Ruijie Reyee RG-EST350G Wireless Bridge

Installation 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 Reyee: https://reyee.ruijie.com
- Technical Support Website: https://reyee.ruijie.com/en-global/support
- Case Portal: https://www.ruijie.com/support/caseportal
- Community: https://community.ruijie.com
- Technical Support Email: service_rj@ruijie.com
- Online Robot/Live Chat: https://reyee.ruijie.com/en-global/rita

Conventions

1. Signs

The signs used in this document are described as below:

Danger

An alert that calls attention to safety operation instructions that if not understood or followed when operating the device can result in physical 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.

2. Note

This manual provides the device installation steps, hardware troubleshooting, module technical specifications, and specifications and usage guidelines for cables and connectors. It is intended for the users who have some experience in installing and maintaining network hardware. At the same time, it is assumed that the users are already familiar with the related terms and concepts.

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1 Product Introduction

1.1 Overview

The RG-EST350G is an 802.11ac wireless bridge launched by Ruijie Reyee. It provides surveillance video backhaul function. RG-EST350G works in the 5 GHz frequency band, supports two spatial streams and 2 x 2 MIMO, and provides a wireless link speed of up to 866 Mbps. The RG-EST350G utilizes the 2.4 GHz band in single-stream mode for bridge management, while the 5 GHz band is used for data transmission. The design of RG-EST350G adapts to inclement outdoor environments such as the cold and humidity. This substantially simplifies installation and maintenance.

1.2 Package Contents

Table 1-1 Package Contents

No.	Item	Quantity
1	Device	2
2	Power adapter	2 Note: 24 V/0.6 A DC power adapter
3	PoE injector	2
4	Mounting bracket	2 x Ball joint mount 2 x Lock ring 2 x Mounting bracket
5	Hose clamp	2
6	User Manual	1
7	Warranty Card	1
8	Screw	6 x Wall anchors 8 x Phillips pan head screws (self-tapping screws 4.2 mm x 19 mm)

Note

The package contents above are intended to provide a general overview, and are subject to the terms of the order contract. Please check your goods carefully against the package contents or order contract. If you have any questions, please contact the distributor.

1.3 Appearance

1.3.1 Appearance

Figure 1-1 Appearance of the RG-EST350G Wireless Bridge



Note

The label is located on the back of the device.

1.3.2 Ports, Buttons and LEDs

Figure 1-2 Ports, Buttons and LEDs of the RG-EST350G Wireless Bridge

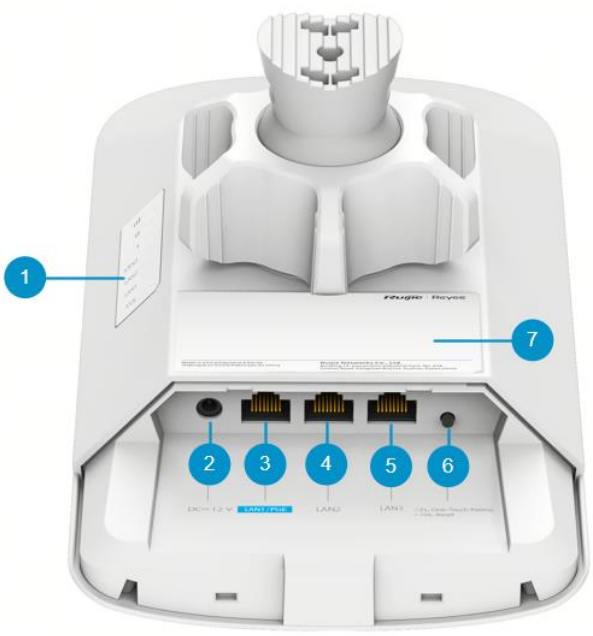


Table 1-2 Ports, Buttons and LEDs of the RG-EST350G Wireless Bridge

Mark	Item	Description
1	Status LEDs	7 status LEDs, including 1 x system status LED, 3 x Ethernet port LEDs, 3 x signal status LEDs
2	DC connector	Support 12 V/1.2 A or 24 V/0.6 A DC power supply
3	LAN1/PoE Port	10/100/1000BASE-T Ethernet port, support 802.3af/at PoE or 24V⎓0.6A passive PoE
4	LAN2 Port	10/100/1000BASE-T Ethernet port
5	LAN3 Port	10/100/1000BASE-T Ethernet port
6	Reset/One-Touch Pairing button	● Press and hold the button for less than 2s: The wireless bridge pairs with another wireless bridge (the LED blinks during pairing). ● Press and hold the button for 2s to 10s: No action is triggered. ● Press and hold the button for more than 10s: Restores the wireless bridge to factory settings.
7	Label	Contains the product name, model, I/O parameters, default IP address, and other information.

Note

- After the One-Touch Pairing button is pressed, the wireless bridge is switched to the BaseStation mode regardless of whether it was in BaseStation or CPE mode.

- During one-touch pairing, the signal LEDs on the wireless bridge in BaseStation mode blink for 1 minute (it will stop blinking after 1 minute if no bridge connection is established). The signal LEDs on the bridge in CPE mode also blink until the pairing is complete.
- Only a bridge that has been reset to factory settings and has not been bridged before can be switched to the CPE mode through one-touch pairing.
- The one-touch pairing feature is enabled by default and can be disabled through eWeb.
- One-touch pairing is disabled during interference scanning.

Table 1-3 LEDs

LED	Status	Description
System status LED	Solid green	The device is operating normally.
	Blinking	● Fast blinking (8 to 10 times/second): The device is starting up. ● Fast blinking (2 times/second): The device is initializing. ● Fast blinking (2 times/second): The device is upgrading.
	Off	The device is NOT receiving power.
LAN1/LAN2/LAN3 Ethernet port LEDs	Solid green	A valid link is established, but the port is not receiving or sending data.
	Blinking green	A valid link is established, and the port is receiving or sending data.
	Off	No link is established.
Signal status LEDs	Off	The device is not bridged.
	LED 1 on/blinking	The device is bridged and the RSSI is below –75 dBm.
	LED 1 on	The RSSI is above –75 dBm.
	LED 1 on, LED 2 blinking	The RSSI is above –73 dBm.
	LEDs 1 and 2 on	The RSSI is above –71 dBm.
	LEDs 1 and 2 on, LED 3 blinking	The RSSI is above –68 dBm.
	LEDs 1, 2, and 3 on	The RSSI is above –64 dBm.
	LEDs 1, 2, and 3 blinking	The mesh pairing is in progress.

1.4 Technical Specification

Table 1-4 Technical Specifications

System Specifications	Flash memory	16 MB
	RAM	128 MB DDR3
Wi-Fi Radio	Radio design	Dual-radio 3 spatial streams ● Radio 1: 2.4 GHz, 1 spatial stream: 1 x 1, SISO ● Radio 2: 5 GHz, 2 spatial streams: 2 x 2, MIMO
	2.4 GHz channel width	Auto/20/40 MHz
	5 GHz channel width	Auto/20/40/80 MHz
	Wi-Fi standard	Wi-Fi 5 (IEEE 802.11ac) standard, compatible with IEEE 802.11a/b/g/n standards
	Receive sensitivity	802.11b: -91 dBm (1 Mbps), -88 dBm (5 Mbps), -85 dBm (11 Mbps) 802.11a/g: -89 dBm (6 Mbps), -80 dBm (24 Mbps), -76 dBm (36 Mbps), -71 dBm (54 Mbps) 802.11n: -83 dBm@MCS0, -65 dBm@MCS7, -83 dBm@MCS8, -65 dBm@MCS15 802.11ac HT20: -83 dBm (MCS0), -57 dBm (MCS9) 802.11ac HT40: -79 dBm (MCS0), -54 dBm (MCS9) 802.11ac HT80: -76 dBm (MCS0), -51 dBm (MCS9)
	Modulation	802.11b: BPSK, QPSK, CCK 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
	2.4 GHz Wi-Fi	Wi-Fi 4 (IEEE 802.11b/g/n)
	5 GHz Wi-Fi	Wi-Fi 5 (IEEE 802.11ac)
	Transmission rate	Maximum wireless data rate: 1166 Mbps ● Radio 1: 2.4 GHz, 300 Mbps ● Radio 2: 5 GHz, 866 Mbps
	Operating band	IEEE 802.11b/g/n: 2.400 GHz to 2.483 GHz IEEE 802.11a/n/ac: 5.150 GHz to 5.350 GHz IEEE 802.11a/n/ac: 5.470 GHz to 5.725 GHz IEEE 802.11a/n/ac: 5.725 GHz to 5.850 GHz

		Note: Available bands vary with countries and regions. To use the preceding frequency bands, ensure that your country or region supports these frequency bands.
	Maximum transmit power	Frequency bands and maximum Effective Isotropic Radiated Power (EIRP): Note: Country specific restrictions apply. European Union & United Kingdom: 2400–2483.5 MHz, EIRP ≤ 20 dBm 5470–5725 MHz, EIRP ≤ 30 dBm Myanmar: 2400–2483.5 MHz, EIRP ≤ 23 dBm 5725–5850 MHz, EIRP ≤ 30 dBm Thailand: 2400–2483.5 MHz, EIRP ≤ 20 dBm 5150–5350 MHz, EIRP ≤ 23 dBm 5470–5725 MHz, EIRP ≤ 30 dBm 5725–5850 MHz, EIRP ≤ 30 dBm Indonesia: 2400–2483.5 MHz, EIRP ≤ 36 dBm 5725–5825 MHz, EIRP ≤ 36 dBm Egypt: 2400–2483.5 MHz, EIRP ≤ 20 dBm 5150–5350 MHz, EIRP ≤ 23 dBm Vietnam： 2400-2483.5 MHz, EIRP ≤ 23 dBm 5150-5350 MHZ, EIRP ≤ 23 dBm 5470-5725 MHz, EIRP ≤ 30 dBm 5725-5850 MHz, EIRP ≤ 30 dBm
	Maximum transmit power (2.4 GHz)	Combined power: 20 dBm (single stream power: 20 dBm)

		Note: The transmit power varies according to regulations in different countries and regions.
	Maximum transmit power (5 GHz)	Combined power: 29 dBm (single stream power: 26 dBm) Note: The transmit power varies according to regulations in different countries and regions.
	Highest QAM order	256
Antenna	Antenna horizontal orientation	31°
	Antenna vertical orientation	14°
	Antenna	2.4 GHz: 1 x 1 Built-in omnidirectional antenna 5 GHz: 2 x 2 Built-in directional antenna, horizontal: 31°, vertical: 14°
	Antenna gain (2.4 GHz)	2 dBi
	Antenna gain (5 GHz)	16 dBi
WLAN	Maximum bridge distance	5 km (3.11 miles)
Port Specifications	Number of fixed LAN ports	3
	Number of 10/100/1000BASE-T ports	3
	Reset button	1
	LEDs	1 x system status LED 3 x Ethernet port LEDs 3 x signal status LEDs
Power Supply and Consumption	Power supply	Power supply options: ● DC power adapter ● Passive PoE injector ● IEEE 802.3af/at (PoE/PoE+) Note: If both a DC power adapter and PoE (passive PoE injector or IEEE 802.3af/at) are available for power supply, the DC power adapter takes priority.
	Power input	DC power adapter: ● Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz ● Rated input current: 0.5 A Max.

		Output: ● Rated output voltage: 24 V DC ● Maximum output current: 0.6 A Passive PoE injector: ● Rated input voltage: 24 V DC ● Rated input current: 0.6 A Output: ● Rated output voltage: 24 V DC ● Maximum output current: 0.6 A PoE/PoE+: compliance with 802.3af/at
	Number of PoE In ports	1
	Number of PoE/PoE+ In ports	1
	Dimensions of the DC connector	Outer Diameter: 5.50 mm ± 0.05 mm (0.22 in. ± 0.002 in.) Inner Diameter: 2.10 mm ± 0.05 mm (0.08 in. ± 0.002 in.) Depth: 9 mm (0.35 in.)
	Maximum power consumption	12 W
Dimensions and Weight	Product dimensions (W x D x H)	240 mm x 133mm x 108 mm (9.45 in. x 5.24 in. x 4.25 in.) (excluding mounting bracket)
	Color	Elegant white
	Weight	0.56 kg (1.24 lbs) (without packaging materials)
	Package dimensions (W x D x H)	394 mm x 311 mm x 104 mm (15.51 in. x 12.24 in. x 4.09 in.)
	Shipping weight	2.55 kg (5.62 lbs)
Environment and Reliability	Surge protection	Service port: ±4 kV for common mode Power connector: ±4 kV for common mode and ±2 kV differential mode
	Cooling	Natural cooling
	Altitude	Operating altitude: -500 m to +5,000 m (-1,640.42 ft. to +16,404.20 ft.) Storage altitude: -500 m to +5,000 m (-1,640.42 ft. to +16,404.20 ft.)

	IP rating	IP55
	Operating temperature	–30°C to +65°C (–22ºF to +149ºF)
	Storage temperature	–40°C to +85°C (–40°F to +185°F)
	Operating humidity	5% RH to 95% RH (non-condensing)
	Storage humidity	5% RH to 95% RH (non-condensing)
	MTBF	400,000 hours (about 45 years)
	ESD protection	Standard test: contact discharge=8 kV, air discharge=15 kV, Class B
	Mounting options	Wall/Pole
Certification and Regulatory Compliance	EMC	EN 55032 EN 55035 EN 61000-3-3 EN 61000-3-2 EN 301489-1 EN 301489-3 EN 301489-17
	Safety compliance	EN62368-1
	Certification	CE, CB

Warning

Operation of this equipment in a residential environment could cause radio interference.

1.5 Power Supply Technical Specification

The RG-EST350G can be powered by 12 V/1.2 A or 24 V/0.6 A DC power supply, 24 V passive PoE power supply, and IEEE 802.3at/af-compliant PoE power supply. It is supplied with a 24 V/0.6 A DC power adapter and a 24 V passive PoE injector.

- Technical specifications of the DC adapter:

Inner Diameter	Outer Diameter	Depth
2.10 mm ± 0.05 mm (0.08 in. ± 0.002 in.)	5.50 mm ± 0.05 mm (0.22 in. ± 0.002 in.)	9 mm (0.35 in.)

Warning

- For PoE power supply, use the provided PoE injector in the package. Do not use other models of PoE injectors or switches for power supply as it may lead to irreparable damage to the device.
- When using a DC power supply to power the device, ensure that the power output of the DC power supply is less than 100 W.

2 Preparing for Installation

2.1 Safety Precautions

Note

- To prevent device damage and physical injury, please read carefully the safety precautions described in this chapter.
- The following safety precautions do not cover all possible dangers.

2.1.1 General Safety Precautions

- Do not expose the device to high temperature, dusts, or harmful gases. Do not install the device in an inflammable or explosive environment. Keep the device away from EMI sources such as large radar stations, radio stations, and substations. Do not subject the device to unstable voltage, vibration, and noises.
- The installation site should be far away from the sea. Keep the device at least 500 meters away from the seaside and do not face it toward the wind from the sea.
- The installation site should be free from water flooding, seepage, dripping, or condensation. The installation site shall be selected according to network planning and features of communications device, and considerations such as climate, hydrology, geology, earthquake, electric power, and transportation.

Caution

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

2.1.2 Handling Safety

- Avoid frequently handling the device.
- Cut off all the power supplies and unplug all power cords before moving or handling the device.

2.1.3 Electrical Safety

Warning

- Improper or incorrect electrical operations may cause a fire, electric shock, and other accidents, and lead to severe and fatal personal injury and device damage.
- Direct or indirect contact with high voltage or mains power supply via wet objects may cause fatal dangers.

- Observe local regulations and specifications during electrical operations. Only personnel with relevant qualifications can perform such operations.
- Check whether there are potential risks in the work area. For example, check whether the power supply is grounded, whether the grounding is reliable, and whether the ground is wet.
- Find out the location of the emergency power supply switch in the room before installation. First cut off the power supply in case of an accident.

- Be sure to make a careful check before you shut down the power supply.
- Do not place the device in a damp/wet location. Do not let any liquid enter the device.
- Keep the device far away from the grounding or lightning protection devices of power device.
- Keep the device away from high-power radio stations, radar stations, and high-frequency high-current devices.

2.2 Installation Environment Requirements

To ensure normal operation and a prolonged useful life of the device, the installation site must meet the following requirements.

2.2.1 Environment

- Install the device 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 device and its accessories.
- Make sure the site has enough space for installing the device and leave sufficient space around the device for ventilation.

2.2.2 Surge Protection

- When the connection cable between the main grounding conductor and local equipotential earthing terminal board (LEB) on each floor is shorter than 2 meters, use a stranded copper wire with a sectional area not less than 1.318 mm^2 (16 AWG) for the connection cable.
- Use a shielded network cable if possible, ensure that devices connected to both ends of the shielded network cable are reliably grounded, and make sure that the sheath of the shielded network cable is also grounded if possible. If no shielded network cable is available, wire the network cable through a steel pipe and bury the steel pipe for lead-in, and properly ground both ends of the steel pipe.
- No additional lightning protector is required as a high-profile lightning protector is built in the device and the antenna port and power port support 4 kV lightning protection. If a lightning protector of a higher profile is available, configure the lightning protector optionally. Before the configuration, connect the lightning protector to the ground cable.

2.2.3 Temperature and Humidity

To ensure the normal operation and prolonged service life of the device, maintain an appropriate temperature and humidity in the equipment room. The equipment room with too high or too low temperature and humidity for a long period may damage the device.

- In an environment with high humidity, the insulating material may have bad insulation or even leak electricity and sometimes the materials may suffer from mechanical performance change and metallic parts may get rusted.
- In an environment with low humidity, the insulating strip may dry and shrink, and static electricity is prone to occur and damage the internal circuits of the device.
- In an environment with high temperature, the device is subjected to even greater harm, as its performance may degrade significantly and its useful life may be shortened in the case of long-term exposure that expedites the aging process.

Table 2-1 Temperature and Humidity Requirements

Operating Temperature	Operating Humidity:
–30°C to +65°C (–22ºF to +149ºF)	5% RH to 95% RH (non-condensing)

2.2.4 Anti-interference

- Take interference prevention measures for the power supply system.
- Keep the device away from the grounding facility or lightning and grounding facility of the power device as much as possible.
- Keep the device far away from high-power radio stations, radar stations, and high-frequency high-current devices.

2.3 Tools

Table 2-2 Tools

Common Tools	Marker, Philips screwdriver, drill, hammer, hose clamp, related copper and fiber cables, diagonal pliers, cable ties
Special Tools	Anti-ESD gloves, wire stripper, crimping plier, RJ45 crimping plier, wire cutter, and waterproof adhesive tape
Meters	Multimeter, network cable tester
Relevant Devices	PC, display, and keyboard

Note

The RG-EST350G wireless bridge is not shipped with a tool kit. You need to prepare a tool kit by yourself.

2.4 Checking Before Installation

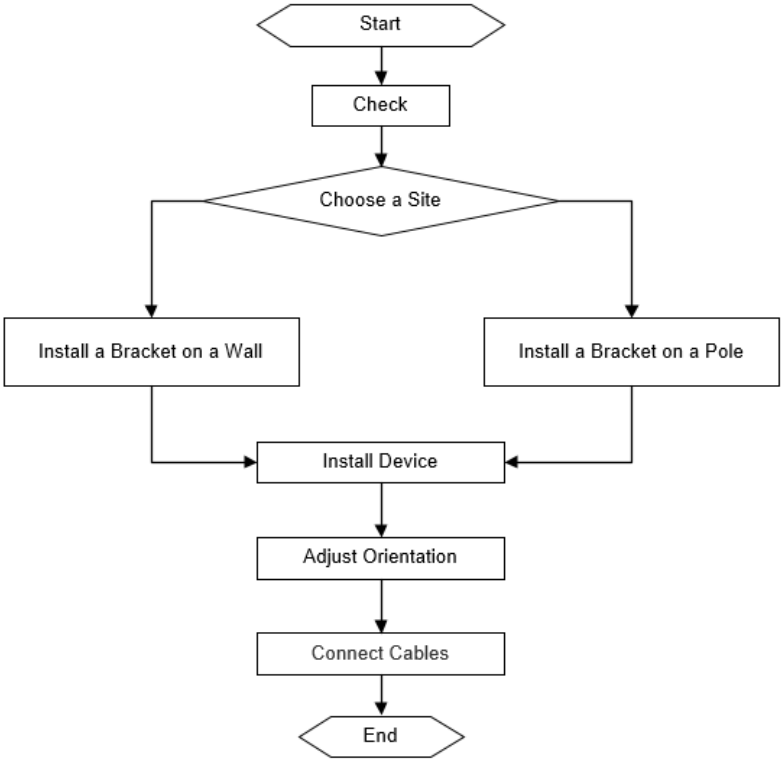
After unpacking the product, carefully inspect each item in accordance with the provided package contents. If any inconsistencies are found, please contact our local distributor.

3 Installation

Caution

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

3.1 Installation Procedure



3.2 Before You Begin

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

- The installation site provides sufficient space for heat dissipation.
- The installation site meets the temperature and humidity requirements of the device.
- The power supply and required current are available in the installation position.
- The selected power supply modules meet the system power requirement.
- The network cables have been deployed in the installation position.
- The installation site meets all described requirements.
- The device meets the customers' requirements.

3.3 Safety Precautions During Installation

The device can be mounted on a wall or a pole with a diameter of 35 mm to 89 mm (1.38 in. to 3.50 in.). If the diameter of the pole is out of the range, the customer should prepare a hose clamp. In this case, we strongly recommend you to use a hose clamp with thickness of 2.5 mm (0.10 in.) at least. Otherwise, the device may fall down and cause injuries. To ensure minimal interference when installing multiple wireless bridges in close proximity, maintain a horizontal installation distance of at least 2 meters (6.56 ft), or a vertical installation distance of at least 0.5 meters (1.64 ft) between each wireless bridge. Ensure that the horizontal angle formed by the two wireless bridges is greater than 120 degrees. The specific installation location of the wireless bridge should be determined by professionals after conducting a thorough site survey.

Before installation, ensure that the installation location meets the requirements in 2.2 Installation Environment Requirements, and pay attention to the following:

- Use the supplied 24 V/0.6 A DC power adapter or an equivalent power source with the same specifications to power the equipment. Do not use adapters with different specifications.
- When the equipment is powered by 24 V passive PoE and is operating under full load (with simultaneous 2.4 GHz, 5 GHz, and wired connectivity), the maximum recommended cable length for the Cat5e cable is 80 m (262.47 ft).
- Ensure that the Ethernet cable and power cord are securely connected.

3.4 Mounting the Device

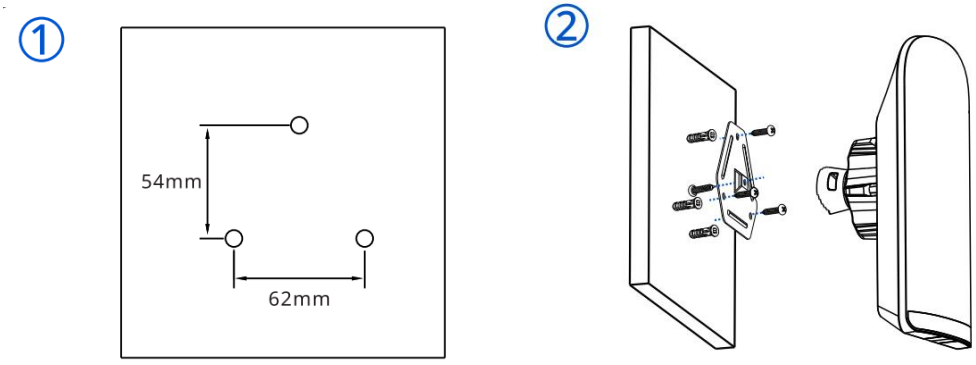
Caution

- Install the device in a manner that maximizes the coverage area of the antenna.
- The schematic diagram provided is for reference purposes only. The actual product should be installed based on its physical specifications and design.

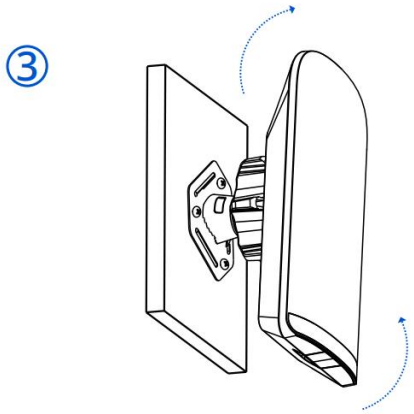
3.4.1 Wall Mounting

(1) Secure the mounting bracket on the wall.

(2) Install the device to the mounting bracket.

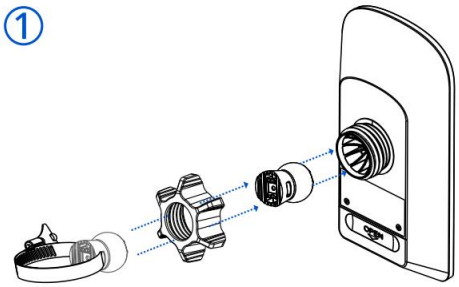


(3) Adjust the orientation.

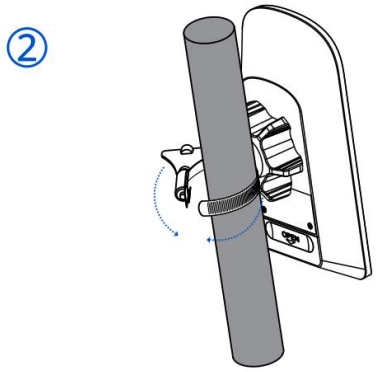


3.4.2 Pole Mounting

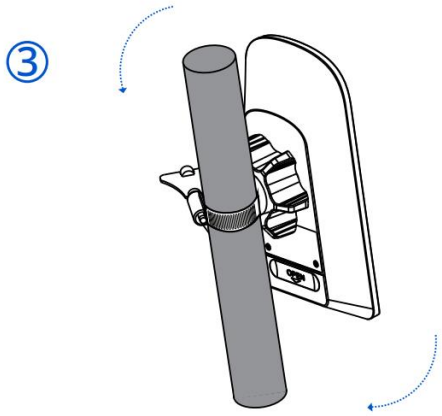
(1) Install the device to the mounting bracket.



(2) Secure the mounting bracket to the pole by threading a clamp through the mounting bracket.



(3) Adjust the orientation.



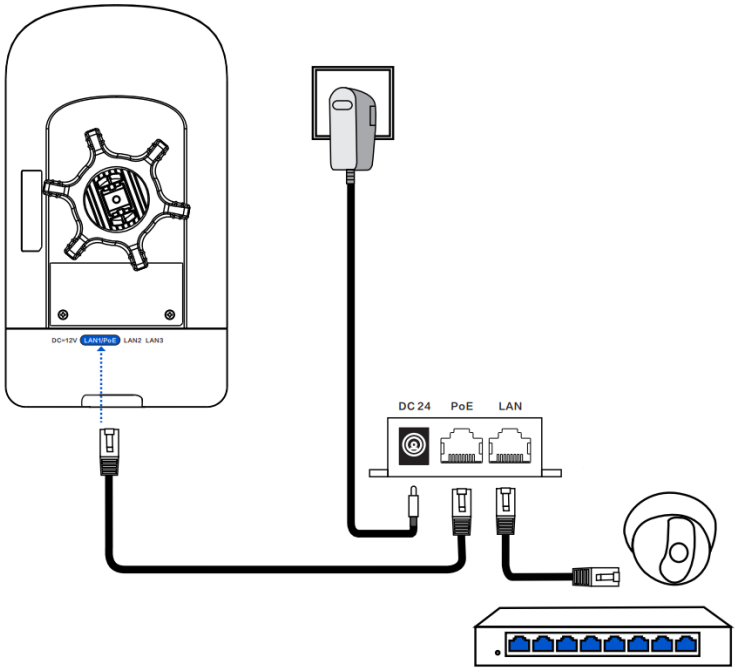
3.5 Connecting Cables

- **Connect the Ethernet cable to the passive PoE injector:**

(1) Select or make a cable (CAT5e or higher) according to the distance between the wireless bridge and the PoE injector.

(2) Connect one end of the Ethernet cable to the PoE port of the 24 V passive PoE injector, and the other end to the LAN1/PoE port on the bridge. Connect the LAN port of the 24 V passive PoE injector to a server or IP camera using another Ethernet cable. Connect the 24 V/0.6 A DC power adapter to the DC power connector of the PoE injector for power supply.

Figure 3-1 Connecting the Ethernet Cable to the Passive PoE Injector

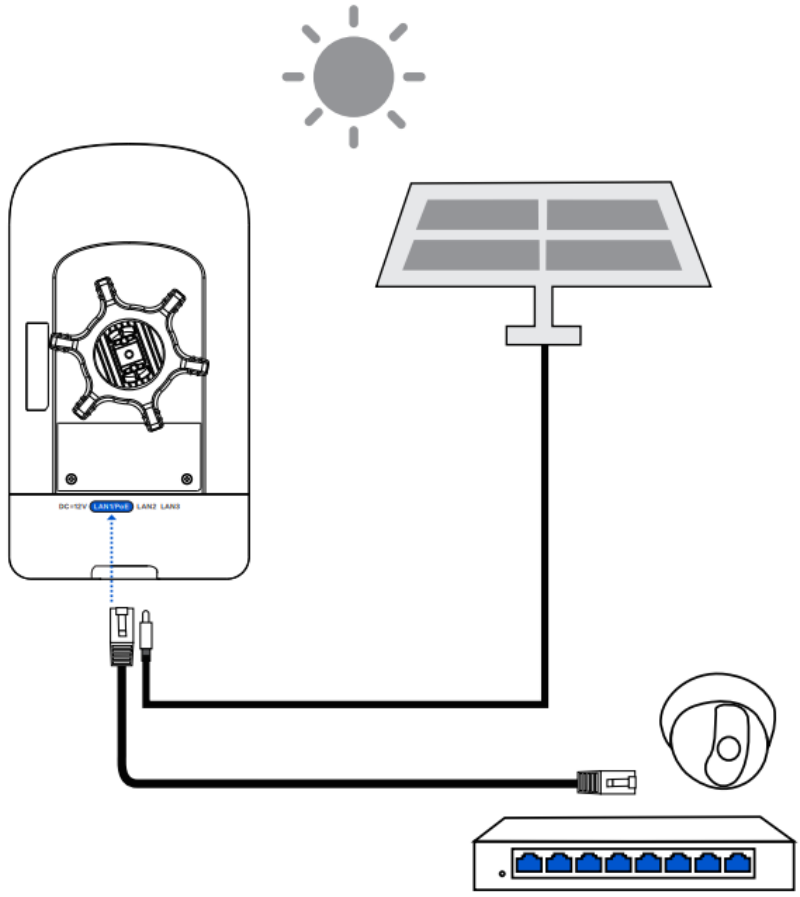


- **Connect the Ethernet cable to a solar panel:**

(1) Connect one end of the Ethernet cable to the LAN1/PoE, LAN2, or LAN3 port on the bridge, and the other end to a server or IP camera.

(2) Connect a 12 V/1.2 A DC solar panel to the DC connector of the bridge for power supply.

Figure 3-2 Connect the Ethernet cable to a solar panel



Solar Panel

Solar panels convert light energy from sunlight into electrical energy. The EST350G requires a solar power panel with an output specification of 12 V/1.2 A DC.

Notes for Installing the Solar Panel

Because the sun's position differs between the Northern and Southern Hemispheres, the solar panel should face south in the Northern Hemisphere and north in the Southern Hemisphere to achieve optimal power output. Additionally, the tilt angle of the solar panel affects the efficiency of solar energy conversion. The optimal tilt angle varies with latitude. The following table shows the optimal tilt angles for different latitude ranges.

Latitude Range	Optimum Tilt
0°–10°	10°–20°
10°–20°	20°–30°
20°–30°	30°–40°

Latitude Range	Optimum Tilt
30°–40°	40°–50°
40°–50°	50°–60°
50°–60°	Approximately 60°

Warning

- Remember to install the bottom cover for waterproof and dustproof purpose.
- Please do not use a switch or a PoE injector of another model. Otherwise, the device may be damaged.

3.6 Verifying the Installation

(1) Check the device

- Verify that the external power supply matches the specification.
- Verify that the device is firmly and reliably secured.

(2) Check the power supply

- Verify that the power cord is properly connected and meet safety requirements.
- Verify that the device works properly after power-on.

4 Debugging

4.1 Power-On

(1) Checklist Before Power-On

- The power cord is properly connected.
- The power voltage meets the requirement.

(2) Recommended: After the bridge is powered on, check whether the LED status is normal.

4.2 Configuring the Bridge

- **Method 1: Configure the bridge through Ruijie Reyee App**

(1) The power cord is properly connected.

(2) Scan the QR code on this page or on the device to download and install Ruijie Reyee App.

(3) Log in to Ruijie Reyee App.

- **Method 2: Log in to eWeb for configuration**

(1) Connect the LAN port of the bridge to a PC using an Ethernet cable for wired connection, or connect your smartphone or PC to the device's SSID (default SSID: @Ruijie-bxxxx) for wireless connection.

(2) Enter **https://10.44.77.254** in a browser to access the device's eWeb.

(3) Enter the device password (default password: admin) and click **Login** to log in to eWeb for configuration.

Caution

- Enter the initial password **admin** to log in and begin configuration.
- To ensure device security, set a password after login and change the password regularly.

5 Monitoring and Maintenance

5.1 Monitoring

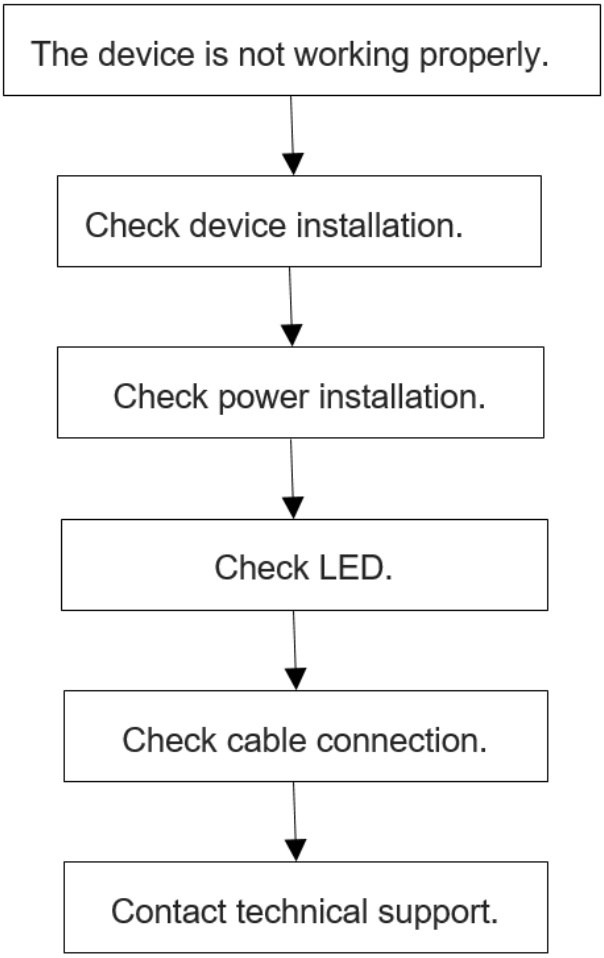
When the RG-EST350G is running, you can monitor the device status by observing the indicator.

5.2 Maintenance

If a hardware error occurs, please contact Ruijie Reyee Technical support for help.

6 Troubleshooting

6.1 General Troubleshooting Procedure



7 Appendix A Connectors and Media Description

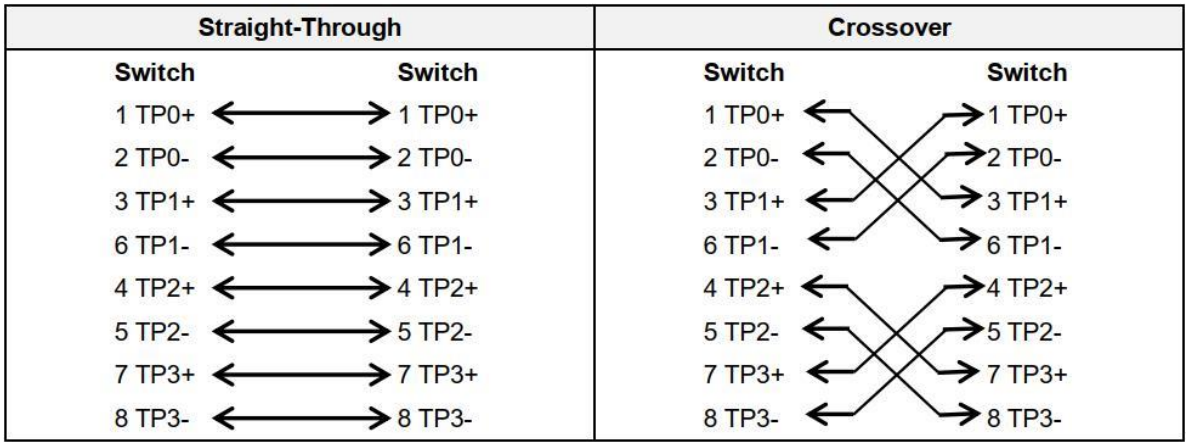
1000BASE-T/100BASE-TX/10BASE-T

The 1000BASE-T/100BASE-TX/10BASE-T is a 10/100/1000 Mbps auto-negotiation port that supports auto MDI/MDIX.

Compliant with IEEE 802.3ab, 1000BASE-T requires Category 5e 100-ohm UTP or STP (STP is recommended) with a maximum distance of 100 meters (328 feet).

1000BASE-T requires all four pairs of wires be connected for data transmission, as shown in Figure 7-1.

Figure 7-1 1000BASE-T Connection



10BASE-T uses Category 3, 4, 5 100-ohm UTP/STP and 1000BASE-T uses Category 5 100-ohm UTP/STP for connections. Both support a maximum length of 100 meters. Figure 7-2 shows100BASE-TX/10BASE-T pin assignments.

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

Figure 7-3 shows wiring of straight-through and crossover cables for 100BASE-TX/10BASE-T.

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

