
Power Adjustment	Configurable in increments of 1 dBm
Dimensions (W x D x H)	230 mm x 230 mm x 49.5 mm (9.05 in. x 9.05 in. x 1.95 in., without the mounting bracket)
Weight	≤ 1.8 kg (3.97 lbs, without the mounting bracket)
Service Ports	Two 10/100/1000/2500Base Ethernet ports LAN1 port is PoE-capable
Management Ports	N/A
LED	One LED (Blue)
Power Supply	<p>There are three power supply modes available:</p> <ul style="list-style-type: none"> ● Standard PoE: IEEE 802.3bt standard (PoE++), backward compatible with the IEEE 802.3at standard (PoE+, with a data rate of up to 573 Mbps in the 2.4 GHz band and a data rate of up to 2400 Mbps in the 5 GHz band) ● 60 W Passive PoE adapter (Optional accessory) ● Local power supply: 48 V DC /1 A <p>Note: The access point is not 802.3af-compliant.</p>
Max Power Consumption	≤ 40 W
Temperature	Operating: 0°C to 40°C (32°F to 104°F)
	Storage: -40°C to 70°C (-40°F to 158°F)
Humidity	Operating: 5% to 95% RH (non-condensing)
	Storage: 5% to 95% RH (non-condensing)
Mounting Method	Ceiling/wall mounting
Certification	CE
MTBF	> 400000 hours

1.5 Power Specifications

The access point can be powered by either PoE or DC power supply.

- In a PoE power supply scenario, the power source equipment (PSE) must be at least 802.3at-capable. You are advised to use an 802.3bt-capable PSE. If you want to use a PoE adapter, a Rujie-certificated PoE adapter is recommended.
- In a DC power supply scenario, use a 48 V DC/1 A power adapter with a 5.5 mm x 2.1 mm x 10 mm (0.22 in. x 0.08 in. x 0.39 in.) plug.

Table 1-5 Power Supply Mode

Power Input	Standard PoE: IEEE 802.3bt standard, backward compatible with the IEEE 802.3at standard			
	Local power supply: 48 V DC/1 A			
Power Supply Mode	2.4 GHz	5 GHz	Data Rate	Max. Power Consumption
IEEE 802.3bt Standard (Recommended)	4 x 4	4 x 4	5952 Mbps	40 W
60 W Passive PoE Adapter (Optional Accessory)	4 x 4	4 x 4	5952 Mbps	40 W
Local Power Supply (48 V DC /1 A)	4 x 4	4 x 4	5952 Mbps	40 W
IEEE 802.3at Standard	2 x 2	2 x 2	2976 Mbps	25 W

 **Warning**

The access point is not 802.3af-compliant.

1.6 Cooling Solution

The access point adopts fanless design. Maintain a sufficient clearance around the access point for proper ventilation.

2 Preparing for Installation

2.1 Safety Precautions

Note

- To prevent device damage and physical injury, please read the safety recommendations carefully as described in this chapter.
 - Recommendations do not cover all possible hazardous situations.
-

2.1.1 General Safety Precautions

- Do not expose the AP to high temperature, dust, or harmful gases.
 - Do not install the AP in an area prone to fire or explosions.
 - Keep the AP away from EMI sources such as large radar stations, radio stations, and substations.
 - Do not subject the AP to unstable voltage, vibration, and noises.
 - The installation site should be dry. Keep the AP at least 500 meters away from the ocean and do not face it towards the sea breeze.
 - The installation site should be free from water including possible flooding, seepage, dripping, or condensation. The installation site should be selected according to network planning and communications equipment features, and considerations such as climate, hydrology, geology, earthquake, electrical power, and transportation.
-

Caution

Please follow the correct method described in the installation guide to install and remove the device.

2.1.2 Handling Safety

- Do not move the access point frequently.
- Turn off all power supplies and unplug all power cables before you remove the device.

2.1.3 Electric Safety

Warning

- Any nonstandard and inaccurate electrical operation can cause an accident such as fire or electric shock, thus causing severe even fatal damages to humans and devices.
 - Direct or indirect contact with a wet object (or your finger) on the high voltage and power line can be fatal.
-

- Please observe local regulations and specifications when performing electrical operations. Relevant operators must be qualified.
- Carefully check for any potential hazards in the working area such as damp/wet ground or floors.

- Find the location of the emergency power supply switch in the room before installation. Cut off the power supply first in case of an accident.
- Be sure to make a careful check before shutting down the power supply.
- Do not place the device in a damp/wet location. Do not let any liquid enter the chassis.
- Keep the AP far away from grounding or lightning protection devices for power equipment.
- Keep the AP away from radio stations, radar stations, high-frequency high-current devices, and microwave ovens.

2.2 Installation Environment Requirements

The AP must be installed indoors. To ensure normal operation, the installation site must meet the following requirements.

2.2.1 Installation Requirements

- Install the AP in a well-ventilated environment. If it is installed in a closed room, make sure there is a good cooling system.
- Make sure the site is sturdy enough to support the RG-RAP2260(H) and its accessories.
- Make sure the site has enough space for installing the RG-RAP2260(H) and leave sufficient room around the AP for ventilation.

2.2.2 Ventilation Requirements

The access point adopts natural cooling. Reserve a sufficient clearance around the access point to ensure proper ventilation.

2.2.3 Temperature/Humidity Requirements

To ensure the normal operation and equipment service life, maintain appropriate temperature and humidity levels in the equipment room. Improper room temperature and humidity can cause damage to the device.

- High relative humidity may affect insulation materials, resulting in poor insulation and even electrical leakage. Sometimes it may lead to changes in the mechanical properties of materials and corrosion of metal parts.
- Low relative humidity can dry and shrink insulation sheets and cause static electricity that can damage the circuitry.
- High temperatures greatly reduce device reliability and shorten service life.

Table 2-1 Temperature and Humidity Requirement

Operating Temperature	Relative Humidity
0°C to 40°C (32°F to 104°F)	5% to 95% (non-condensing)

2.2.4 Cleanliness Requirements

Dust poses a serious threat to device operation. Dust on the surface of the device can be absorbed onto metal contact points by static electricity causing poor contact. Electrostatic absorption of dust occurs more easily when

the relative humidity is low, and might shorten the equipment service life and cause communication failures. The following table shows the maximum concentration and diameter of dust allowed in the equipment room.

Maximum Diameter (μm)	0.5	1	3	5
Maximum Concentration (Particles/ m^3)	1.4×10^7	7×10^5	2.4×10^5	1.3×10^5

The amount of salt, acids and sulfides in the air are also strictly limited for the equipment room. These substances can accelerate metal corrosion and aging of some parts. The following table describes the limits of some hazardous gases such as sulfur dioxide, hydrogen sulfide, nitrogen dioxide, ammonia gas and chlorine gas in the equipment room.

Gas	Average (mg/m^3)	Maximum (mg/m^3)
Sulfur dioxide (SO_2)	0.2	1.5
Hydrogen sulfide (H_2S)	0.006	0.03
Nitrogen dioxide (NO_2)	0.04	0.15
Ammonia gas (NH_3)	0.05	0.15
Chlorine gas (Cl_2)	0.01	0.3

2.2.5 Anti-interference Requirements

- Keep the access point as far away from the lightning prevention equipment and grounding equipment of the power device as possible.
- Keep the access point far away from radio stations, radar stations, high-frequency high-current devices, and microwave ovens.

2.3 Tools

Table 2-2 Tools

Common Tools	Phillips screwdrivers, power cords, Ethernet cables, fastening bolts, diagonal pliers, and binding straps
Special Tools	Antistatic gloves, wire stripper, crimping pliers, crystal connector crimping pliers, and wire cutter
Meter	Multimeter
Relevant Devices	PC, display, and keyboard

Note

The RG-RAP2260(H) is delivered without a tool kit. The tool kit is customer-supplied.

3 Installing the Access Point

⚠ Caution

Before installing the access point, make sure you have carefully read the requirements described in Chapter 2.

3.1 Before You Begin

Carefully plan and arrange the installation position, networking mode, power supply, and cabling before installation. Confirm the following requirements before installation:

- The installation site provides sufficient space for proper ventilation.
- The installation site meets the temperature and humidity requirements of the access point.
- The power supply and required current are available in the installation site.
- The selected power supply modules meet the system power requirements.
- The installation site meets the cabling requirements of the access point.
- The installation site meets the site requirements of the access point.
- The customized access point meets the client-specific requirements.

3.2 Precautions for Installation

To avoid damage to the access point, observe the following safety precautions:

- Do not power on the access point during installation.
- Install the access point in a well-ventilated location.
- Do not subject the access point to high temperature.
- Keep the access point away from high voltage cables.
- Do not expose the access point in a thunderstorm or strong electric field.
- Keep the access point clean and dust-free.
- Cut off the power switch before cleaning the access point.
- Do not wipe the device with a damp cloth.
- Do not wash the device with liquid.
- Do not open the enclosure when the access point is working.
- Secure the access point tightly.

3.3 Precautions for Cabling

- Connect the UTP/STP to the LAN port on the AP. See [7.1 Connectors and Media](#) for the supported wiring for twisted pairs.
- Avoid bending the cable in a small radius close to the connector.
- Ruijie recommends that you do not use Ethernet cables with protective sleeves as they could make

installation of Ethernet cables more difficult.

- If the access point adopts PoE power supply, make sure that the power source equipment (PSE) connected to the LAN1/PoE port is 802.3at-capable or 802.3bt-capable.

3.4 Installing the Access Point

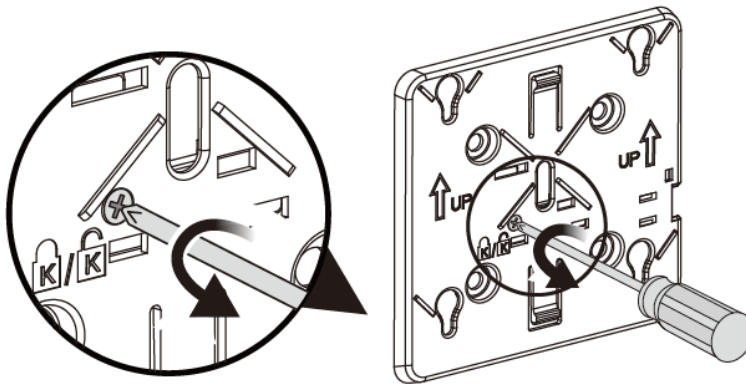
Caution

- You are advised to install the access point where you can get the optimal Wi-Fi coverage.
- Image is for indicative purpose only and may not represent exact equipment.

(1) Do you want to engage the security lock?

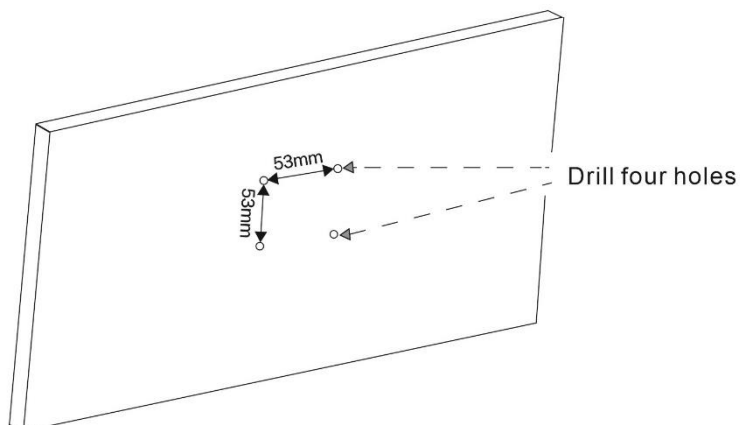
- No. Go to the next step.
- Yes. Loosen the security screw and engage the security lock.

Figure 3-1 Loosening the Security Screw



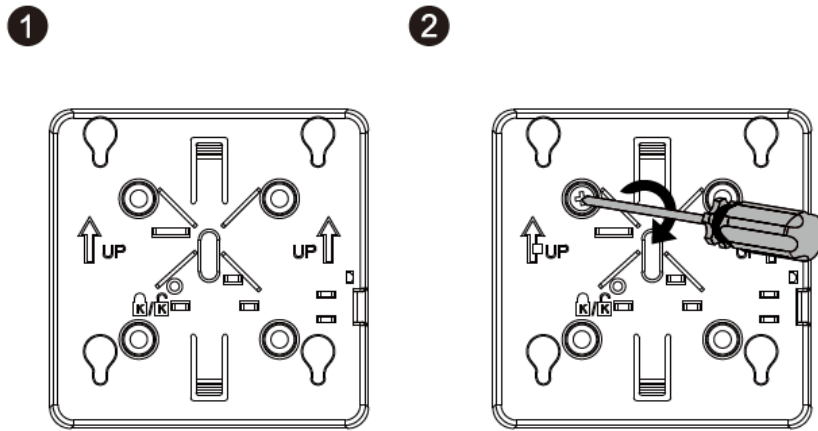
(2) Drill four holes at 53 mm (2.09 in) spacing on the wall or ceiling.

Figure 3-2 Drilling Four Holes on the Wall or Ceiling



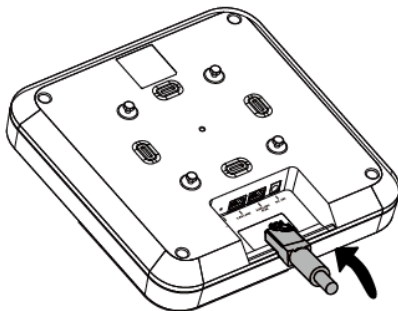
- (3) Take out the mounting bracket from the packaging material, and secure the mounting bracket on the ceiling or wall by using self-tapping screws.

Figure 3-3 Securing the Mounting Bracket



- (4) Connect the Ethernet cable to the LAN port on the rear of AP (LAN1/PoE port is PoE-capable).

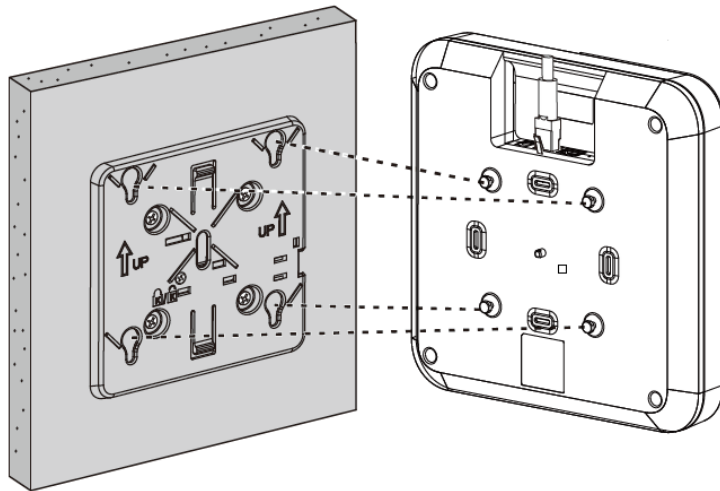
Figure 3-4 Connecting the Ethernet Cable to the LAN Port



- (5) Align the square feet on the rear of the AP over the mounting holes on the bracket. Slide the AP into the mounting holes.

⚠ Caution

- The AP can be installed in any of four directions on the mounting bracket depending on how you route the Ethernet cable.
 - The square feet should fit easily into the mounting holes. Do not forcibly push the AP into the mounting holes.
 - After installation, verify that the AP is securely fastened.
-

Figure 3-5 Securing the Access Point

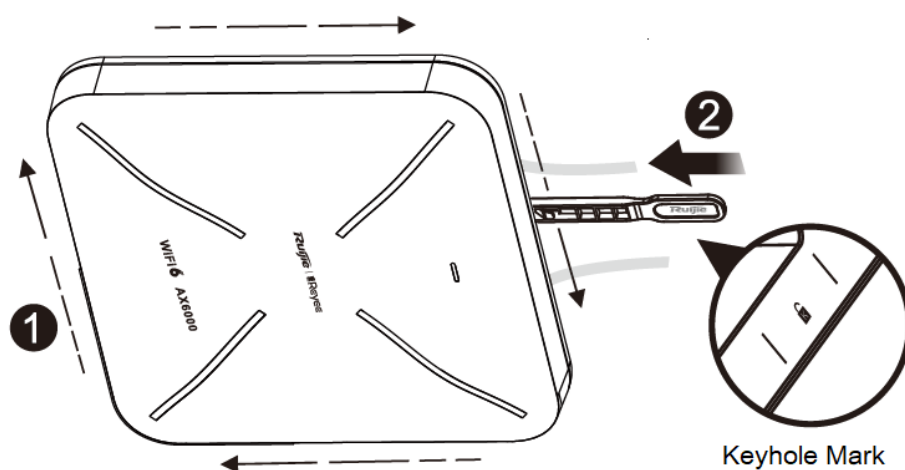
3.5 Removing the Access Point

- Security Lock is Not Used

Hold the AP in your hands and push it away from the bracket. Attempt to slide it in four directions (the AP can only slide out in one direction).

- Security Lock is Used

- (1) If the security lock is used, keep the top of the key against the edge of the mounting bracket (with the Ruijie logo on the key pointed upwards).
- (2) Slide the key along with the four edges of the mounting bracket, and attempt to insert the key into the keyhole. It can only be inserted into one marked keyhole.

Figure 3-6 Inserting the Key for Unlocking

- (3) Hold the AP in your hands and push it upward and away from the bracket.

Figure 3-7 Removing the Wall Mount AP

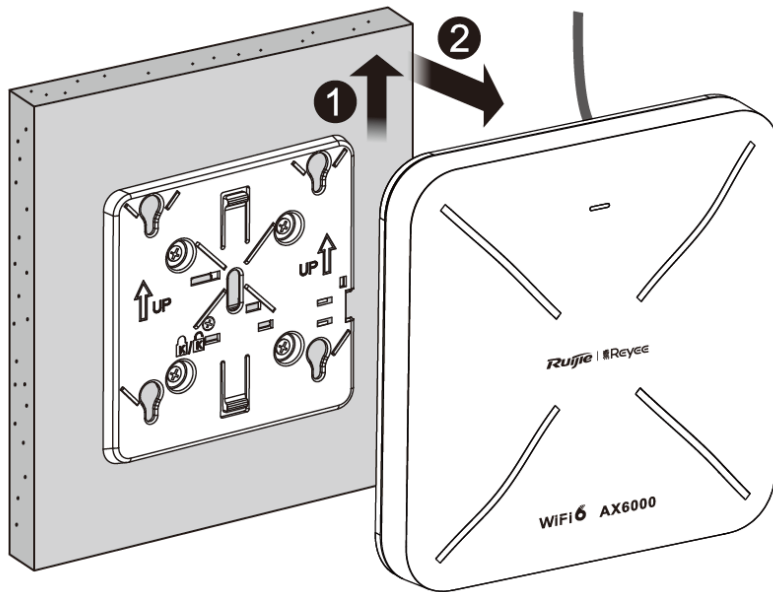
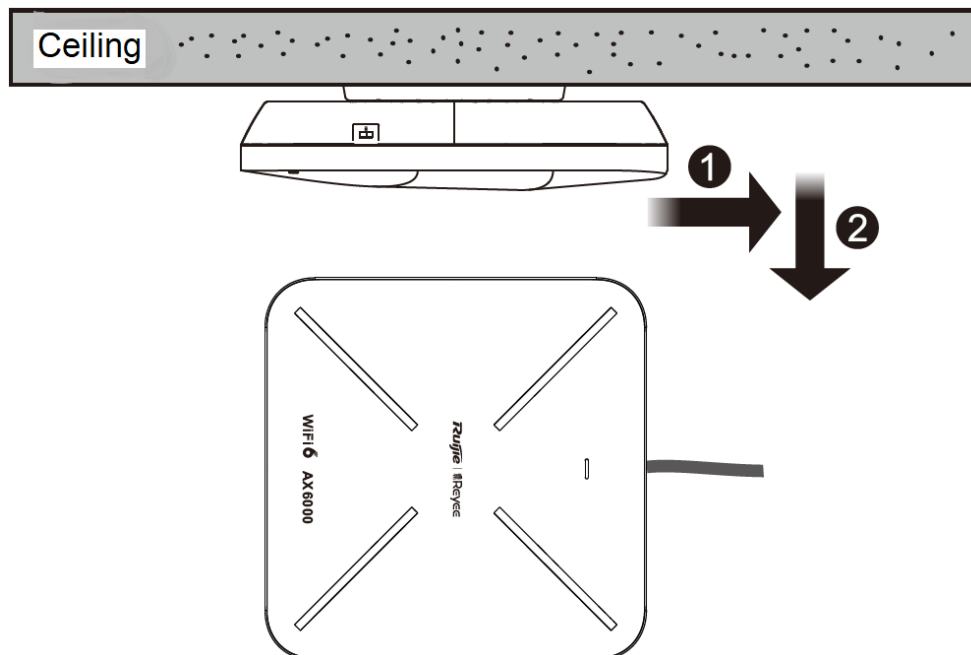


Figure 3-8 Removing the Ceiling Mount AP



3.6 Checking after Installation

(1) Checking the Access Point

- o Verify that the power source equipment (PSE) connected to the LAN1/PoE port is 802.3at-capable or 802.3bt-capable.
- o Verify that the access point is properly secured.

(2) Checking the Power Supply

- Verify that the power cord is properly connected and compliant with safety requirements.
- Verify that the access point is operational after power-on.

4 Verifying Operating Status

4.1 Setting up Configuration Environment

If the access point is powered by PoE, verify that the power cord is properly connected and compliant with safety requirements.

4.2 Powering on the Access Point

4.2.1 Checklist before Power-on

- Verify that the power source equipment (PSE) connected to the LAN1/PoE port is 802.3at-capable or 802.3bt-capable.

4.2.2 Checklist after Power-on (Recommended)

- Verify that the mobile phone or other wireless device can discover the SSID broadcast by the access point.
- Verify that the LED works normally.

5 Monitoring and Maintenance

5.1 Monitoring

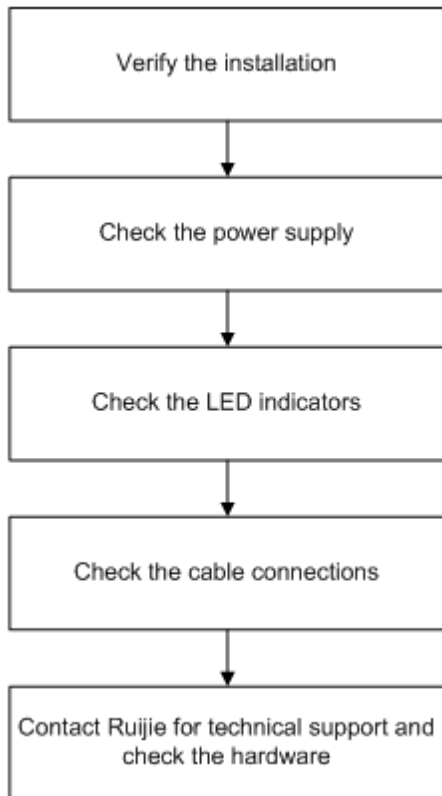
When RG-RAP2260(H) is operating, you can monitor its status by observing the LED indicator.

5.2 Maintenance

If the hardware is faulty, please contact Ruijie technical support for help.

6 Troubleshooting

6.1 Troubleshooting Procedure



7 Appendix

7.1 Connectors and Media

2500BASE-T/1000BASE-T/100BASE-TX/10BASE-T Port

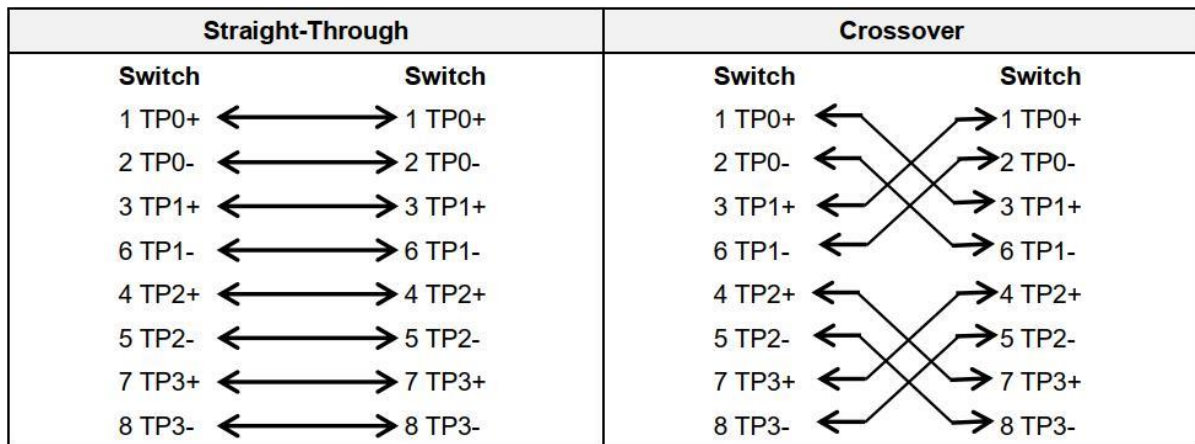
2500BASE-T/1000BASE-T/100BASE-TX/10BASE-T is a 10/100/1000/2500 Mbps self-adaptive port that supports auto MDI/MDIX Crossover.

Compliant with IEEE 802.3bz, 2500BASE-T requires Category 6 or Category 5e 100-ohm UTP or STP (STP is recommended) with a maximum distance of 100 meters (328.08 feet). Category 6 STP is recommended for PoE power supply. Take shielding measures for both ports and cables.

Compliant with IEEE 802.3ab, 1000BASE-T requires Category 6 or Category 5e 100-ohm UTP or STP (STP is recommended) with a maximum distance of 100 meters (328.08 feet). Category 6 STP is recommended for PoE power supply. Take shielding measures for both ports and cables.

2500BASE-T/1000BASE-T port uses four twisted pairs for data transmission. Twisted pairs for the 2500BASE-T/1000BASE-T port are connected as shown in the following figure.

Figure 7-1 Four Twisted Pairs Connection



100BASE-TX/10BASE-T port can also be connected by cables of the preceding specifications. Besides, the 10BASE-T port can be connected by 100-ohm Category 3, Category 4, and Category 5 cables with a maximum distance of 100 meters (328.08 feet). 100BASE-TX port can be connected by 100-ohm Category 5 cables with a maximum distance of 100 meters (328.08 feet). The following figure lists definitions of pin signals for the 100BASE-TX/10BASE-T port.

Figure 7-2 100BASE-TX/10BASE-T Pin Assignments

Pin	Socket	Plug
1	Input Receive Data+	Output Transmit Data+
2	Input Receive Data-	Output Transmit Data-
3	Output Transmit Data+	Input Receive Data+
6	Output Transmit Data-	Input Receive Data-
4,5,7,8	Not used	Not used

The following figure shows feasible connections of the straight-through and crossover twisted pairs for a 100BASE-TX/10BASE-T port.

Figure 7-3 100BASE-TX/10BASE-T Connection

