Datasheet

RG-AP180P-L

Wi-Fi 6 Dual-Radio Access Point

INNOVATION
Beyond Networks

Ruijie

01 Product Overview

The RG-AP180P-L is a dual-radio 802.11ax-compliant Wi-Fi 6 wireless access point (AP) provided by Ruijie Networks for general education, higher education, government, finance, business, and other indoor high-density scenarios. It adopts 802.11ax and supports 2.4 GHz and 5 GHz frequency bands. It can provide an access rate of up to 2.975 Gbps. The ultra-fast wireless rate eliminates the bottleneck of performance.

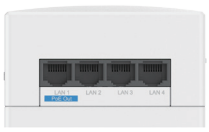
The design of the RG-AP180P-L considers factors such as wireless network security, radio control, mobile access, QoS, seamless roaming, and Internet of Things (IoT) scalability. With Ruijie's wireless access controller (AC), the RG-AP180P-L can implement wireless client access control, data forwarding, and secure access control.

The RG-AP180P-L can work in 802.11ax, 802.11ac Wave 2, 802.11ac Wave 1, and 802.11n modes simultaneously. It can be installed in a Chinese-standard 86 mm x 86 mm junction box, or an American- or European-standard junction box. It can be mounted against a wall, a panel, or other positions. It supports the local power supply and Power over Ethernet (PoE), which can be flexibly selected based on the onsite environment. Therefore, it is suitable for small-sized office environments such as hotels, apartments, healthcare facilities, and educational institutions.

02 Product Appearance

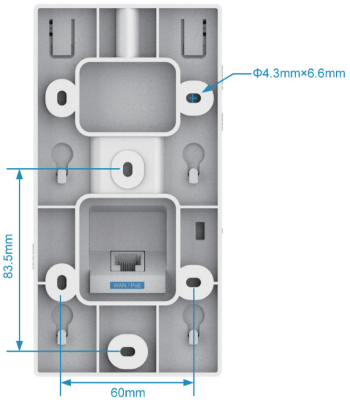
Front View

45° Right and Left View



Bottom Port View

Port View on the Back



Port View on the Back (with Mounting Bracket)

03 Product Highlights

High Speed and Intelligent Network Optimization, Improving User Access Experience

- **Dual-band design (2.4 GHz + 5 GHz), four spatial streams, and up to 2.975 Gbps peak data rate**
- **Intelligent local forwarding technology, delivering local or centralized forwarding to adapt to different scenarios**
- **OFDMA, optimizing multi-user access experience**
- **IEEE 802.11k/v/r support, roaming stickiness optimization, and remote association improvement for better user experience**

Secure and Reliable Network System

- **User-level secure access, providing secure authentication upon user access**
- **Authentication and encryption technologies such as WPA3, 802.1x, PPSK, and UPSK, improving data security**

Various Management Modes

- **Flexible switching between Fat and Fit modes, improving O&M and management efficiency on a wireless network**
- **Comprehensive security protection with Ruijie Cloud, building a highly-efficient and secure wireless network**

Diverse Extension Features

- **LAN1 port that allows the Power Sourcing Equipment (PSE) to power external devices and connect to IP phones, IoT modules, and other modules, adapting to more scenarios**

04 Product Features

Reliable High-Speed Port Design

The RG-AP180P-L uses one 2.5 Gbps uplink port, which solves the uplink data bottleneck and supports PoE for powered devices (PDs). It offers four 1000M downlink ports. LAN1 port allows the PSE to power external devices and can connect to IP phones, IoT modules, and other modules, adapting to more scenarios.

High-speed Wireless Access for Better Experience

The RG-AP180P-L optimizes user experience by maximizing Wi-Fi utilization and substantially reducing airtime competition between clients. It provides Orthogonal Frequency-Division Multiple Access (OFDMA) and Multi-User Multiple-Input Multiple-Output (MU-MIMO). With up to 2 spatial streams (2SS) and 160 MHz channel bandwidth (HE160), the RG-AP180P-L delivers the data rate of up to 2.4 Gbps at 5 GHz band, providing pioneering wireless capabilities for enterprises.

1024-QAM High-speed Access

The RG-AP180P-L adopts the dual-radio design and complies with the next-generation Wi-Fi standard IEEE 802.11ax. When dual radios are enabled, it can provide a wireless data rate of up to 2.975 Gbps to realize high-speed access experience.

OFDMA High-density User Access

OFDMA in IEEE 802.11ax enables the RG-AP180P-L to divide a WLAN channel into multiple narrower sub-channels, with each user occupying one or more sub-channels. The RG-AP180P-L can schedule services of multiple users, and receive and send packets concurrently. This reduces contention for air interface resources and backoff, shortens the network latency, and improves the network efficiency.

Diverse Wi-Fi Technologies

It supports RF transmission technologies:

- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum to prevent radar channel interference.
- Cyclic delay diversity (CDD) improves downlink RF performance, and converts spatial diversity to frequency diversity to avoid intersymbol interference, thus reducing bit error rate (BER) and effectively reducing signal distortion.
- Maximum ratio combining (MRC) improves the signal quality at the receiving end and enhances reliability and performance of received signals.

It supports RF channel coding technologies:

- Space-time block coding (STBC) increases the range and improves signal receiving, and enhances reliability of data transmission.
- Low-density parity check (LDPC) corrects errors efficiently and improves the throughput.
- Transmit beam-forming (TxBF) expands the signal coverage and enhances the reliability of specific devices, thereby improving the data rate.

Intelligent Optimization, Reliability Guarantee

Intelligent Local Forwarding

The RG-AP180P-L integrates intelligent local forwarding technology to eliminate the traffic bottleneck on its connected wireless access controller. The data forwarding mode of the RG-AP180P-L can be flexibly pre-configured through Ruijie's wireless access controller. Then the RG-AP180P-L determines whether data needs to be forwarded by the wireless access controller or be sent to a wired network for data exchange based on the SSID or user VLAN.

To optimize network performance, roaming, and security, wireless access points can forward all traffic to its connected wireless access controller, allowing for centralized management of traffic forwarding and isolation, and data encryption.

With the local forwarding technology, the RG-AP180P-L classifies the data that is sensitive to the delay and requires real-time high-performance transmission, and forwards it through a wired network. This greatly relieves the traffic burden of the wireless access controller and better adapts to heavy-traffic transmission on 802.11ax networks.

Client Access Optimization

In Fit mode, the RG-AP180P-L supports IEEE 802.11k/v/r, and provides intelligent identification and guidance functions such as roaming optimization and remote association guidance, delivering better Internet experience.

Abundant QoS Policies

The RG-AP180P-L provides abundant QoS policies. It supports bandwidth limiting based on the WLAN, AP, and STA, and provides Wi-Fi Multimedia (WMM) that defines priorities for different service data. Therefore, it implements immediate and quantitative transmission of audio and video data, and guarantees smooth application of multimedia services.

The RG-AP180P-L in centralized forwarding mode together with a wireless access controller can identify and limit application traffic by analyzing payload characteristics and traffic characteristics of data streams.

The multicast-to-unicast technology supported by the RG-AP180P-L solves the video freezing problem caused by packet loss or long latency in Video on Demand (VoD) and other multicast applications on a wireless network. It enhances the experience in the use of multicast video services on a wireless network.

Intelligent Monitoring, Green Design, and Power Saving

Intelligent Power Monitoring

The RG-AP180P-L can monitor the PoE output power and disable or enable some functions according to the available power to ensure its normal operation.

- When powered by 802.3at, the RG-AP180P-L starts up normally. The downlink port can supply power to external devices.
- When powered by 802.3af, the RG-AP180P-L starts up normally. Two RF cards can only work in one-stream mode, and the downstream port cannot supply power to external devices.

Energy Saving and Lower Power Consumption

The RG-AP180P-L incorporates the packet-based power control technology. With the high-performance power design, the RG-AP180P-L is energy-efficient while providing high-speed wireless access service.

Comprehensive Security Protection and Ease of Use

User-level Secure Access

The RG-AP180P-L supports various authentication and encryption technologies, including web, 802.1x, WEP (64/128 bits), WPA-TKIP, WPA-PSK, WPA2-AES, WPA3, PPSK (one-time dynamic password), UPSK, credentials/access codes, user accounts, and social authentication. The authentication server is not required, and only an AC is needed to provide secure data for clients.

The WPA2 device key is managed by eUPSK configured on an external server. When the device or device type changes, no additional configuration is required.

It supports WPA3-Personal (SAE) and WPA3-Personal mixed mode to improve data security.

The RG-AP180P-L supports secure storage of certificates and keys, providing secure device authentication and encrypted communication. The chip of the AP180P-L has the built-in hardware security module that can store and protect sensitive information such as certificates, keys, and passwords. These security features can be used to protect wireless networks and IoT devices against malicious attacks and prevent data leakage.

The RG-AP180P-L complies with the standard network access control system, and strictly defines network access from the perspective of user access, authorization, host compliance, network behavior monitoring, and network attack prevention. It ensures secure authentication upon network access.

Multiple Easy-to-Use Authentication Modes

Together with Ruijie authentication system or multi-service AC, the RG-AP180P-L supports a variety of efficient and easy authentication modes such as web, 802.1x, MAC address bypass (MAB), SMS, and QR code-based guest authentication. It conforms to the principle of authentication security upon network access.

MAB authentication frees the client from entering the username and password repeatedly. The username and password are required only upon the first login.

When a guest accesses a wireless network through SMS authentication, an authentication page pops up. On the authentication page, a guest can register an account using the mobile number, and accesses the Internet using the username and password in the SMS received.

QR code-based authentication is easy for guests to access the Internet. After accessing a wireless network, guests can receive a QR code prompt. They can access the network after being authorized by the visited employee, providing better security.

Comprehensive Wireless Security Protection

Through Ruijie Cloud and RG-WS series wireless controller, the RG-AP180P-L offers many security features, including Wireless Intrusion Detection System (WIDS), RF interference tracking, rogue AP containment, anti-ARP spoofing, and DHCP protection to build a secure and reliable wireless network.

All-in-One for Small Branch Office

The RG-AP180P-L supports IPsec VPN tunnels. IPsec VPN tunnels can be set up between the headquarters and branch offices to implement LAN interconnection.

The RG-AP180P-L supports IPsec VPN + NAT + PPPoE. It can provide wireless access services for the office area, and act as a VPN gateway to establish a dedicated tunnel for the office network. This realizes a dedicated office network for branches and the headquarters, improving security.

Flexible Device Management Modes

Flexible Switching Between Fat, Fit, and Cloud Modes

The RG-AP180P-L supports flexible switchover among Fat, Fit, and Cloud deployment modes. In Fit mode, it allows zero-touch provisioning (ZTP) configuration, and comprehensive remote management greatly improves O&M and management efficiency on a wireless network.

The RG-AP180P-L supports hybrid management. When the RG-AP180P-L is deployed as the standalone AP (Fat mode) or hosted AP (Fit or Cloud mode), it can automatically detect the operation mode, without the need for additional firmware upgrade. You can flexibly select a management mode of APs by function and capacity as needed.

Web Management

The RG-AP180P-L provides the web management GUI of the AP and AC, on which O&M personnel can complete wireless configuration easily and manage the wireless network in an all-round manner. On the AC web GUI, O&M personnel can manage the AP as well as clients connected to the AP, and rate-limit clients and restrict network access behaviors of clients. With the GUI, O&M personnel can plan, manage, and maintain wireless networks conveniently.

Association with the Network Management Software

The RG-AP180P-L can associate with Ruijie Cloud, which can manage all ACs and APs throughout the network, including device configuration backup and device status query. Ruijie Cloud presents the usage experience of wireless APs in the actual environment based on client analysis.

Rich IoT Platform Features

The RG-AP180P-L considers IoT extensions. The LAN1 port allows the PSE to power external devices and can connect to IP phones, IoT modules, and other modules to adapt to more scenarios.

The RG-AP180P-L It uses the built-in filter to automatically minimize the impact of interference from non-Wi-Fi network devices.

05 Specifications

Hardware Specifications

Dimensions and Weight

Dimensions and Weight	RG-AP180P-L
Unit dimensions (W x H x D)	86 mm x 170 mm x 43 mm (3.4 in × 6.7 in × 1.7 in)
Shipping dimensions (W x D x H)	399 mm x 367 mm x 245 mm (15.8 in × 14.5 in × 9.7 in)
Unit weight	Main unit: 0.3 kg (0.66 lbs) Mounting bracket: 0.1 kg (0.22 lbs)
Shipping weight	0.54 kg (1.19 lbs)
Mounting	Wall-mount (a mounting bracket is delivered with the main unit) Compatible with 86-mm, EU, and US standard junction boxes
Color	Elegant white
Lock option	Kensington lock

Wi-Fi Radio

Wi-Fi Radio	RG-AP180P-L
Radio design	Dual-radio and up to four spatial streams: ● Radio 1: 2.4 GHz, two spatial streams, 2x2 MU-MIMO ● Radio 2: 5 GHz, two spatial streams, 2x2 MU-MIMO
Operating frequencies	Radio 1, 802.11b/g/n/ax: ● 2.400 GHz to 2.4835 GHz (HE20/HE40), ISM, channels 1 to 13 Radio 2, 802.11a/n/ac/ax: ● 5.150 GHz to 5.250 GHz, U-NII-1, channels 36, 40, 44, and 48 ● 5.250 GHz to 5.350 GHz, U-NII-2A, channels 52, 56, 60, and 64 ● 5.470 GHz to 5.725 GHz, U-NII-2C, channels 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, and 140 ● 5.725 GHz to 5.850 GHz (HE80), U-NII-3/ISM, channels 149, 153, 157, 161, and 165 Note: Country-specific restrictions apply.
Data rates	Combined peak data rate: 2.975 Gbps Radio 1: 2.4 GHz, 574 Mbps ● Two spatial stream Single User (SU) MIMO for up to 574 Mbps wireless data rate to individual 2SS HE40 802.11ax client devices (max.) ● Two spatial stream Single User (SU) MIMO for up to 287 Mbps wireless data rate to individual 2SS HE20 802.11ax client devices (typical) Radio 2: 5 GHz, 2.4 Gbps ● Two spatial stream Single User (SU) MIMO for up to 2.4 Gbps wireless data rate to individual 2SS HE160 802.11ax client devices (max.) ● Two spatial stream Single User (SU) MIMO for up to 1.2 Gbps wireless data rate to individual 2SS HE80 802.11ax client devices (typical)

Wi-Fi Radio	RG-AP180P-L
Data rate set	The following 802.11-compliant data rates in Mbps are supported: 2.4 GHz radio ● 802.11b: 1, 2, 5.5, 11 ● 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 ● 802.11n: 6.5 to 300 (MCS0 to MCS15, HT20 to HT40) ● 802.11ax: 8.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40) 5 GHz radio ● 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 ● 802.11n: 6.5 to 300 (MCS0 to MCS15, HT20 to HT40) ● 802.11ac: 6.5 to 1,732 (MCS0 to MCS9, NSS = 1 to 2, VHT20 to VHT160) ● 802.11ax: 8.6 to 2,402 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE160)
Packet aggregation	802.11n/ac/ax: A-MPDU and A-MSDU
Antenna type	Built-in omnidirectional antenna ● 2 x 2.4 GHz antennas ● 2 x 5 GHz antennas
Max. antenna gain	2.4 GHz radio: 3 dBi 5 GHz radio: 3 dBi
Max. transmit power	2.4 GHz radio: 20 dBm (17 dBm per chain) 5 GHz radio: 20 dBm (17 dBm per chain) Note: The transmit power is limited by local regulatory requirements.
Power increment	Configurable in increments of 1 dBm
Radio technologies	802.11b: Direct-Sequence Spread-Spectrum (DSSS) 802.11a/g/n/ac: Orthogonal Frequency-Division Multiplexing (OFDM) 802.11ax: Orthogonal Frequency Division Multiple Access (OFDMA)
Modulation types	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 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM

The following table lists the radio frequency performance of Wi-Fi including different frequency bands, protocols, and date rates. It is country-specific, and Ruijie Networks reserves the right of interpretation.

Wi-Fi Radio Frequency Performance	RG-AP180P-L		
Frequency Band and Protocol	**Data Rate**	**Max. Transmit Power per Transmit Chain**	**Max. Receive Sensitivity per Receive Chain**
2.4 GHz, 802.11b	1 Mbps	20 dBm	–96 dBm
	2 Mbps	-10 dBm	–94 dBm
	5.5 Mbps	-10 dBm	–93 dBm
	11 Mbps	-10 dBm	–89 dBm
2.4 GHz, 802.11g	6 Mbps	19 dBm	–91 dBm
	24 Mbps	17 dBm	–85 dBm
	36 Mbps	17 dBm	–80 dBm
	54 Mbps	16 dBm	–74 dBm

Wi-Fi Radio Frequency Performance	RG-AP180P-L		
Frequency Band and Protocol	**Data Rate**	**Max. Transmit Power per Transmit Chain**	**Max. Receive Sensitivity per Receive Chain**
2.4 GHz, 802.11n (HT20)	MCS0	19 dBm	–85 dBm
	MCS7	16 dBm	–67 dBm
2.4 GHz, 802.11n (HT40)	MCS0	19 dBm	–82 dBm
	MCS7	16 dBm	–64 dBm
2.4 GHz, 802.11ax (HE20)	MCS0	18 dBm	–85 dBm
	MCS11	12 dBm	–58 dBm
2.4 GHz, 802.11ax (HE40)	MCS0	17 dBm	–82 dBm
	MCS11	12 dBm	–54 dBm
5 GHz, 802.11a	6 Mbps	18 dBm	–89 dBm
	24 Mbps	17 dBm	–82 dBm
	36 Mbps	17 dBm	–78 dBm
	54 Mbps	15 dBm	–72 dBm
5 GHz, 802.11n (HT20)	MCS0	18 dBm	–85 dBm
	MCS7	14 dBm	–67 dBm
5 GHz, 802.11n (HT40)	MCS0	17 dBm	–82 dBm
	MCS7	14 dBm	–64 dBm
5 GHz, 802.11ac (VHT20)	MCS0	18 dBm	–85 dBm
	MCS9	13 dBm	–60 dBm
5 GHz, 802.11ac (VHT40)	MCS0	17 dBm	–82 dBm
	MCS9	13 dBm	–57 dBm
5 GHz, 802.11ac (VHT80)	MCS0	16 dBm	–82 dBm
	MCS9	13 dBm	–56 dBm
5 GHz, 802.11ax (HE20)	MCS0	18 dBm	–85 dBm
	MCS11	12 dBm	–58 dBm
5 GHz, 802.11ax (HE40)	MCS0	17 dBm	–82 dBm
	MCS11	12 dBm	–54 dBm
5 GHz, 802.11ax (HE80)	MCS0	16 dBm	–82 dBm
	MCS11	12 dBm	–52 dBm
5 GHz, 802.11ax (HE160)	MCS0	15 dBm	–79 dBm
	MCS11	12 dBm	–50 dBm

Bluetooth Radio

Bluetooth Radio	RG-AP180P-L
Bluetooth	Bluetooth 5.1
Antenna type	Onboard omnidirectional antenna
Max. antenna gain	2.4 dBi, with a downtilt angle of roughly 30 degrees
Max. transmit power	10 dBm
Receive sensitivity	–88 dBm (@BLE)

Ports

Ports	RG-AP180P-L
Fixed service port	Uplink: 1 x 100/1000/2500Base-T Ethernet port with auto-negotiation, compliant-with IEEE 802.3af/802.3at standard (PoE/PoE+). When powered by 802.3af PoE, LAN 1 cannot supply power to an attached device. Downlink: 4 x 10/100/1000Base-T Ethernet ports with auto-negotiation. LAN 1 supports 48 V/10 W power supply to an attached device.
Fixed management port	1 x Micro USB console port
Status LED	1 x multi-color system status LED
Button	1 x Reset button ● Press the button for shorter than 2 seconds. Then the device restarts. ● Press the button for longer than 5 seconds. Then the device restores to factory settings.

Power Supply and Consumption

Power Supply and Consumption	RG-AP180P-L
Input power supply	The AP supports the following two power supply modes: ● 48 V DC/0.6 A power input over DC connector: The DC connector accepts 2.1 mm/5.5 mm center-positive circular plug. A DC power adapter needs to be purchased separately. ● PoE input over PoE-in port: The power source equipment (PSE) complies with IEEE 802.3af/at standard (PoE/PoE+). Note: ● When powered by 802.3at (PoE+), the AP operates with the optimal performance. ● If both DC power and PoE are available, DC power is preferred.
External power supply	LAN 1 supports 48 V/10 W PoE output to an attached device.
Max power consumption	Max power consumption: 25 W ● DC powered: 25 W ● PoE powered (802.3af): 15 W ● PoE+ powered (802.3at): 25 W ● Idle mode: 8 W

Environment and Reliability

Environment and Reliability	RG-AP180P-L
Temperature	Operating temperature: 0°C to 40°C (–32°F to +104°F) Storage temperature: –40°C to 70°C (–40°F to +158°F) Note: At an altitude between 3,000 m (9,843 ft) and 5,000 m (16,404 ft), every time the altitude increases by 220 m (722 ft), the maximum temperature decreases by 1°C (1.8°F).

Environment and Reliability	RG-AP180P-L
Humidity	Operating humidity: 5% to 95% RH (non-condensing) Storage humidity: 5% to 95% RH (non-condensing)
Environment standard	Storage and operating environment: NEBS GR-63-CORE_Issue3_2006 GB/T 2423.6-1995
Mean Time Between Failure (MTBF)	200,000 hours (22 years) at the operating temperature of 25°C (77°F)

Certifications and Regulatory Compliance

Certifications and Regulatory Compliance	RG-AP180P-L
Regulatory compliance	GB 4943.1 CE Marked, EN 55032. EN 55035 EN/IEC 61000-3-2, EN 61000-3-3 IEC/EN 62368-1 (replacing IEC/EN 60950-1) RED Directive 2014/53/EU EMC Directive 2014/30/EU Low Voltage Directive 2014/35/EU
Certifications	Wi-Fi Alliance: • 2.4 GHz and 5 GHz Spectrum Capabilities • Wi-Fi CERTIFIED a, b, g, n, ac, ax (6) • WPA2™-Enterprise 2018-04 • WPA2™-Personal 2021-01 • WPA3™-Enterprise 2020-02 • WPA3™-Personal 2020-12 • WPA™-Enterprise • WPA™-Personal • WMM®, W-Fi Agile Multiband™

* For more country-specific regulatory information and approvals, contact your local sales agency.

Software Specifications

Applicable software version	RG-AP180P-L
Applicable software version	RGOS11.9(6)W3B3 or higher

WLAN

WLAN	RG-AP180P-L
Max. number of associated STAs	256 (up to 128 STAs per radio)
Max. number of BSSIDs	32 (up to 16 BSSIDs per radio)
STA management	SSID hiding Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. Remote intelligent perception technology (RIPT) Intelligent load balancing based on the STA quantity or traffic
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	STA/SSID/AP-based rate limiting
Wireless roaming	Layer 2 and Layer 3 roaming

Security and Authentication

Security and Authentication	RG-AP180P-L
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK, web, 802.1x, WPA, WPA2, and WPA3 authentication WPA3-Personal (SAE) and WPA3-Personal hybrid QR code-based guest authentication SMS authentication MAB authentication Data encryption: WPA-TKIP, WPA-PSK, WPA2-AES, WEP (64/128-bit)
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	WIDS User isolation Rogue AP detection and containment
ACL	Dynamic ACL assignment • ACL assignment based on time spans • ACL assignment (complete entry) based on MAC addresses • Execution of pre-configured ACLs (entry index) based on MAC addresses
CPP	Supported
NFPP	Supported

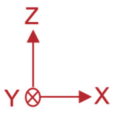
Routing and Switching

Routing and Switching	RG-AP180P-L
IP service	Static IPv4 address and DHCP-assigned IPv4 address
Multicast	Multicast-to-unicast conversion
IPv6 basics	IPv6 addressing, Neighbor Discovery (ND), ICMPv6, IPv6 Ping IPv6 DHCP Client
IP routing	IPv4/IPv6 static routing
VPN	PPPoE client IPsec VPN

Management

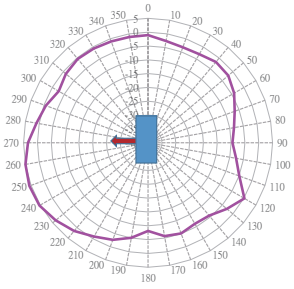
Management	RG-AP180P-L
Network management	NTP server and NTP client SNTP client SNMP v1/v2c/v3 Fault inspection and alarm Information statistics and logging
Network management platform	Web-based management (Eweb)
STA access management	Console and Telnet-based management FTP client and TFTP client
Fat/Fit/Cloud mode switchover	When the AP works in Fit mode, it can be switched to Fat mode through an AC. When the AP works in Fat mode, it can be switched to Fit mode through the console port or Telnet. When the AP works in Cloud mode, it can be managed through Ruijie Cloud.

06 Antenna Pattern Plots

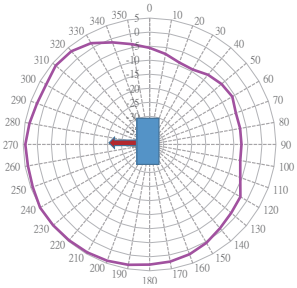


Horizontal Planes (Top View)

2.45G WiFi_XY plane(antenna2,3)

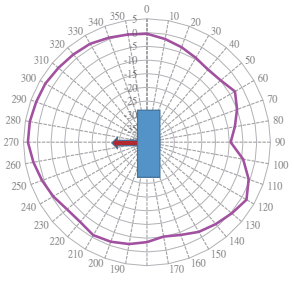


5.5G WiFi_XY plane(antenna2,3)

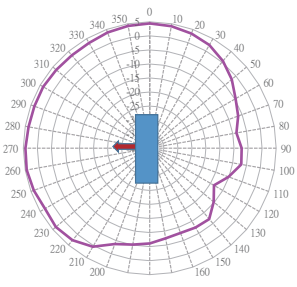


Vertical Planes (Side View)

2.45G WiFi_YZ plane(antenna2,3)

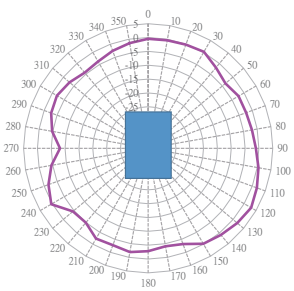


5.5G WiFi_YZ plane(antenna2,3)

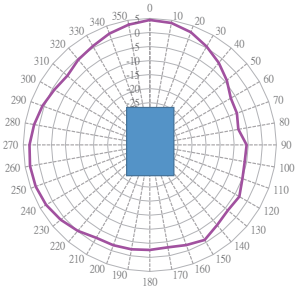


Vertical Planes (Front View)

2.45G WiFi_XZ plane(antenna2,3)



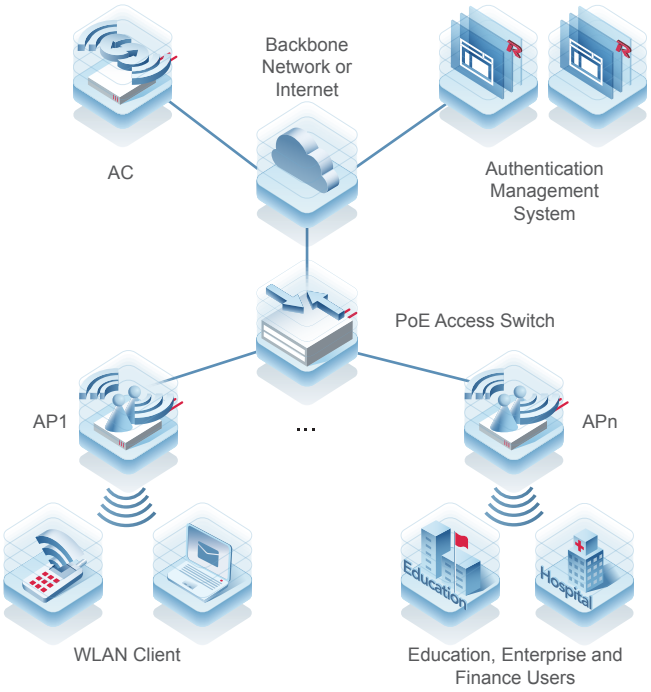
5.5G WiFi_XZ plane(antenna2,3)



Note: Operating frequency bands are country-specific.

07 Typical Applications

Typical Scenario

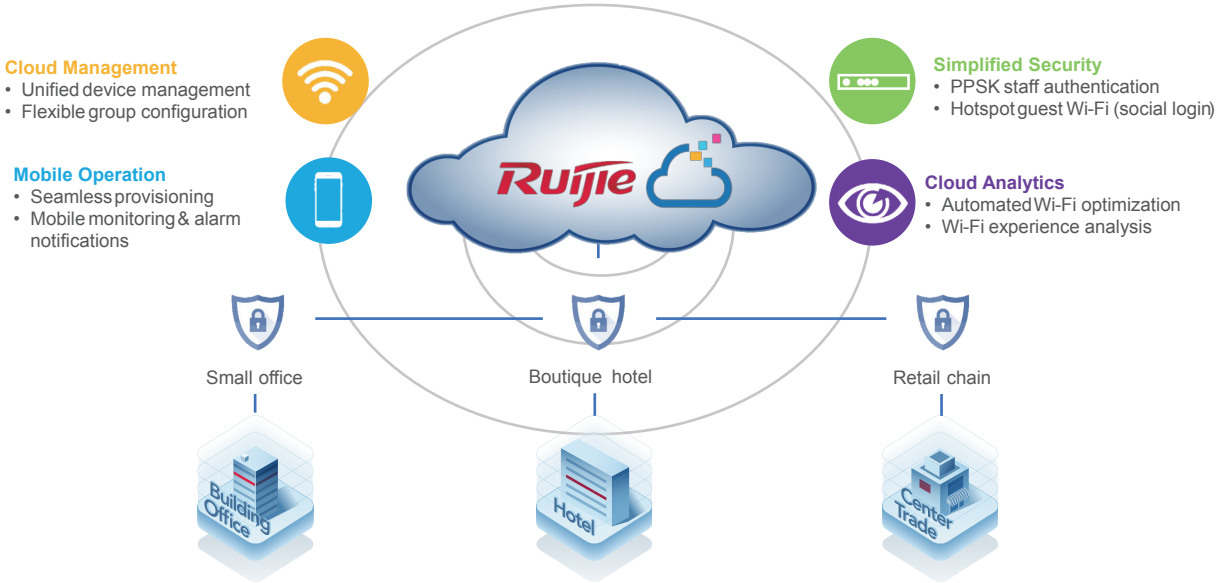


The AP is applicable to densely populated areas with simple building structures, no special obstructions, and a large capacity demand. Such areas cover the scenarios of higher education, wireless city, energy, and plaza. The AP can be flexibly deployed based on the environment.

Public Cloud Deployment

With Ruijie public cloud service, the RG-AP180P-L is fit for SME scenarios, including small offices, boutique hotels, and retail stores. Ruijie Networks provides customers with Ruijie Cloud lifetime free licenses. It significantly streamlines the IT operational efficiency, and simplifies wireless deployment with cost-effective options for SMEs.

The Ruijie Cloud service provides network provisioning, monitoring, optimization, operation, and maintenance. Devices can be easily deployed or swapped in plug-and-play mode. Automatic RF planning meets the needs of increasing user experience.

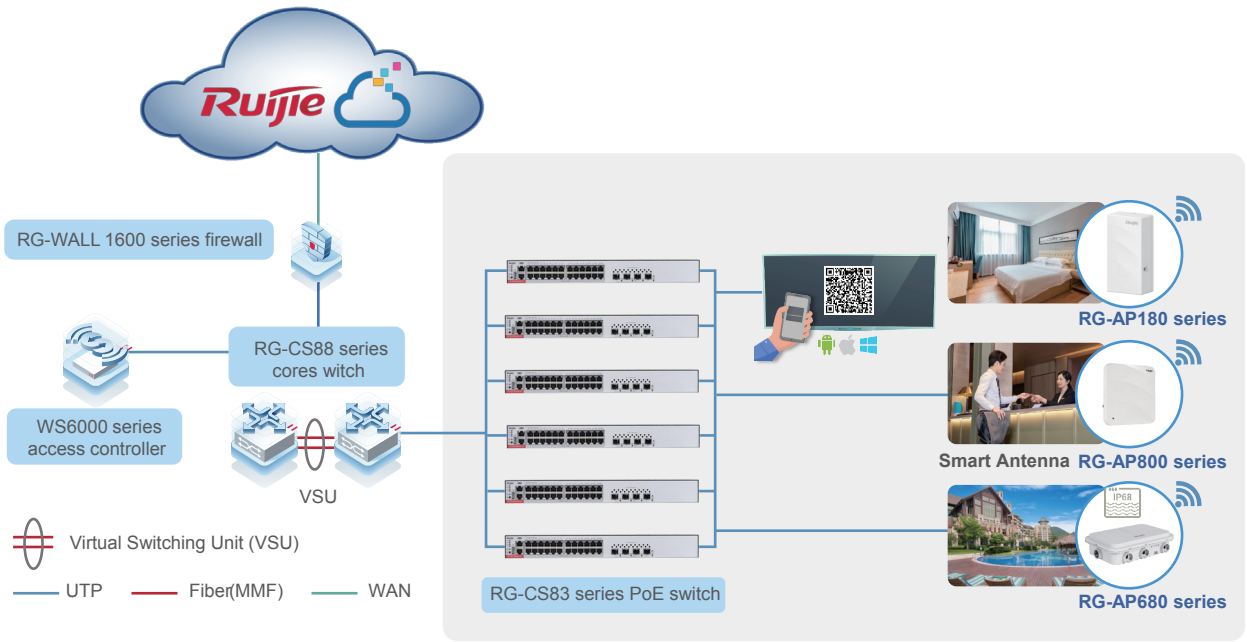


Key Features:

- Unified device management
- Fast provisioning by Cloud and App
- Secure PPSK/UPSK authentication
- Captive portal & social media authentication
- App-based monitoring and alarm

Hybrid Cloud Deployment

For enterprise office, campus network, and hospitality customers with single or multiple sites, a hybrid mode consisting of Ruijie RG-WS series wireless access controller (on-premises) and cloud-based management (optional) is recommended for high-density AP deployment. Wireless access controllers are installed at the customer's site with fully integrated wireless management and authentication features, supporting large-scale AP management with cluster-based controller architecture. Optionally, the cloud management platform allows for value-added features such as centralized device configuration and monitoring, and reporting.



Key Features:

- Centralized device management and reporting by Ruijie Cloud
- Ultra-seamless roaming management
- High performance and security with all user authentication and traffic forwarding handled locally
- Flexible authentication options, including 802.1x, PPSK/UPSK, and voucher authentication
- Unified management of all series of Ruijie APs

08 Ordering Information

Model	Description
RG-AP180P-L	Wi-Fi 6 dual-radio wall plate wireless access point Up to four spatial streams Data rate of up to 2.975 Gbps Compliance with IEEE 802.11a/b/g/n/ac and 802.11ax standards Fat/Fit/Cloud mode switchover IEEE 802.3af/at-compliant power supply and DC power supply Note: ● A PSE needs to be purchased separately. ● A 48 V/0.6 A power adapter needs to be purchased separately.

09 Package Contents

Item	Quantity
Main unit	1
Mounting bracket	1
T8 screw	1
M4 x 40 mm screw	2
Warranty Card and Hazardous Substance Table	1
Quick Start Guide	1

10 Warranty

For more information about warranty terms and period, contact your local sales agency:

- Warranty terms: *https://www.ruijienetworks.com/support/servicepolicy*
- Warranty period: *https://www.ruijienetworks.com/support/service_41*

Note: The warranty terms are subject to the terms of different countries and distributors.

11 More Information

For more information about Ruijie Networks, visit the official Ruijie website or contact your local sales agency:

- Ruijie Networks official website: *https://www.ruijienetworks.com/*
- Online support: *https://www.ruijienetworks.com/support*
- Hotline support: *https://www.ruijienetworks.com/support/hotline*
- Email support: *service_rj@ruijienetworks.com*

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Ruijie Networks Co., Ltd

Floor 11, East Wing, Zhongyipengao Plaza,

No.29 Fuxing Road, Haidian District, Beijing China

Website: https://www.ruijienetworks.com