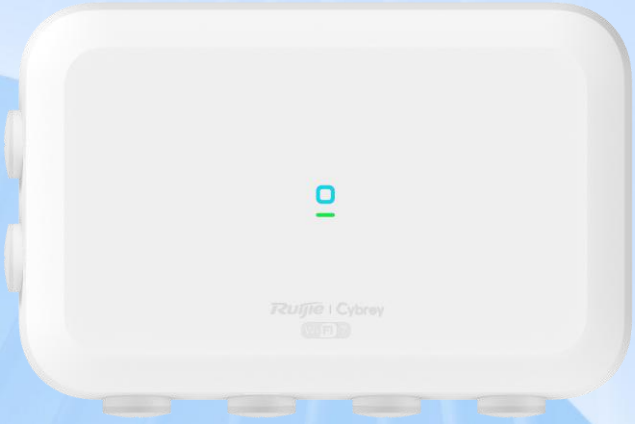
Ruijie | Cybrey



RG-CAP73-O

Datasheet

Product Overview

The RG-CAP73-O is a Tri-radio Wi-Fi 7 access point (AP) for outdoor scenarios in various sectors, such as K12, government, hotel, resort, park outdoor scenarios. In compliance with IEEE 802.11be, IEEE 802.11ax, IEEE 802.11ac Wave2, IEEE 802.11ac Wave1, and IEEE 802.11n standards, the RG-CAP73-O delivers a combined peak data rate of 9.335 Gbps.

The RG-CAP73-O integrates AI radio design, the third radio can switch between 5GHz and 6GHz and can function as independent real-time full-band scanning, ensuring high security and superior user experience in the Wi-Fi environment.

The RG-CAP73-O is designed considering factors such as wireless network security, radio control, access control, QoS, seamless roaming. The RG-CAP73-O can be used together with network controller (CNC) and Cloud to implement wireless user experience, security, and access control.

The RG-CAP73-O adopts IP68 rated housing. It is applicable to harsh outdoor environments. In addition, it supports the local power supply and Power over Ethernet (PoE), which can be flexibly selected based on the onsite environment.

Product Highlights

Ultra-High Performance

- Tri-radio design with support for the latest IEEE 802.11be standard, providing 9.335 Gbps peak data rate for high-speed wireless access.
- Wi-Fi 7 technologies and 6 GHz spectrum resources thereby providing users with high-performance wireless experience.
- Advanced 4096-QAM technology, delivering higher data rates and enhanced user experience in demanding scenarios.
- Orthogonal Frequency-Division Multiple Access (OFDMA) improves network efficiency and reduces latency, enabling seamless access for high-density deployments.
- Dynamic Frequency Selection (DFS) optimizes RF spectrum usage and minimizes radar interference, ensuring stable and efficient network performance.

High Security and Reliability

- Comprehensive wireless security features, including Wi-Fi Protected Access 3 (WPA3), 802.1X, and Private Pre-Shared Key (PPSK), delivering robust data protection.

- Multicast-to-unicast conversion and intelligent monitoring enhance the stability of multimedia services and overall network reliability.

Flexible Deployment and Power Supply

The RG-CAP73-O features six SMA interfaces, which can be used to connect external antennas. Users can choose between using the built-in antenna or the external antenna in eWeb.

The RG-CAP73-O supports both local power supply (DC & 2 pin terminal) and Power over Ethernet (PoE), providing you with the flexibility to choose the power supply mode. In addition, the RG-CAP73-O can be mounted against a wall or pole, making space deployment and environmental requirements less challenging.

Ease of Management

- Flexible deployment options with support for Fat, Fit, and Cloud modes, offering simplified provisioning and comprehensive remote management.
- Integration with Cloud for centralized management, including device configuration, real-time monitoring, and one-click optimization for end-to-end network lifecycle management.

Product Specifications

Hardware Specifications

Dimensions and Weight

Dimensions and Weight	
Unit dimensions (W x D x H)	---
Shipping dimensions (W x D x H)	---
Unit weight	---
Shipping weight	---
Mounting	Wall/Pole-mount
Color	White

Lock option	Kensington lock

Wi-Fi Radio

Wi-Fi Radio	
Radio design	Tri-radio and up to six spatial streams: ● Radio 1: 2.4 GHz, two spatial streams, 2x2 MIMO ● Radio 2: 5 GHz, two spatial streams, 2x2 MIMO ● Radio 3: 5 GHz or 6GHz, two spatial streams, 2x2 MIMO
Smart Radio	Mode 1：2.4G: 2*2 + 5G: 2*2 + 6G: 2*2 Mode 2：2.4G: 2*2 + 5G_L: 2*2 + 5G_H: 2*2 Mode 3：2.4G: 2*2 + 5G: 4*4 Mode 4：2.4G: 2*2 + 5G: 2*2 + AR(5G): 2*2
Operating band	Radio 1, 802.11b/g/n/ax/be Radio 2, 802.11a/n/ac/ax/be Radio 3, 802.11a/n/ac/ax/be
Data rates	Maximum combined peak data rate: 9.334 Gbps Radio 1: 2.4 GHz, 0.688 Gbps Radio 2: 5 GHz, 2.882 Gbps Radio 3: 6 GHz, 5.764 Gbps
Packet aggregation	802.11n/ac/ax/be: A-MPDU and A-MSDU
Antenna type	Built-in omnidirectional antennas (two 2.4 GHz antennas, two 5 GHz antennas and two 6 GHz antennas) Six (female) RP-SMA connectors for external antennas (antennas ordered separatly)
Antenna gain	-

Maximum transmit power	Frequency bands and maximum Effective Isotropic Radiated Power (EIRP):Note: Country specific restrictions apply. European Union & United Kingdom 2400–2483.5 MHz, EIRP ≤20 dBm 5150–5350 MHz, EIRP ≤23 dBm 5470–5725 MHz, EIRP ≤30 dBm Myanmar 2400–2483.5 MHz, EIRP ≤23 dBm 5725–5825 MHz, EIRP ≤30 dBm Thailand 2400–2483.5 MHz, EIRP ≤20 dBm 5150–5350 MHz, EIRP ≤23 dBm 5470–5725 MHz, EIRP ≤30 dBm 5725–5825 MHz, EIRP ≤30 dBm Indonesia 2400–2483.5 MHz, EIRP ≤27 dBm 5150–5350 MHz, EIRP ≤23 dBm 5725–5825 MHz, EIRP ≤23 dBm Egypt 2400–2483.5 MHz, EIRP ≤20 dBm 5150–5350 MHz, EIRP ≤23 dBm Vietnam 2400–2483.5 MHz, EIRP ≤23 dBm 5150–5350 MHz, EIRP ≤23 dBm 5470–5725 MHz, EIRP ≤30 dBm 5725–5850 MHz, EIRP ≤30 dBm
Power increment	Configurable in increments of 1 dBm
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

	802.11be: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM

Port Specifications

Port Specifications	
Fixed service port	1 x 10G Ethernet/ SFP+ Combo port 1 x 100/1000/2.5GBASE-T port
Fixed management port	1 x RJ45 console port
Bluetooth	Bluetooth 5.x
Status LED	1 x system status LED 1 x RSSI LED
Button	1 x Reset button

Power Supply and Consumption

Power Supply and Consumption	
Input power supply	The AP supports the following three power supply modes: ● 54 V DC/0.6 A power input over DC jack: The DC jack accepts 2.1 mm/5.5 mm center-positive circular plug. A DC power adapter needs to be purchased separately. ● PoE input over WAN and 2-pin terminal: 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.
Overall power consumption	-

Environment and Reliability

Environment and Reliability	

Temperature	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 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: 0% RH to 100% RH (non-condensing) Storage humidity: 0% RH to 100% RH (non-condensing)
IP rating	IP68
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	
Security regulations	IEC 62368-1 EN 62368-1 EN 60950-22
EMC regulations	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 regulations	EN 300328 EN 301 893 EN 300 440 EN 62311 EN IEC 62311 EN 50665 FCC Part 15

Software Specifications

WLAN

WLAN	
Maximum number of associated STAs	768
Recommended maximum number of active devices per AP	100
Maximum number of BSSIDs	48 (up to 16 BSSIDs per radio)
Maximum number of WLAN IDs	16
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 Intelligent STA identification technology Rate set settings
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	STA/SSID/AP-based rate limiting
CAPWAP	IPv4/IPv6 CAPWAP Layer 2 and Layer 3 topology between an AP and an CNC An AP can automatically discover the accessible CNC. An AP can be automatically upgraded through the CNC. An AP can automatically download the configuration file from the CNC. CAPWAP through NAT MTU setting and fragmentation over CAPWAP tunnels Encryption over CAPWAP data tunnels Encryption over CAPWAP control tunnels
Data forwarding	Centralized and local forwarding
Wireless roaming	Layer 2 and Layer 3 roaming
Wireless locating	MU and TAG device locating

Application management	Application identification
Bridge Vlan	Supported
Wireless Distribution System (WDS)	Supported

Security and Authentication

Security and Authentication	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) EXEC authorization, specifying source IP addresses of RADIUS packets, supporting authentication of other vendors, and built-in authentication server PPSK, UPSK (used with CNC) , web, 802.1X, WPA, WPA2, and WPA3 authentication SMS authentication (used with CNC) MAB authentication (used with CNC) WEP (64/128 bits), WPA-Personal, WPA-Enterprise, WPA2/WPA3(AES), WPA2-Personal, WPA2-Enterprise, WPA3-Personal (WPA2/WPA3 transition mode), WPA3-Enterprise (CCMP), WPA3-OWE, WPA3-OWE transition mode
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Wireless Intrusion Detection System (WIDS) User isolation Rogue AP detection and containment
Dynamic Policy	IP standard ACL, MAC extended ACL, IP extended ACL, expert-level ACL, and IPv6 ACL Time range-based ACL ACL based on a Layer 2 interface ACL based on a Layer 3 interface Ingress ACL based on a wireless interface Dynamic ACL assignment based on 802.1X authentication (used with an CNC)
CPP	Supported
NFPP	Supported

Routing and Switching

Routing and Switching	
MAC	Static MAC address, MAC address filtering, MAC address limiting MAC address table size: 4,096 Maximum number of static MAC addresses: 2,048 Maximum number of filtered MAC addresses: 2,048
ARP	ARP entry aging, gratuitous ARP learning, and proxy ARP Identification of IP address conflict among downlink users Maximum number of ARP entries: 1,024 ARP check
IPv4 services	Static IPv4 address and DHCP-assigned IPv4 address Maximum number of IPv4 addresses configured on each Layer 3 interface: 200 NAT, FTP ALG, and DNS ALG
IPv6 services	IPv6 addressing, Neighbor Discovery (ND), IPv6 ND proxy, ICMPv6, and IPv6 ping IPv6 DHCP clientMaximum number of IPv6 addresses configured on each Layer 3 interface: 400
IP routing	IPv4/IPv6 static routing Maximum number of static IPv4 routes: 1,024 Maximum number of static IPv6 routes: 1,000
Multicast	Multicast-to-unicast conversion
VPN	PPPoE client IPsec VPN
LLDP	LLDP LLDP-MED LLDP-PoE

Management and Monitoring

Management and Monitoring	

Network management	Fault inspection and alarm Information statistics and logging SNMPv1/v2c/v3 NTP Server and NTP Client SNTP 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 CNC. 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.

Order Information

Take the following ordering procedure:

Order an RG-CAP73-O.

The RG-CAP73-O supports six SMA interfaces, which can be used to connect external antennas. Purchase an antenna if you need it.

Main Unit

Model	Description
RG-CAP73-O	Wi-Fi 7 Tri-radio outdoor access point. Up to six spatial streams, peak data rate of 9.335 Gbps. The AP consumes one license of a CNC. In compliance with IEEE 802.11a/b/g/n/ac/ax/be standards. Fat/Fit/Cloud mode switching. IEEE 802.3af/at-compliant (PoE/PoE+) and DC power supply. Note: The power source equipment (PSE) needs to be purchased separately. The DC power supply needs to be purchased separately, and the output voltage/current must be 54 V/0.6 A.

Antennas

Model	Description
RG-ANT30-D2	Equipped with a high-performance dual-band directional outdoor antenna, it is specifically designed for scenarios requiring directional coverage in either the 2.4 GHz or 5 GHz frequency bands. Its 5 GHz horizontal and vertical beamwidths are both 20°, with a peak gain of 14 dBi. For the 2.4 GHz band, the horizontal and vertical beamwidths are 40°, and the peak gain reaches 12 dBi.
RG-ANT90-T2	The tri-band, dual-polarized high-gain antenna features a 65° horizontal beamwidth and a 18° vertical beamwidth at 6GHz, achieving a peak gain of 11dBi. At 5GHz, it also boasts a 65° horizontal beamwidth and a 18° vertical beamwidth, with a peak gain of 11dBi. For the 2.4GHz band, the antenna exhibits a 60° horizontal beamwidth and a 20° vertical beamwidth, delivering a peak gain of 9dBi.
RG-ANT90-T6	The tri-band, six-element, dual-polarized high-gain antenna features a 65° horizontal beamwidth and a 18° vertical beamwidth at 6GHz, achieving a peak gain of 11dBi. At 5GHz, it also boasts a 65° horizontal beamwidth, a 18° vertical beamwidth, and a peak gain of 11dBi. For the 2.4GHz band, the antenna exhibits a 60° horizontal beamwidth, a 20° vertical beamwidth, and a peak gain of 9dBi.


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