

Wi-Fi 6 Access Point AX3000 802.11ax Dual Bands 2.976 Gbps, 1 x 2.5G uplink with 4 x Gb LAN with LAN 1 POE Out, Wall Mount **RG-AP180P-L**



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The Ruijie RG-AP180P-L delivers fast, reliable Wi-Fi 6 connectivity for hotels, apartments, offices, healthcare and education environments. It offers dual-band speeds up to 2.976 Gbps, a 2.5 Gbps uplink and four Gigabit LAN ports. The LAN1 PoE output can power devices such as IP phones and IoT modules, while OFDMA and MU-MIMO improve multi-user performance. Seamless roaming, WPA3 security and flexible Fat, Fit or Cloud management provide secure, streamlined deployment.



3-Year Manufacturer's Warranty

Refer to website for full terms & conditions.

Features and Benefits

- » Wi-Fi 6 dual-band performance delivers combined wireless speeds up to 2.976 Gbps for fast, reliable connectivity.
- » OFDMA and MU-MIMO improve network efficiency, reduce congestion and support up to 128 simultaneous users.
- » Supports 802.11a/b/g/n/ac/ax standards, providing broad compatibility with older and newer wireless devices.
- » Lifetime-free Ruijie Cloud management enables remote monitoring, fault alerts, optimisation and maintenance through the Ruijie Cloud App.
- » Features one 2.5 Gbps uplink and four Gigabit downlink ports, combining high-speed wired and wireless networking in one wall-mounted unit.
- » LAN1 PoE output can power compatible IP phones, IoT modules and other devices, simplifying installation in hotels, offices, schools and commercial spaces.



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Dimensions and Weight	
Unit dimensions (W x H x D)	86 mm x 170 mm x 43 mm (3.39 in. x 6.69 in. x 1.69 in.)
Shipping dimensions (W x H x D)	367 mm x 399 mm x 245 mm (14.45 in. x 15.71 in. x 9.65 in.)
Unit weight	Main unit: 0.3 kg (0.66 lbs) Mounting bracket: 0.1 kg (0.22 lbs)
Shipping weight	11.53 kg (25.42 lbs)
Mounting	Wall-mount (a mounting bracket is delivered with the main unit) Junction box-mount (86 mm/European-standard/American-standard junction box)
Color	Elegant white
Lock option	Kensington lock
Wi-Fi Radio	
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: Available frequency bands may vary with countries or regions.
Data rates	Combined peak data rate: 2.976 Gbps Radio 1: 2.4 GHz, 574 Mbps Two spatial stream SU-MIMO for up to 574 Mbps to individual 2SS HE40 802.11ax client devices (maximum) Two spatial stream SU-MIMO for up to 287 Mbps to individual 2SS HE20 802.11ax client devices (typical) Radio 2: 5 GHz, 2.402 Gbps Two spatial stream SU-MIMO for up to 2.402 Gbps to individual 2SS HE160 802.11ax client devices (maximum) Two spatial stream SU-MIMO for up to 1.201 Gbps to individual 2SS HE80 802.11ax client devices (typical)
Data rate set	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 antennas (two 2.4 GHz antennas and two 5 GHz antennas)
Antenna gain	2.4 GHz: 5 dBi 5 GHz: 5 dBi

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Maximum 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. Thailand 2.400 GHz to 2.4835 GHz, EIRP ≤ 20 dBm 5.150 GHz to 5.350 GHz, EIRP ≤ 23 dBm 5.470 GHz to 5.725 GHz, EIRP ≤ 30 dBm 5.725 GHz to 5.825 GHz, EIRP ≤ 30 dBm Vietnam 2.400 GHz to 2.4835 GHz, EIRP ≤ 23 dBm 5.150 GHz to 5.350 GHz, EIRP ≤ 23 dBm 5.470 GHz to 5.725 GHz, EIRP ≤ 30 dBm 5.725 GHz to 5.850 GHz, EIRP ≤ 30 dBm	
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	
Wi-Fi Radio Frequency Performance			
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum 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
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

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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		Bluetooth 5.1	
Antenna type		Onboard omnidirectional antenna	
Maximum antenna gain		2.4 dBi, with a downtilt angle of roughly 30 degrees	
Maximum transmit power		10 dBm	
Receive sensitivity		-88 dBm (@BLE)	
Ports Specifications			
Fixed service port		Uplink: 1 x 100/1000/2.5GBASE-T port, in compliance 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 ports. 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			
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.	
PoE port		LAN 1 supports 48 V/10 W PoE output to an attached device.	

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Overall power consumption	Maximum 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	
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 in the range of 3,000-5,000 m (9,842.52-16,404.20 ft.), every time the altitude increases by 220 m (722 ft.), the maximum temperature decreases by 1°C (1.8°F).
Humidity	Operating humidity: 5% RH to 95% RH (non-condensing) Storage humidity: 5% RH to 95% RH (non-condensing)
Mean Time Between Failure (MTBF)	200,000 hours (22 years) at the operating temperature of 25°C (77°F)
Regulatory Compliance	
Security standards	IEC 62368-1 EN 62368-1
Cyber security standards	EN 18031-1 EN 18031-2
EMC standards	EN 55032 EN 55035 EN IEC 61000-3-2 EN 61000-3-3 EN 301 489-1 EN 301 489-3 EN 301 489-17
Radio frequency standards	EN 300 328 EN 301 893 EN 300 440 EN 62311 EN IEC 62311 EN 50665 FCC Part 15
Software Version	
Applicable software version	RGOS11.9(6)W3B3 or higher
WLAN	
Recommended maximum number of active devices per AP	120
Maximum number of associated clients	256 Note: The number of associated clients varies according to the environment.
Maximum 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

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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	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK, web, 802.1X, WPA, WPA2, and WPA3 authentication SMS authentication (used with the RG-WS series wireless access controller) MAB authentication (used with the RG-WS series wireless access controller) WEP (64/128 bits), WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WPA3-Personal (WPA2/WPA3 transition mode), WPA3-Enterprise (CCMP), WPA3-OWE
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
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	
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	
Network management	Fault inspection and alarm Information statistics and logging SNMPv1/v2c/v3 NTP Server and NTP Client
Network management platform	Ruijie Cloud Web-based management (Eweb)
User access management	Console, Telnet, SSH, SNMP and TFTP-based management
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.