

Ruijie RG-AP520 Wireless Access Point Datasheet

Ruijie Networks Co., Ltd.

All Rights Reserved

Revision Record

Revision Date	Version	Revised Sections	Details	Authors
2016-3-1	V1.2	Draft	- Chinese version completed	HQ Headquarter
2016-5-6	V1.0	Draft	- English translation completed	HK Translation Team
2016-5-9	V1.1	Product Picture	- Updated with Eng logo picture	HK Translation Team
2016-5-19	V1.2	Product Features	- Added hardware highlights picture	HK Translation Team

Contents

1	Product Picture	3
2	Product Overview	4
3	Product Features	5
3.1	Smart Wireless Coverage	5
3.1.1	802.11ac Gigabit Access	5
3.1.2	Remarkable Energy-saving Design	5
3.1.3	Intelligent Device Recognition	5
3.1.4	Industry-leading Local Forwarding Technology	5
3.1.5	Abundant QoS Policies	6
3.1.6	X-speed Wireless Experience	6
3.2	Flexible Device Management	7
3.2.1	Flexible Switching Between FAT & FIT Modes	7
3.2.2	Simple Deployment With Zero Configuration	7
3.2.3	PoE Port For Easy Deployment & Maintenance	7
4	Technical Specifications	8
5	Ordering Information	12
6	More Information	13

1 Product Picture



RG-AP520

2 Product Overview

Ruijie RG-AP520 Wireless AP offers you exceptional cost savings without sacrificing user experience. The 802.11ac AP implements a dual-radio, dual-band design supporting 2 spatial streams. The cost-efficient AP delivers an impressive performance up to 300Mbps@2.4GHz (802.11b/g/n) and 867Mbps@5GHz (802.11a/n/ac). The access rate speeds up to 1.167Gbps per device, totally eliminating Gigabit wireless bottleneck.

The RG-AP520 AP takes full care of security, RF control, mobile access, QoS, seamless roaming and other Wi-Fi aspects. Teaming up with Ruijie RG-WS Wireless Controller Series, the AP supports Wi-Fi user data forwarding, advanced security and access control with ease. The RG-AP520 AP is an ideal match for higher education, government, healthcare, finance, commerce and other indoor Wi-Fi scenarios alike.

3 Product Features

3.1 Smart Wireless Coverage

3.1.1 802.11ac Gigabit Access

The RG-520 AP supports next-gen Wi-Fi standard 802.11ac and enables access rates to up to 867Mbps@5GHz. When the dual bands operate simultaneously, the AP achieves an ultra-fast speed of up to 1.167Gbps. Comparing to the conventional 802.11n standard, the throughput is greatly enhanced to deliver a truly Gigabit wireless performance.

3.1.2 Remarkable Energy-saving Design

The AP adopts advanced power-saving features including single-antenna standby, dynamic MIMO power saving, enhanced transmission technology with automatic power saving and packet-by-packet power control. Coupled with the high-performance power supply design, the AP guarantees high-speed wireless access and maximized signal coverage under 802.3af power supply.

3.1.3 Intelligent Device Recognition

The AP supports intelligent recognition of end devices running mainstream operating systems such as iOS and Android.

3.1.4 Industry-leading Local Forwarding Technology

Employing an industry-leading local forwarding technology, the AP eliminates the traffic bottleneck of ACs. In collaboration with Ruijie RG-WS Wireless Controller Series, users can flexibly pre-set a forwarding mode for the AP. The AP can determine whether to forward data to the AC according to a SSID or user VLAN, or directly send the data to a wired network for data exchange.

The local forwarding technology can forward large-scale, delay-sensitive and real-time transmission data through the wired network. The feature significantly alleviates the traffic

on the wireless controllers and better fulfills the high traffic transmission requirements of 802.11ac network.

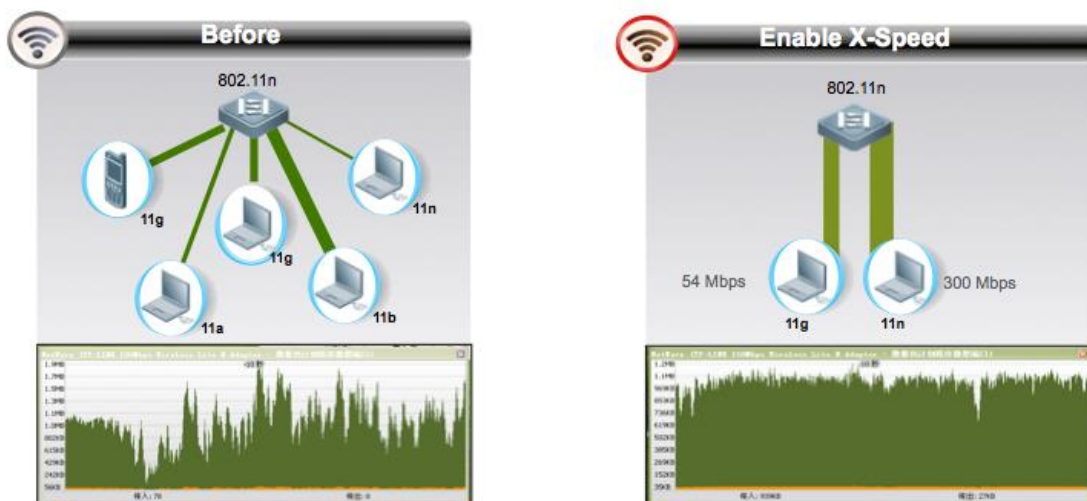
3.1.5 Abundant QoS Policies

The AP supports an extensive array of QoS policies. For example, it provides bandwidth limitations in WLAN/AP/STA modes and Wi-Fi multimedia (WMM) that defines different priorities for different service data. The AP realizes timely and quantitative transmission of audio and video and guarantees smooth operation of multi-media applications.

With the multicast-to-unicast conversion technology, the AP resolves the video interruption problem due to packet loss or long delay in the wireless Video on Demand (VoD) system. The AP highly enhances user experience of multicast video over the wireless network.

3.1.6 X-speed Wireless Experience

X-speed allows Ruijie APs to seize the best channel resources in environments with severe interference comparing with other APs. The RG-520 AP hence offers equal access time for smart devices running different standards such as 802.11g, 802.11n, 802.11ac, etc. The feature solves the problems such as high latency and low network speed caused by use of an old wireless LAN card which is far away from the AP. The RG-520 AP ensures a fair high-speed wireless network for all users with any devices anywhere and anytime.



X-speed Technology Gives Wireless Performance a Strong Boost

3.2 Flexible Device Management

3.2.1 Flexible Switching Between FAT & FIT Modes

The AP supports flexible switching over the FAT and FIT modes according to the networking requirements of different industries. When there are few APs, users can adopt the FAT mode for easy, independent network establishment. For large-scale networks, the AP can operate at FIT mode and works with RG-WS ACs to allow centralized management of all the APs and other aspects such as security, traffic management, QoS and IP management. Smooth transition from one mode to another, the RG-AP520 AP fully protects user investment.

3.2.2 Simple Deployment With Zero Configuration

Under the FIT mode, no configuration is required for the AP before deployment. Also, no manual configuration is necessary for on-site installation, maintenance or replacement. Download and auto implementation of AP configuration can all be completed via the AC. This user-friendly feature remarkably reduces installation and maintenance workload as well as investment costs.

3.2.3 PoE Port For Easy Deployment & Maintenance

In addition to local power supply, the AP also supports the 802.3af/802.3at PoE standard. With PoE switch or PoE power adapter, a single Ethernet cable can provide both data connection and electrical power to the AP. The network administrator can remotely control the devices. It also solves the problem of unstable power source, hence simplifying the installation process and maximizing the cost savings.

Hardware Highlights



Interfaces

1. Local Power Supply (DC 12V)
2. Console Port (RJ-45)
3. 10/100/1000BASE-T Uplink Port (Supports PoE)

4 Technical Specifications

Model	RG-AP520
Radio	Concurrent dual-band dual-radio
Protocol	802.11a/b/g/n/ac
Operating Bands	802.11b/g/n: 2.4GHz to 2.483GHz 802.11a/n/ac: 5.150GHz to 5.350GHz, 5.47GHz to 5.725GHz, 5.725GHz to 5.850GHz (vary depending on countries)
Antenna	2x2 MIMO
Spatial Streams	2
Max Throughput	300Mbps@2.4GHz 867Mbps@5GHz 1.167Gbps per AP
Modulation	OFDM: BPSK@6/9Mbps QPSK@12/18Mbps 16-QAM@24Mbps 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM and 256QAM
Receiver Sensitivity	11b: -99dBm(1Mbps), -93dBm(5.5Mbps), -90dBm(11Mbps) 11a/g: -93dBm(6Mbps), -85dBm(24Mbps), -82dBm(36Mbps), -77dBm(54Mbps) 11n: -92dBm@MCS0, -74dBm@MCS7, -92dBm@MCS8, -73dBm@MCS15 11ac HT20: -90dBm (MCS0), -65dBm (MCS9) 11ac HT40: -85dBm(MCS0) , -60dBm (MCS9) 11ac HT80: -82dBm(MCS0) , -58dBm (MCS9)
Transmit Power	≤100mW (20dBm, transmit power of the RF card only)
Adjustable Power	1dBm
Service Port	1 10/100/1000BASE-T Ethernet uplink port (supports PoE)
Management Port	1 console port (RJ-45)
LED Indicator	1 LED (red, green, blue, orange, and flashing modes, breathing flashing mode for smart device access, and the indicator can be switched off to silent mode)

IP Rating		IP41
Safety Standard		GB4943, EN/IEC 60950-1
EMC Standard		GB9254, EN301 489
Health Standard		EN 62311
Radio Standard		EN300 328, EN301 893
WLAN	Maximum stations per AP	128
	Virtual AP	A maximum of 32 SSIDs
	SSID hiding	Support
	Configuring the authentication mode, encryption mechanism, and VLAN attributes for each SSID	Support
	WDS (bridge mode)	Support
	Remote Intelligent Perception Technology (RIPT)	Support
	X-speed	Support
	Intelligent identification of smart device	Support
	Intelligent load balancing based on the number of users or traffic	Support
	STA control	SSID/radio-based
	Bandwidth control	STA/SSID/AP-based speed control
	802.11w	Support
	PSK, Web, and 802.1x authentication	Support
Security	Data encryption	WPA (TKIP), WPA2 (AES), WPA-PSK, and WEP (64 or 128 bits)
	WeChat authentication	Support

	QR code authentication	Support
	SMS authentication	Support
	PEAP authentication	Support
	Data frame filtering	Whitelist, static/dynamic blacklist
	User isolation	Support
	Rogue AP detection and countermeasure	Support
	Dynamic ACL assignment	Support
	WAPI	Support
	RADIUS	Support
	CPU Protection Policy (CPP)	Support
	Network Foundation Protection Policy (NFPP)	Support
	WIDS (Wireless Intrusion Detection System)	Support
	Remote probe	Support
Routing	IPv4 address	Static IP address or DHCP reservation
	IPv6 CAPWAP tunnel	Support
	ICMPv6	Support
	IPv6 address	Manual or automatic configuration
	IPv6 tunnel	Manual or automatic configuration
	Multicast	Multicast to unicast conversion
Wireless Position Tracking	Network tracking	Support
	Endpoint tracking	Support
Management and Maintenance	Network management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and Web management
	Fault detection and alarm	Support

	Statistics and logs	Support
	FAT/FIT switching	The AP working in FIT mode can switch to the FAT mode through the RG-WS wireless AC. The AP working in FAT mode can switch to the FIT mode through a local console port or Telnet.
Dimensions (W x D x H) (mm)		194 × 194 × 37 (Height of AP only, excluding case and mount kit)
Weight		0.5kg
Installation Mode		Ceiling/wall-mountable
Power Supply		Local power supply (DC 12V) and PoE (802.3at/af)
Power Consumption		<12.95W
Temperature		Operating Temperature: -10°C to 55°C
		Storage Temperature: -40°C to 70°C
Humidity		Operating Humidity: 5% to 95% (non-condensing)
		Storage Humidity: 5% to 95% (non-condensing)

5 Ordering Information

Model	Description
RG-AP520	Indoor Wireless Access Point, dual-radio, dual-band, 2 spatial streams, access rate up to 1.167Gbps per AP, support concurrent 802.11ac and 802.11a/b/g/n, FAT/FIT modes, 1 10/100/1000BASE-T uplink port, support PoE and local power supply (PoE and local power adapters sold separately)

6 More Information

For more information about the Ruijie RG-AP520 Wireless Access Point, please visit <http://www.ruijienetworks.com> or contact your local Ruijie sales representative.



Ruijie
Networks

Innovation Beyond Networks

Beijing

Fax: (8610) 6815-4205
Phone: (8610) 5171-5996
Email: info@ruijienetworks.com
Address: 11/F, East Wing, ZhongYiPengao Plaza,
No. 29 Fuxing Road, Haidian District,
Beijing 100036, China

Hong Kong

Fax: (852) 3620-3470
Phone: (852) 3620-3460
Email: sales-HK@ruijienetworks.com
Address: Unit 09, 20/F, Millennium City 2,
378 Kwun Tong Road, Kowloon, Hong Kong

Malaysia

Fax: (603) 2181-1071
Phone: (603) 2181-1071
Email: sales-MY@ruijienetworks.com
Address: Office Suite 19-12-3A, Level 12, UOA Center,
No. 19 Jalan Pinang, 50450 Kuala Lumpur,
Malaysia

OEM Cooperation Division

Phone: (8610) 5171-5995
Email: OEM@ruijienetworks.com
Address: 11/F, East Wing, ZhongYiPengao Plaza,
No. 29 Fuxing Road, Haidian District,
Beijing 100036, China

For further information, please visit our website <http://www.ruijienetworks.com>

Copyright © 2016 Ruijie Networks Co., Ltd. All rights reserved. Ruijie reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication shall be applicable.