Wi-Fi 6 Outdoor Omnidirectional Access Point AX3000 802.11ax Dual Bands 2.97Gbps With SFP Fibre Port

RG-AP680-L

The RG-AP680-L Wi-Fi 6 Outdoor Omnidirectional Access Point is a high-power outdoor omnidirectional dual-band access point designed for use in scenarios such as mining camps, caravan parks, town centres, villas, parks, scenic spots, and any other suitable outdoor applications to provide high-speed Wi-Fi to multiple end users. The RG-AP680-L features an inbuilt SFP fibre port allowing for long-range deployments from the data centre, up to 20km over single-mode fibre.

3-Year Manufacturer's Warranty

Refer to website for full terms & conditions

Features and Benefits

- Outdoor high-range WiFi-6 (802.11ax) supporting speeds up to 2976 Mbps (Concurrent high-speed wireless access of 574Mbps at 2.4GHz and 2402Mbps at 5Ghz)
- Built-in gigabit SFP port supporting up to 20km transmission from the data centre over single-mode fibre for long-range deployment.
- Lifetime free Ruijie Cloud management: Remote fault alarm, one-click optimizing and maintenance on Ruijie Cloud App.
- The RG-AP680-L supports WEP (64/128 bits), WPA-TKIP, WPA-PSK, WPA2-AES, WPA3 authentication and encryption methods, and PPSK and UPSK technologies.
- IP68 rated and operating temperature of 65°C makes the RG-AP680-L perfect for use in outdoor settings like mining camps, caravan parks, villas, town centres, sports grounds, parks, etc
- Compliant with 802.11a/b/g/n/ac/ax Wi-Fi protocols

Radio design	Dual-radio and 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 2.483 GHz, 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, U-NII-3/ISM, channels 149, 153, 157, 161, and 165 Note: Country-specific restrictions apply.
Data rates	Combined peak data rate: 2.976 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, 2.402 Gbps Two spatial stream Single User (SU) MIMO for up to 2.402 Gbps wireless data rate to individual 2SS HE160 802.11ax client devices (max) Two spatial stream Single User (SU) MIMO for up to 1.201 Gbps wireless data rate to individual 2SS HE80 802.11ax client devices (typical) Two spatial stream Multi-User (MU) MIMO for up to 2.402 Gbps wireless data rate to up to two 1SS HE160 802.11ax DL-MU-MIMO capable client devices simultaneously (max) Two spatial stream Multi-User (MU) MIMO for up to 1.201 Gbps wireless data rate to up to two 1SS HE80 802.11ax DL-MU-MIMO capable client devices simultaneously (typical) Wi-Fi Radio AC AP Wireless client Switch Gateway Internet Wireless client

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	25 dBm	-92 dBm
	2 Mbps	25 dBm	-82 dBm
	5.5 Mbps	25 dBm	-84 dBm
	11 Mbps	25 dBm	-78 dBm
2.4 GHz 802.11g	6 Mbps	25 dBm	-84 dBm
	24 Mbps	23 dBm	-74 dBm
	36 Mbps	23 dBm	-72 dBm
	54 Mbps	20 dBm	-67 dBm
2.4 GHz 802.11n (HT20)	MCS0	25 dBm	-79 dBm
	MCS7	20 dBm	-63 dBm
2.4 GHz 802.11n (HT40)	MCS0	25 dBm	-79 dBm
	MCS7	20 dBm	-63 dBm
2.4 GHz 802.11ax (HE20)	MCS0	25 dBm	-84 dBm
	MCS11	18 dBm	-54 dBm
2.4 GHz 802.11ax (HE40)	MCS0	25 dBm	-80 dBm
	MCS11	18 dBm	-51 dBm
5 GHz 802.11n (HT20)	MCS0	25 dBm	-84 dBm
	MCS7	20 dBm	-63 dBm
5 GHz 802.11n (HT40)	MCS0	25 dBm	-81 dBm
	MCS7	20 dBm	-63 dBm
5 GHz 802.11ac (VHT20)	MCS0	25 dBm	-84 dBm
	MCS8	19 dBm	-61 dBm
5 GHz 802.11ac (VHT40)	MCS0	25 dBm	-81 dBm
	MCS8	19 dBm	-56 dBm
5 GHz 802.11ac (VHT80)	MCS0	25 dBm	-78 dBm
	MCS8	19 dBm	-53 dBm
5 GHz 802.11ac (HE20)	MCS0	25 dBm	-84 dBm
	MCS11	18 dBm	-54 dBm
5 GHz 802.11ac (HE40)	MCS0	25 dBm	-81 dBm
	MCS11	18 dBm	-51 dBm
5 GHz 802.11ac (HE80)	MCS0	25 dBm	-78 dBm
	MCS11	18 dBm	-48 dBm
5 GHz 802.11ac (HE160)	MCS0	25 dBm	-73 dBm
	MCS11	18 dBm	-43 dBm
Bluetooth Radio			
Bluetooth	Bluetooth 5.0 iBeacon Bluetooth, applied to Bluetooth locating and Bluetooth applications		
Antenna type	Integrated omnidirectional antenna		
Max. antenna gain	5 dBi		

Max. transmit power	10 dBi
Receive sensitivity	-88 dBm (@BLE)
Ports	
	1 x 10/100/1000Base-T Ethernet port with auto-negotiation, compliant-with IEEE 802.3af/802.3at standard 1 x GE SFP port
Fixed management port	1 x RJ45 console port (serial console port)
Status LED	1 x multi-color system status LED 3 x single-color RSSI LEDs
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/0.35 A power input over DC connector: The DC connector accepts 2.0 mm/6.3 mm centerpositive circular plug. A DC power adapter needs to be purchased independently. PoE input over ETH/PoE: The power source equipment (PSE) complies with IEEE 802.3af/at standard (PoE/PoE+). Note: If both DC power and PoE are available, DC power is preferred.
Power consumption	Max power consumption: 12.95 W DC powered: 12.95 W PoE powered (802.3af): 12.95 W PoE+ powered (802.3at): 12.95 W PoE++ powered (802.3bt): 12.95 W Idle mode: 6.0 W
Environment and Reliability	
Humidity	Operating temperature: –40°C to +65°C (–40°F to +149°F) Storage temperature: –40°C to +85°C (–40°F to +185°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).
IP rating	IP68
Mean Time Between Failure (MTBF)	> 250,000 hours
Regulatory Compliance	
	EN 55032, EN 55035 EN 61000-3-3, EN IEC 61000-3-2 EN 301 489-1, EN 301 489-3 EN 301 489-17, EN 300 328 EN 301 893, EN 300 440 FCC Part 15, EN IEC 62311 IEC 62368-1, EN 62368-1, IEC 60950-22
Software Specifications	

Applicable software version	RGOS11.9(6)W3B3 or later
WLAN	
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 client identification technology 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	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK, web, 802.1x and MSCHAPv2 authentication QR code-based guest authentication (used with the RG-WS series wireless access controller) SMS authentication (used with the RG-WS series wireless access controller) MAB authentication (used with the RG-WS series wireless access controller) Data encryption: WPA-TKIP, WPA-PSK, WPA2-AES, WEP (64/128-bit)
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
ACL	Dynamic ACL assignment
CPP	Supported
NFPP	Supported
Routing and Switching	
IPv6 basics	Static IPv4 address and DHCP-assigned IPv4 address NAT, FTP ALG, DNS ALG
IP routing	IPv4/IPv6 static routing
VPN	IPv6 addressing, Neighbor Discovery (ND), ICMPv6, IPv6 ping IPv6 DHCP client
Management	
Network management	Fault inspection and alarm Information statistics and logging
Network management platform	Web-based management (Eweb)
User access management	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.