

# RG-EST450G

5 GHz, 120°, PTMP Station  
With 3 x 10/100/1000 Mbps Ports

DATASHEET

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## Highlights

- H: 120°, V: 13°;
- RG-EST450G supports TDMA;
- Supports 3 power supply options: 802.3af/at, Passive PoE, DC
- Supports Self-Organizing Network.

## Highlight Features

### RG-EST450G

EST Bridge with 120° Built-in Antenna



5 GHz, 867 Mbps

H: 120°, V: 13°

15 dBi

IP55 Weatherproof

TDMA

### Triple GE Ports & Triple Power Supply Options



12 V DC Solar Power Supply

802.3af/at

or

Passive PoE

3 x GE Ports

3-Year Warranty

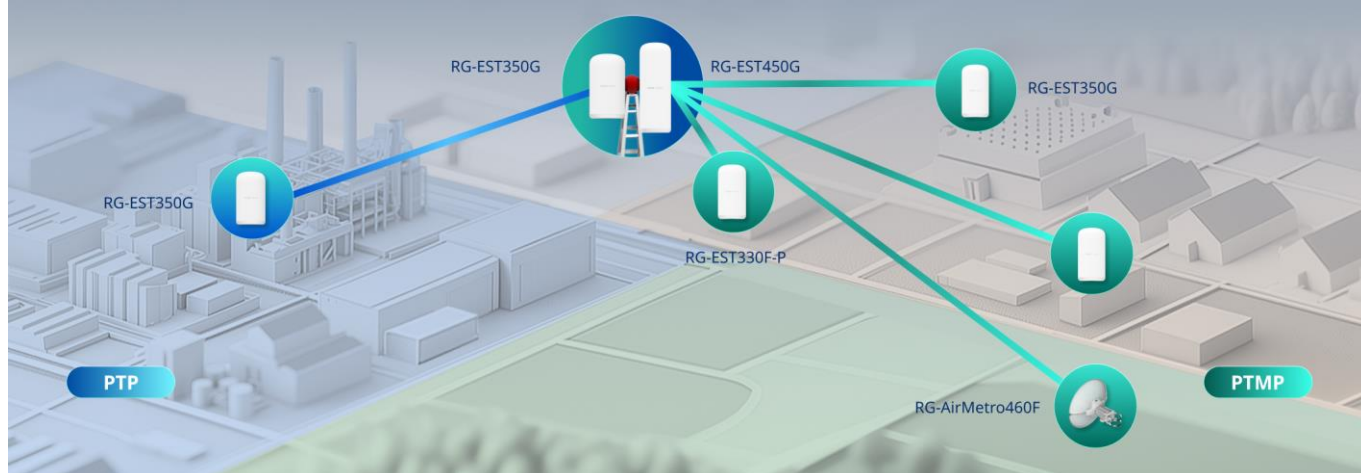
## / Highlight Features

### One-Touch Pairing



### Bridging for TDMA-Powered Devices of Different Series

The new EST and AirMetro can be mixed for bridging with TDMA enabled



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SON

Alignment Tool

Spectrum Scan

Monitoring &  
Configuration

### Quick Self-Organizing Network for Bridge



## / Specifications

| Model                                       | RG-EST450G                                                                                                                                                                               |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hardware Features                           |                                                                                                                                                                                          |
| Radio Design                                | 5 GHz dual-stream<br>2.4 GHz single-stream                                                                                                                                               |
| 2.4 GHz Band                                | Yes                                                                                                                                                                                      |
| 5 GHz Band                                  | Yes                                                                                                                                                                                      |
| Protocol and Standard                       | 5 GHz: 802.11ac/n/a<br>2.4 GHz: 802.11b/g/n                                                                                                                                              |
| Wi-Fi Standard                              | Wi-Fi 5                                                                                                                                                                                  |
| Spatial Streams                             | 5 GHz dual-stream, 2x2 MIMO<br>2.4 GHz single-stream                                                                                                                                     |
| 2.4 GHz Channel Width                       | Auto/20/40 MHz                                                                                                                                                                           |
| 5 GHz Channel Width                         | Auto/20/40/80 MHz                                                                                                                                                                        |
| Receiver Sensitivity                        | 11a: -89 dBm (6 Mbps), -80 dBm (24 Mbps), -76 dBm (36 Mbps), -71 dBm (54 Mbps);<br>11n: -83 dBm@MCS0, -65 dBm@MCS7, -83 dBm@MCS8, -65 dBm@MCS15;<br>11ac: -86 dBm (MCS0), -63 dBm (MCS9) |
| Nominal Receive Sensitivity @20 MHz Channel | -91 dBm (MCS0) to -57 dBm (MCS9)                                                                                                                                                         |
| Nominal Receive Sensitivity @40 MHz Channel | -83 dBm (MCS0) to -57 dBm (MCS9)                                                                                                                                                         |

| Model                                       | RG-EST450G                                                                                                                                                                                 |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal Receive Sensitivity @80 MHz Channel | -76 dBm (MCS0) to -51 dBm (MCS9)                                                                                                                                                           |
| Modulation Levels (Adaptive)                | MCS0 (BPSK) to MCS9 (256QAM)                                                                                                                                                               |
| Wi-Fi Protocols (2.4 GHz)                   | Wi-Fi 4                                                                                                                                                                                    |
| Wi-Fi Protocols (5 GHz)                     | Wi-Fi 5 (IEEE 802.11ac)                                                                                                                                                                    |
| Wireless Data Rate                          | 1017 Mbps                                                                                                                                                                                  |
| Wireless Data Rate (2.4 GHz)                | 150 Mbps                                                                                                                                                                                   |
| Wireless Data Rate (5 GHz)                  | 867 Mbps                                                                                                                                                                                   |
| Frequency Bands                             | 2.4 GHz: 802.11b/g/n: 2.4000 GHz to 2.483 GHz<br>5 GHz: 802.11a/n/ac: 5.150 GHz to 5.350 GHz, 5.470 GHz to 5.725 GHz, 5.725 GHz to 5.850 GHz<br>Note: Country-specific restrictions apply. |
| 2.4 GHz Max. Transmit Power                 | 20 dBm                                                                                                                                                                                     |
| 5 GHz Max. Transmit Power                   | 26 dBm                                                                                                                                                                                     |
| Surge Protection                            | Common mode: ±4 kV Differential mode: ±2 kV                                                                                                                                                |
| Dimensions (W x D x H)                      | 355 mm x 124 mm x 48 mm (13.98 in. x 4.88 in. x 1.89 in.)<br>(without bracket)                                                                                                             |
| Weight                                      | 0.83 kg (1.83 Ibs.)                                                                                                                                                                        |
| Number of Fixed LAN Ports                   | 3                                                                                                                                                                                          |
| Max. LAN Port Rate                          | 1000 Mbps                                                                                                                                                                                  |
| Number of 10/100/1000BASE-T Ports           | 3                                                                                                                                                                                          |

| Model                   | RG-EST450G                                                                                                                                                              |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reset                   | Yes                                                                                                                                                                     |
| Status LED              | Yes                                                                                                                                                                     |
| Power Supply            | 12V DC or 24 V passive PoE or 802.3af/at                                                                                                                                |
| Local Power Supply      | Yes                                                                                                                                                                     |
| PoE Out                 | No                                                                                                                                                                      |
| Supported PoE Standards | 802.3af/at                                                                                                                                                              |
| Antenna Type            | Built-in antenna, horizontal 120°/vertical 13°                                                                                                                          |
| Hardware Button         | 1 x reset button                                                                                                                                                        |
| DC Power Connector Size | Inner Diameter: 2.10 mm ± 0.1 mm (0.083 in. ± 0.004 in.)<br>Outer Diameter: 5.50 mm ± 0.1 mm (0.217 in. ± 0.004 in.)<br>Depth: 10.0 mm ± 0.5 mm (0.394 in. ± 0.020 in.) |
| DC Voltage/Current      | 12 V/1.2 A, 24 V/0.6 A                                                                                                                                                  |
| LEDs                    | 1 x system LED<br>3 x port LEDs<br>3 x signal strength LEDs                                                                                                             |
| 2.4 GHz Antenna Gain    | 2 dBi                                                                                                                                                                   |
| 5 GHz Antenna Gain      | 15 dBi                                                                                                                                                                  |
| Power Consumption       | < 12 W                                                                                                                                                                  |
| IP Rating               | IP55                                                                                                                                                                    |
| Color                   | Elegant white                                                                                                                                                           |
| Operating Temperature   | −30°C to +65°C (−22°F to +149°F) (−40°C to +80°C [−40°F to +176°F] in publicity materials)                                                                              |

| Model                                 | RG-EST450G                                                                        |
|---------------------------------------|-----------------------------------------------------------------------------------|
| Storage Temperature                   | −40°C to +85°C (−22°F to +185°F)                                                  |
| Operating Humidity                    | 5% RH to 95% RH (non-condensing)                                                  |
| Storage Humidity                      | 5% RH to 95% RH (non-condensing)                                                  |
| MTBF                                  | > 400000 hours                                                                    |
| Working Distance                      | 5 km                                                                              |
| Bridging Performance                  | 200 Mbps/1 km (HT40)<br>130 Mbps/3 km (HT40)<br>80 Mbps/5 km (HT40)               |
| RSSI (dBm)                            | −54 dBm/1 km<br>−62 dBm/3 km<br>−66 dBm/5 km<br>(Pairing with the CPE RG-EST350G) |
| Throughput & Camera Limits: 3 MP      | 40/1 km<br>30/3 km<br>15/5 km                                                     |
| Throughput & Camera Limits: 4 to 5 MP | 25/1 km<br>18/3 km<br>10/5 km                                                     |
| Throughput & Camera Limits: 6 to 7 MP | 18/1 km<br>10/3 km<br>7/5 km                                                      |
| Throughput & Camera Limits: 7 to 8 MP | 13/1 km<br>8/3 km<br>5/5 km                                                       |
| Management Radio                      | 2.412 GHz ~ 2.472 GHz                                                             |
| Number of PtMP Links                  | 16                                                                                |
| ESD Protection                        | ESD tolerance: contact discharge=8 kV, air discharge=15 kV                        |
| Certification                         | CE                                                                                |
| Software Features                     |                                                                                   |

| Model                                                   | RG-EST450G                 |
|---------------------------------------------------------|----------------------------|
| Operating Mode                                          | BaseStation/CPE            |
| TDMA                                                    | Fixed Mode/Flexible Mode   |
| WLAN Security                                           | WPA2-PSK                   |
| Management SSID                                         | @Ruijie-bxxxx              |
| Management SSID for Internet Access                     | Yes                        |
| SSID Hiding                                             | Yes                        |
| Spectrum Scan                                           | Yes                        |
| Antenna Aligment                                        | Yes                        |
| One-Touch Pairing                                       | Yes                        |
| WMM                                                     | Yes                        |
| Storm Control                                           | Yes                        |
| VLAN Packet Transmit                                    | Yes                        |
| DHCP Server                                             | Yes                        |
| DHCP Client                                             | Yes                        |
| Network Diagnosis                                       | Ping/Traceroute/DNS Lookup |
| Time & Date                                             | Yes                        |
| Firmware Upgrade                                        | Yes                        |
| Backup/Restore                                          | Yes                        |
| Cloud Management                                        | Yes                        |
| Power Configuration                                     | Yes                        |
| Country/Region Code                                     | Yes                        |
| Remote Restart                                          | Yes                        |
| SON (Self-organizing Networking with all Reyee Devices) | Yes                        |
| SNMP                                                    | Yes                        |
| Link Aggregation                                        | No                         |
| Bridge Speed Test                                       | Yes                        |

| Model                           | RG-EST450G |
|---------------------------------|------------|
| Max. Number of Devices on a SON | 200        |
| Ping                            | Yes        |
| Traceroute                      | Yes        |
| AI Heatmap                      | Yes        |

# Package Contents

| Model                          | RG-EST450G                                                    |
|--------------------------------|---------------------------------------------------------------|
| Wireless Bridge/Antenna        | 1                                                             |
| PoE Injector                   | 1                                                             |
| DC Power Adapter               | 1                                                             |
| Mounting Bracket               | 1                                                             |
| Gross Weight                   | 1.61 kg (3.55 lbs.)                                           |
| Package Dimensions (W x D x H) | 415 mm x 185 mm x 113 mm<br>(16.34 in. x 7.28 in. x 4.45 in.) |

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