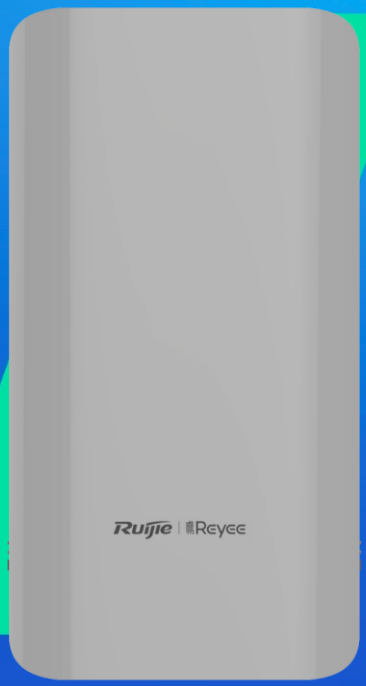
DATASHEET

RG-EST310 V2

5 GHz Dual-stream 802.11ac 1 km Wireless Bridge



Highlights

- RG-EST310 V2 provides stable traffic transmission from 1 km away
- Factory-paired, auto-rebridge upon power restoration
- IP54 Weatherproof, -30℃~55℃ ensures stable operating
- Cost-effective wireless solution for elevator CCTV to avoid cable loss

Date: 2026.9.7

Highlight Features

Highlight Features

Strong Adaptability and High Scalability

V0 Level
Flame Retardant

IP54
Weatherproof

-30 to 55°C Operating
Temperature

High Quality
High Performance

RG-EST310 V2 has adopted the new high-performance 5GHz single-band dual-stream chip solution, which offers up to 867Mbps wireless transmit rate and significantly enhances the efficiency and stability of network bridge data transmission.

Highlight Features

Product Information

Model	RG-EST310 V2
Product Type	Wireless bridge
Accessory	No

Hardware Specifications

Model	RG-EST310 V2
Certification and Regulatory Compliance	
Safety compliance	EN62368-1
EMC	EN 55032 EN 55035 EN 61000-3-3 EN 61000-3-2 EN 301489-1 EN 301489-3 EN 301489-17
Certification	CE, FCC, CB, ISED, cTUVus
System Specifications	
CPU	Single-core processor, 575/580 MHz clock frequency
Flash memory	8 MB
RAM	64 MB DDR2
Power Supply and Consumption	

Hardware Specifications

Model	RG-EST310 V2
Power supply	Power supply options: ● DC power adapter ● Passive PoE adapter
Power input	Passive PoE adapter: ● Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz ● Rated input current: 0.5 A Max ● Rated output voltage: 24 V DC ● Maximum output current: 0.6 A
Number of PoE In ports	1
Local power supply	Yes, one DC power connector (12 V, 1 A)
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	7 W
Dimensions and Weight	
Weight	0.20 kg (0.44 lbs) (without packaging materials)
Shipping weight	1.08 kg (2.38 lbs)
Product dimensions (W x D x H)	76 mm x 37 mm x 147 mm (2.99 in. x 1.46 in. x 5.79 in.) (excluding mounting bracket)
Package dimensions (W x D x H)	251 mm x 268 mm x 68 mm (9.88 in. x 10.55 in. x 2.68 in.)
Color	Gray

Hardware Specifications

Model	RG-EST310 V2
Wi-Fi Radio	
Radio design	Single-radio 2 spatial streams ● Radio 1: 5 GHz, 2 spatial streams: 2 x 2, MIMO
Operating band	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. For details, see Channels for Countries & Regions (official website link to be added).
Wi-Fi standard	Wi-Fi 5 (IEEE 802.11ac) standard, compatible with IEEE 802.11a/n standards
5 GHz Wi-Fi	Wi-Fi 5 (IEEE 802.11ac)
5 GHz channel width	Auto/20/40/80 MHz
Transmission rate	Maximum wireless data rate: 866 Mbps ● Radio 1: 5 GHz, 866 Mbps
Maximum transmit power	Frequency bands and maximum Effective Isotropic Radiated Power (EIRP): Note: Country specific restrictions apply.

Hardware Specifications

Model	RG-EST310 V2
	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： 5150-5350 MHZ, EIRP ≤ 23 dBm 5470-5725 MHz, EIRP ≤ 30 dBm 5725-5850 MHz, EIRP ≤ 30 dBm

Hardware Specifications

Model	RG-EST310 V2
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.
Receive sensitivity	802.11a: -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	802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
Highest QAM order	256
Antenna	
Antenna	5 GHz: 2 x 2 Built-in directional antenna, horizontal: 60°, vertical: 30°
Antenna gain (5 GHz)	10 dBi
Antenna horizontal orientation	60°
Antenna vertical orientation	30°
Environment and Reliability	
Mounting options	Wall/Pole

Hardware Specifications

Model	RG-EST310 V2
Operating temperature	–30°C to +55°C (–22°F to +131°F)
Storage temperature	–40°C to +70°C (–40°F to +158°F)
Operating humidity	5% RH to 95% RH (non-condensing)
Storage humidity	5% RH to 95% RH (non-condensing)
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.)
MTBF	400,000 hours (about 45 years)
Cooling	Natural cooling
IP rating	IP54
ESD protection	Standard test: contact discharge=8 kV, air discharge=15 kV, Class B
Surge protection	Service port: ±4 kV for common mode Power connector: ±4 kV for common mode and ±2 kV differential mode
Applicable Scenarios	
Applicable Scenarios	CCTV
Port Specifications	
Number of fixed LAN ports	1
Number of 10/100BASE-T ports	1

Hardware Specifications

Model	RG-EST310 V2
Reset button	1
LEDs	1 x system status LED 1 x Ethernet port LED 3 x signal status LEDs

Software Specifications

Model	RG-EST310 V2
Basic Configurations	
eWeb login with the username and password	Yes
Local upgrade	Yes
Configuration backup	Yes
System language	Chinese (Simplified), English
System time settings	Yes
Ethernet Switching	
Interface rate	10/100 Mbps auto-negotiation
VLAN	Yes
Link aggregation	No
WLAN	
BaseStation/CPE mode switching	Yes
Enhanced one-to-many transmission (TDMA)	No
Bridge SSID hiding	Yes
WPA2-PSK encryption	Yes
WPA-PSK encryption	No
WPA/WPA2-PSK encryption	No
Recommended channel	Yes
Bridge speed test	Yes

Software Specifications

Model	RG-EST310 V2
5 MHz offset	No
Random security key upon configuration delivery	No
Configuring a security key for network-wide bridges	Yes
Configuring a security key for a single bridge group	Yes
Configuring a security key for a single bridge	Yes
Bridge SSID, channel, and power configuration	Yes
WMM	Yes
Recommended PTMP connections	5
Maximum bridge distance	1 km (0.62 miles)
One-touch pairing	Yes
Maximum effective distance of one-touch pairing	20 m (65.62 ft.)
Bridge performance	90 Mbps/100 m (328.08 ft.) (HT40) 80 Mbps/500 m (0.31 miles) (HT40) 80 Mbps/1 km (0.62 miles) (HT40) 40 Mbps/2 km (1.24 miles) (HT40)

Software Specifications

Model	RG-EST310 V2
RSSI	– 52 dBm/100 m (328.08 ft.) – 65 dBm/500 m (0.31 miles) – 68 dBm/1 km (0.62 miles) – 75 dBm/2 km (1.24 miles)
Recommended number of connected cameras (3 Mbps)	16/100 m (328.08 ft.) 16/500 m (0.31 miles) 16/1 km (0.62 miles) 6/2 km (1.24 miles)
Recommended number of connected cameras (4 – 5 Mbps)	10/100 m (328.08 ft.) 10/500 m (0.31 miles) 10/1 km (0.62 miles) 4/2 km (1.24 miles)
Recommended number of connected cameras (6 – 7 Mbps)	7/100 m (328.08 ft.) 7/500 m (0.31 miles) 7/1 km (0.62 miles) 3/2 km (1.24 miles)
Recommended number of connected cameras (7-8 Mbps code streams)	5/100 m (328.08 ft.) 5/500 m (0.31 miles) 5/1 km (0.62 miles) 2/2 km (1.24 miles)
Real-time signal strength	Yes

Software Specifications

Model	RG-EST310 V2
Optimal signal strength	Yes
Active/Standby channel	Yes
Restoring to the active channel	Yes
Maximum number of devices on the SON	200
IP Service	
IPv4 ping	Yes
IPv4 traceroute	Yes
DHCP server	Yes
DHCP client	Yes
Security	
Broadcast storm control	Yes
Network Management and Monitoring	
SON	Yes
AI heatmap	No
Camera detection	No
Network-wide management SSID configuration	Yes
Network connection through the management SSID	No
Ruijie Cloud management	Yes

Software Specifications

Model	RG-EST310 V2
Restarting devices through Ruijie Reyee App	Yes
SNMPv1, v2c, and v3	No
Fault diagnosis	Yes Note: support for network tools (ping, traceroute, and nslookup), fault alarms, and fault collection
Restart cause prompt	No
Disconnection cause prompt	No
Cloud alarms on DFS signal detection	No

Package Contents

Model	RG-EST310 V2
Device	
Device	2
Accessories	
Cable tie	4
Power adapter	2 Note: 24 V passive PoE adapter
Power cord	2
Mounting bracket	2
Screw	8 x Wall anchors 8 x Phillips pan head screws (self-tapping screws 4.2 mm x 19 mm)
Manual	
User Manual	1
Warranty Card	1

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