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RG-EW1200G PRO

1300M Dual-band Gigabit Wireless Router

V1.1

Ruijie Networks Co., Ltd.

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R e v i s i o n R e c o r d

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2020/4/24	1.0	All	First draft	Lei Lin
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P r e f a c e

This document includes the product pictures, overview, features, technical specifications, typical applications and ordering information of RG-EW1200G PRO 1300M Dual-band Gigabit Wireless Router (Enhanced Edition) for marketing purpose.

Note:

This document can be used directly for product datasheet printing by the Marketing Department.



If you have any enquiries, please contact the document author.

C o n t e n t s

1	Product Photo	1
2	Product Overview	2
3	Product Features	3
4	Hardware Specifications	5
5	Software Specifications	6
6	Typical Applications	7
7	Ordering Information.....	错误!未定义书签。

1 Product Photo



RG-EW1200G PRO

2 Product Overview

Ruijie Reyee RG-EW1200G PRO is a Gigabit dual-band wireless consumer router designed for one-story homes, villas, small shops, SOHO and other scenarios. The device can meet the needs of Gigabit Internet access with its excellent performance, while providing strong signals and coverage. Integrated with Ruijie's exclusive Reyee Mesh Technology, it eliminates the configuration difficulties of multi-device networking and adding new equipment to the network. The simple app management coupled with features such as children's Internet protection, gaming mode, and smart home Wi-Fi makes it a practical and easy-to-use wireless router for men, women and children.

The router offers 1 10/100/1000Mbps WAN port and 3 10/100/1000Mbps LAN ports, with maximum access bandwidth of 1000Mbps. The recommended number of clients is 64, including 32 wireless terminals.

The device supports both 2.4GHz and 5GHz, offering maximum wireless rate of 400Mbps at 2.4G, 867Mbps at 5G and 1267Mbps per router. Equipped with the 802.11ac Wave2 chip, the device supports MU-MIMO, which can support more terminals, provide faster wireless speed and more stable connection, thereby improving the terminals' Internet access performance and users' Internet experience.

In addition to Ruijie's Reyee Mesh Technology, the router also supports network deployment with Ruijie Reyee Series enterprise gateways and APs for unified management and configuration. No matter which networking method is used, the RF adjustment algorithm applied to millions of Ruijie enterprise-grade APs can provide seamless roaming between devices and fast switching between 2.4GHz and 5GHz. Users can move around the Wi-Fi coverage area without service interruption thanks to the seamless roaming.

Collaborative management can be authorized to others temporarily or permanently. Local or remote management and configuration can be performed via various methods such as local web, Ruijie Cloud app, etc. to achieve fault diagnosis and maintenance, providing multi-end management on mobile phone and PC anytime anywhere, and offering worry-free maintenance.

3 Product Features

High-performance Gigabit Routing

The device supports 4 Gigabit Ethernet ports and wireless access rate of up to 1267M. The powerful dual-core hyper-threading CPU, combined with the hardware NAT feature, performs high-speed data forwarding and maximizes the broadband performance. For gigabit broadband speed test of the wired network port, after deducting the basic network overhead, the measured network speed can reach more than 980M.

1267M Dual-Band Integration Offering Low Interference and Fast Internet Speed

Affected by the actual application environment, the 2.4GHz frequency band has high interference and the testing speed is usually only 40 to 50M, which is unlikely to reach 100M. RG-EW1200G PRO provides both 2.4GHz and 5GHz wireless frequency bands at the same time. The 2.4GHz frequency band offers good penetration, long transmission and wide coverage, providing good basic signal coverage. The 5GHz frequency band features low interference, high speed, and low latency, providing better experience when watching HD videos and playing online games. The SSIDs of 2.4GHz and 5GHz can be set separately, or the two can be combined into one, offering dual-band concurrent access, 5G priority and smart identification, which provides better Internet experience.

Optimize 2.4G to Increase the Limit of Smart Terminal Connections

In view of the widespread adoption of smart terminals such as smart homes and wireless cameras, the device has applied the Wi-Fi 5 chip for Wi-Fi 4 device access to increase the maximum access rate of the 2.4GHz band from 300Mbps to 400Mbps, and provide a higher limit for the number of smart terminal connections. An independent Wi-Fi signal for smart home can be set up for secure and reliable connection.

MU-MIMO Offers Higher Transmission Efficiency

The device supports 802.11ac Wave2 MU-MIMO (multi-user, multiple-input, multiple-output), changing the previous inefficient transmission method in which only one terminal can occupy the channel at a time. MU-MIMO allows the device to transmit data to multiple terminals concurrently. Multi-terminal concurrent transmission is no longer in competitive mode, which improves the multi-user experience by 50% and offers extremely fast Internet access for all users.

Professional RF Design Multiplies the Coverage Distance

The quad-stream independent FEM design ensures that the LNA amplifies the received signal power during signal transmission to effectively improve the receiving sensitivity and to a certain extent reduce the problems caused by the unbalanced power between the router and the

Wi-Fi terminal, such as false signal and terminal signal unable to transmit back to the router. In addition, the external omnidirectional antennas also further ensure the Wi-Fi signal coverage.

Exclusive Easy Link Technology Enables Zero-configuration Networking for Multiple Devices

Easy-Link is a networking technology self-developed by Ruijie for multiple wireless routers' connection, which supports both plug-in and one-key pairing. Without requiring any pre-configuration, you can complete the multiple devices pairing process, additional equipment installation, and coverage optimization with zero threshold. Multiple wireless routers connected by Easy-Link Technology can intelligently identify the connection status and automatically switch between wireless relay and wired relay modes to improve network reliability.

Easy-Link Technology Offers Seamless Roaming without Disconnection

The Easy-Link Technology supports wired or wireless networking of multiple devices. The RF adjustment algorithm applied to millions of Ruijie enterprise-grade APs can provide seamless roaming between the equipment and fast switching between 2.4GHz and 5GHz. When users walk around under the Wi-Fi signal coverage, the optimal frequency band selection and network switching will be automatically performed without service interruption.

Parental Control Allow Parents to Monitor Their Child's Internet Use

Users can control the Internet access authority of the specified terminal through the Ruijie Cloud App and set rules to limit the online duration of the specified terminal.

Wi-Fi Acceleration Mode Put You One Step Ahead of Other Players

The Wi-Fi acceleration mode improves the anti-interference of the device and the wireless channel efficiency under high-interference environment, thereby reducing game delays and putting you one step ahead of other players.

Temporary Authorization for Remote Management

Users can use the Ruijie Cloud App for smart network inspection to determine the current network failures. Users can also temporarily grant network authorization and share network to technical personnel who can do remote-diagnosis through various technical tools such as Ruijie Cloud app and MACC cloud platform, to avoid unnecessary on-site services.

Professional Heat Dissipation Design for Long-Term Stable Operation

The CPU uses metal sheet for heat dissipation, offering heat dissipation coefficient close to 200W/m²*K, which is 20 times that of the traditional ceramic heat-sinks. With an excellent aerodynamic heat dissipation structure design, the internal temperature of the equipment is greatly reduced. Long-term high-speed operation is stable and reliable, avoiding stability problems such as speed reduction and crashes caused by excessive temperature.

Enterprise-grade product design supporting connection with enterprise-grade equipment

The device can be deployed with Ruijie Reyee enterprise-grade gateway and AP for hybrid deployment, unified management, unified configuration, and seamless roaming.

4 Hardware Specifications

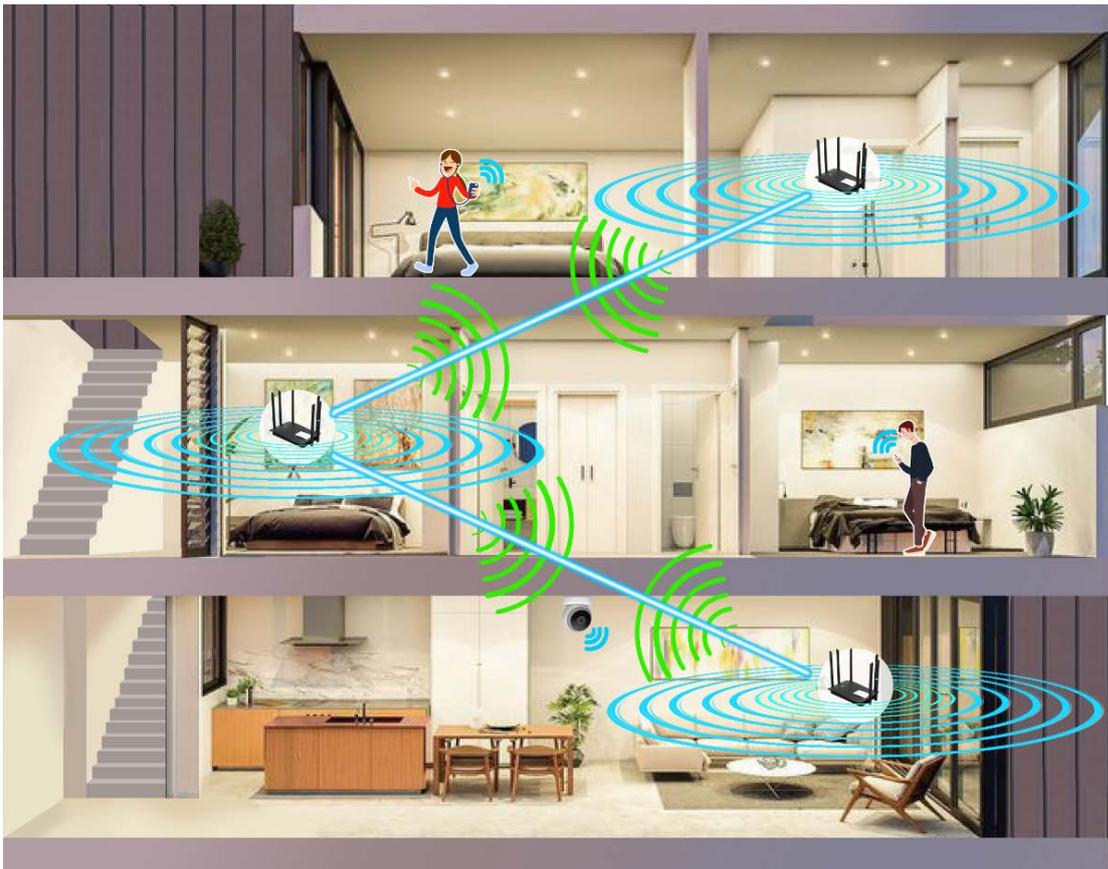
Wireless specifications	2.4GHz 2*2: maximum rate 400Mbps; 5GHz 2*2: maximum rate 867Mbps
	Antenna: External 6dBi non-removable omnidirectional antennas
	Support 802.11a/b/g/n/ac/ac Wave2, MU-MIMO
	Frequency band: Independent 2.4GHz and 5GHz modules, supporting dual frequency integration
	Wi-Fi 2.4GHz 5GHz
Ports	1 10/100/1000M WAN port (Auto MDI/MDIX)
	3 10/100/1000M LAN ports (Auto MDI/MDIX)
	1 blue system LED indicator, 4 network port LED indicators
	1 device pairing/factory reset button
	1 power input interface
Physical specifications	Dimensions : 220x140x36mm (WxDxH, excluding antennas)
	Weight : 0.98kg (entire equipment including packaging)
Power supply	Power specification: DC12V 1.5A
	Maximum power: <14W
Certification	CE
Operating environment	Operating temperature: 0-45°C
	Storage temperature: -40-70°C
	Operating humidity: 5%-95%RH (non-condensing)
	Storage humidity: 5%-95%RH (non-condensing)

5 Software Specifications

Main features	<p>Routing mode: PPPoE / DHCP / static IP; relay mode: wired relay / wireless relay</p> <p>Obtain PPPoE account from the old router</p> <p>Wi-Fi dual-band separation/ integration</p> <p>Guest Wi-Fi; smart home Wi-Fi; wireless network isolation</p> <p>Static DHCP address</p> <p>Virtual server: port mapping, DMZ, etc.</p> <p>DDNS: Oray</p> <p>UPnP</p>
Network security	<p>Wireless security: WPA-PSK/WPA2-PSK encryption</p> <p>ARP protection: IP/MAC binding</p> <p>SSID hiding</p> <p>Preventing rogue devices (Blacklist/whitelist)</p> <p>Internet access control</p>
Advanced features	<p>Easy Link: Supports zero-configuration networking of multiple devices, and supports automatic switching between wired and wireless networking for multiple devices</p> <p>Wi-Fi optimization: Wi-Fi roaming, 5G priority, acceleration mode, channel adjustment, power adjustment, roaming sensitivity adjustment</p> <p>Bandwidth management: hardware NAT, intelligent bandwidth allocation</p> <p>Auto network inspection, fault diagnosis</p> <p>Software upgrade: Automatic & manual cloud software upgrade</p>
Management mode	<p>Local web page</p> <p>Cloud management: MACC cloud platform</p> <p>Ruijie Cloud app: iOS version, Android version</p>

6 Typical Applications

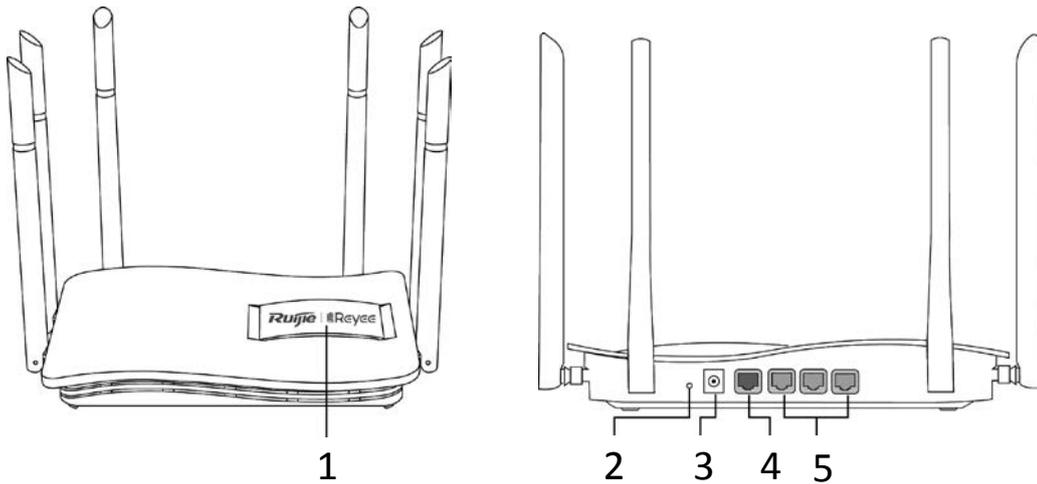
RG-EW1200G PRO is an ideal choice for wireless network deployment in one-story houses, villas, small shops, and SOHO. RG-EW1200G PRO can realize flexible networking and seamless roaming for multi-device via the Easy Link Technology, providing stable and high-speed wireless experience.



Installation Guide

For better use of Reyee products,
please read this guide before installation

Appearance



1	System Status Indicator
2	pairing/Reset Button press >10s to reset press <1s to pair
3	Power
4	WAN Port/ndicator
5	LAN1-3 Port/ndicator

Packing List

Router *1

Power Adapter *1

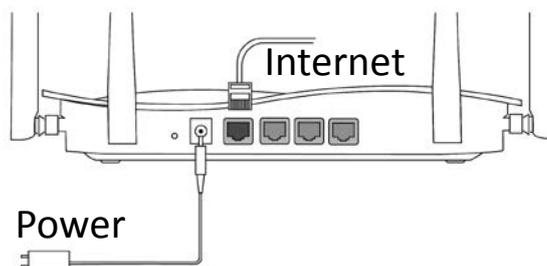
Quick Installation Guide *1

Warranty card *1

Quick Installation

Access the Internet in Only 3 Steps

① Insert the cable which connects to the Internet to the yellow port, and power on the router.

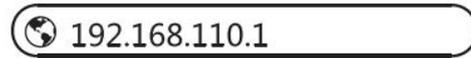


② Access the Internet

Connect to the SSID “@Ruijie-sxxxx” or “@Ruijie-mxxxx” (xxxx is the last 4 digits of MAC address) by mobile phone or PC. The configuration page will be displayed automatically, or you can visit 192.168.110.1 by browser.



WLAN

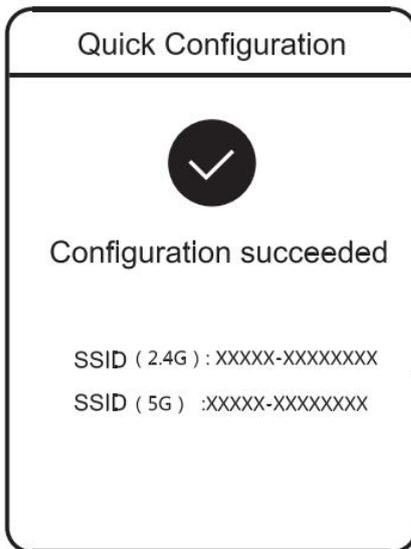


Browser

*If you can not connect to the SSID or visit the website, please scan the QR-code on the back of package for online support.

③ Configuration Completes

Complete all configuration according to the guide. When "Configuration succeeded" is displayed, you can access the Internet.



————— SSID you have configured

Reyee Mesh router can connect with each other to form a distributed network.

1. Connect the main router to the Internet

Please refer to the Quick Installation for configuration.

This router is used as the main router of the distributed network, and other Reyee Mesh routers are secondary routers.

2. One-click connection

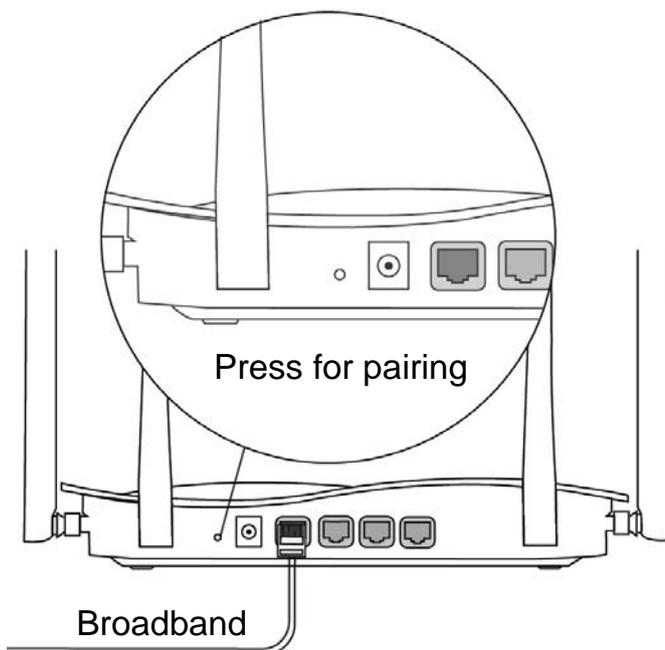
Please make sure that the routers to be paired are in the factory

settings. If they are configured before, restore the factory settings first (see the FAQ for how to restore the factory settings). Do not connect the network cable to the routers.

Power on the routers within 2 meters of the main router, and their indicators will start to blink quickly. Wait for a period of time, the system indicators will turn to steady on, which means the routers are on. Press the Pairing button on the main router, and its system indicator will start to blink. The main router will search for neighboring secondary routers for 2 minutes. After the search is over, the system indicator changes to steady on. When the system indicators on the secondary routers blink, it means that two routers are being paired; when the system indicator changes to steady on, the pairing completes.

3. Move the paired Reyee Mesh routers to the positions where the signal needs to be expanded, and power them on. No more configuration is required.

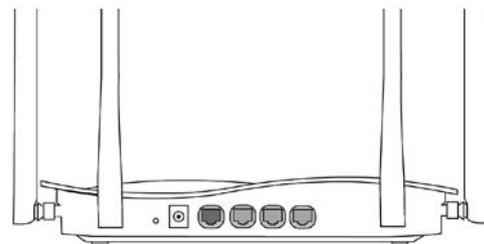
After the router is powered on, the system indicator blinks, which means it is connecting to the main router. When the system indicator turns to steady on, the connection is successful, and a distributed WiFi network can be constructed.



Main Router

Ensure the router can access the Internet

After pressing the button, the system indicator starts blinking.
As the detection ends after 2 minutes, it will stop blinking.



Secondary Router

Do not connect with network cable
During pairing, the system indicator blinks.
If pairing succeeds, it will stop blinking.

Indicator Instruction

Indicator	Status	Description
System Status Indicator	Off	The router is powered off
	Steady On	The router is running normally
	Fast Blinking	Restoring factory settings/Rebooting
	Slow Blinking	Reyee Mesh is being paired or repeater stops
Port Indicator	Off	The port is not connected or the cable disconnects
	Steady On	The port is connected normally
	Blinking	Data is being transmitting

FAQ

Why can't I visit 192.168.110.1?

- 1) Check whether NIC is configured as DHCP.
- 2) Ensure the computer is connected to any of the LAN ports and the indicator is on; otherwise you may change the cable and have a try again.
- 3) Re-open the browser (recommend to use Google Chrome) and visit 192.168.110.1 again.
- 4) Change the browser.
- 5) Change the cable or computer.

If all these methods fail, please restore the factory settings (hold the Reset Button for 10s).

Why can't I access the Internet after configuration?

- 1) Check whether the cable is connected as the instruction, and the indicator is on.
- 2) Check the Internet connection type.
 - a. If your ISP offers an account/password, please select PPPoE and enter your account/password.
 - b. If your ISP offers the static IP address, subnet mask, gateway and DNS, please select Static IP and enter the information.
- 3) If you still can not access the Internet, please contact your ISP.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 25 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.