

# RG-MAP852-SF-M

## Wi-Fi 6 Dual-Radio Wall Plate Micro AP



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**Ruijie**



# Product Features

## Simplified Optical Ethernet Solution Architecture

### Fiber to Room and Exclusive Bandwidth

Ruijie SOE Solution adopts the architecture of fiber to room and one fiber for each room. Each room has exclusive line and bandwidth resources without needing to consider the optical split ratio. The traditional passive optical network (PON) solution architecture utilizes 1:8 or 1:16 optical splitting, which can hardly meet high bandwidth application requirements. Ruijie SOE Solution implements room-level high-speed optical networks and makes full use of Wi-Fi 6 to bring high-speed wireless network services.

### Simplified Construction: Free Optical Fiber Deployment

Compared with traditional Ethernet cables, optical fibers feature long communication distance, small size, and long service life.

Based on the technical base of the i-Share+ solution, Ruijie SOE Solution uses hybrid cables, which ensure at least 1.1 km lossless transmission. Even in modern high buildings, wired signals in the building's weak-current equipment room can reach each room through optical fibers. This solution architecture helps customers reduce relay devices in buildings, significantly reduces the network management difficulty, and ensures flat network management.

Compared with traditional copper cables, the hybrid cables used for Ruijie SOE Solution feature small cross-sectional area and high flexibility, and have obvious advantages over Ethernet cables in terms of cable tray design, construction and cabling convenience, and cabling aesthetics, bringing great convenience in the early intelligent weak current design, mid-phase construction, and later management and maintenance.

Ethernet cables only have a 3 to 5 years lifespan on average. However, optical fibers have a lifespan of 10 years, which helps customers eliminate subsequent cable O&M.

### Intelligent Management and Convenient O&M

The micro AP for Ruijie SOE Solution inherits the management mode of the i-Share solution. In i-Share mode, micro APs do not need to deliver configurations, and power

over Ethernet (PoE) switches do not need to be deployed. It is an optimal choice for future wireless network development towards high performance, high density, small scale, and microcell.

### Flexible Expansion and Worry-free Service

Ruijie SOE Solution fully considers room-level bandwidth expansion in future service upgrades. With one optical fiber deployed in each room, the optical split ratio does not need to be re-calculated. The optical fibers automatically adapt to the port bandwidth, and the deployed cables do not need to be adjusted. To ensure bandwidth upgrade in rooms, only the optical i-Share+ master AP and micro AP need to be replaced.

### Intelligent Power Supply and Worry-free Security

In Ruijie SOE Solution, the i-Share+ AP panel has 24 power supply ports, and the maximum output power of PoE power supply is 480 W. It can bear 24 i-Share+ APs (AF power supply) in 1100 m. This solves the department coordination, electricity use security, and charging fee allocation issues of local power supply and dramatically improves O&M convenience.

## Multi-Level Distributed System Architecture

### Performance Comes First: Multi-Level Distributed Architecture

With the continuous implementation of the Broadband China strategy, the requirements for bandwidth of wireless networks also keep increasing. Ruijie SOE Solution adopts the multi-tier distributed architecture. The master AP (RG-MAP852-SF) adopts the distributed architecture. Different modules are used for data forwarding and service management, and 10G uplink interfaces are used to eliminate data transmission bottlenecks. The RF modules of micro APs deployed in rooms use independent CPUs for data processing and forwarding and an independent RF chip for multi-user air interface scheduling. The multi-tier distributed architecture design of optical i-Share+ master AP + micro AP brings high performance to the SOE Solution.

## High Performance and Reliability

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### Intelligent Local Forwarding

RG-MAP852-SF-M integrates Ruijie Networks intelligent local forwarding technology and breaks through the bottleneck in the traffic of AP controllers (ACs). The data forwarding mode of RG-MAP852-SF-M can be pre-configured through the Ruijie RG-WS series AC. Then, this AP determines whether data needs to be forwarded by the AC based on the SSID name or user VLAN, or be sent to a wired network for data exchange.

With the local forwarding technology, the AP classifies data that is sensitive to delay and requires highly real-time transmission, and forwards it through a wired network. In this way, the traffic pressure of the AC is greatly relieved, and the AP better adapts to heavy-traffic transmission on 802.11ax networks.

### Roaming Access

Cooperated with the RG-WS series AC, RG-MAP852-SF-M ensures seamless roaming of wireless users between L2 and L3 networks. Wireless users will not feel data access interruption when they move between RG-MAP852-SF-Ms.

### Abundant QoS Policies

RG-MAP852-SF-M supports abundant QoS policies, such as bandwidth limitation in WLAN, AP, and STA modes and bandwidth guarantee for key data applications first. The multicast-to-unicast technology supported by RG-MAP852-SF-M solves the video lagging problem caused by packet loss or long delay in Video on Demand (VoD) and other multicast applications on wireless networks, and enhances the experience in the use of multicast video services on wireless networks.

### Wireless IPv6 Access

RG-MAP852-SF-M supports IPv6 features, ensuring IPv6 forwarding on wireless networks. IPv4 and IPv6 users can automatically connect to ACs through tunnels to bear IPv6 applications on wireless networks.

## Flexible and Complete Security Policies

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### User Data Encryption Security

RG-MAP852-SF-M supports a complete data security

protection mechanism. The WEP, TKIP, and AES encryption technologies are supported to ensure data transmission security of the wireless network.

### RF Security

With Ruijie Networks unified NMS RG-INC and RG-WS series AC, RG-MAP852-SF-M can enable the RF probe scanning mechanism, discover illegal access points or other RF interference sources in real time, and provide corresponding alarms to the NMS in real time, enabling the network administrators to monitor the potential threats and usage in each wireless environment anytime.

### Multiple Easy-to-Use Authentication Modes

RG-MAP852-SF-M not only supports traditional web page authentication and 802.1x client authentication to monitor users' network access behavior but also provides convenient authentication methods for customers based on actual scenarios. It cooperates with the RG-WS series AC to ensure MAB authentication and SM-based or QR code-based visitor authentication.

Users need to enter their usernames and passwords only for the first time when accessing a network by using STAs via MAB authentication. They can directly access the network with no need to enter the usernames and passwords again in their future access.

When visitors access a wireless network via SM-based authentication, an authentication page pops up, on which visitors can register accounts by using their mobile numbers and access the Internet by using the usernames and passwords in their received SMS.

QR code-based authentication is another convenient way for visitors to access the Internet. After accessing a wireless network, visitors can receive a QR code prompt. They can access the network after being authorized by the visited employees. Visitor behaviors are directly linked with the visited employees, providing better security.

### DHCP Snooping

DHCP snooping is supported to allow the DHCP responses from trusted ports only. This prevents setting up a DHCP server without permission of the administrator, disrupting the distribution and management of IP addresses, and affecting the normal network access of users. On the basis

of DHCP snooping, dynamic ARP monitoring and source IP address detection are performed to prevent ARP host spoofing and source IP address spoofing in the environment in which the DHCP server dynamically allocates IP addresses.

### **Anti-ARP Spoofing**

Address Resolution Protocol (ARP) viruses or attacks are a type of common and influential network attack. RG-MAP852-SF-M supports ARP spoofing prevention in multiple modes. Regardless of whether clients automatically obtain addresses from the DHCP server or use static IP addresses, RG-MAP852-SF-M records clients' authentic IP+MAC addresses and compare addresses in ARP packets with recorded IP+MAC addresses when ports receive the ARP packets from hosts. RG-MAP852-SF-M forwards only ARP packets whose addresses match the recorded IP+MAC addresses and discards fake ARP packets. In this way, ARP spoofing is shielded outside the network, and network users are protected from ARP virus attacks.

### **Proactive Defending Against Various DoS Attacks**

Computers may be infected with viruses due to network openness or attackers may launch attacks on network devices and servers for various purposes, resulting in network unavailability. The common ARP flood attacks can lead to the failure of the gateway to respond to requests. Internet Control Message Protocol (ICMP) flood attacks can paralyze network devices due to high CPU load. DHCP request flood attacks deplete addresses of the DHCP server, and users cannot obtain IP addresses for network access.

RG-MAP852-SF-M adopts the innovative Network Foundation Protection Policy (NFPP) technology to limit the rate of ARP packets, ICMP requests, DHCP requests, and other packets sent to networks. RG-MAP852-SF-M discards packets whose rate exceeds the threshold, identifies attack behaviors, and isolates users launching attacks. In this way, the basic networks are protected from network attacks, and therefore the network stability is guaranteed.

### **Management Information Security**

Through the Secure Shell (SSH) and Simple Network

Management Protocol version 3 (SNMPv3), RG-MAP852-SF-M can encrypt management information in the telnet and SNMP processes, to ensure information security of management devices and prevent hackers from attacking and controlling the devices. Based on source IP address control, Telnet access control provides more precise device management and control. This ensures that only the devices with IP addresses configured by administrators can log in to the AP, thereby enhancing the network management security.

## **Abundant Management Policies**

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### **Zero-Configuration Installation**

When RG-MAP852-SF-M works in fit mode, pre-configuration is not required before installation. During on-site installation and subsequent maintenance, re-configuration is not required for product replacement. Configuration information can be automatically inherited from the AC to complete configuration, which dramatically reduces the implementation and maintenance workload and costs.

### **Comprehensive Remote Management**

The working parameters of RG-MAP852-SF-M deployed in any position, such as the channel number, power class, SSID settings, security settings, and VLAN division can be centrally processed by the remote RG-WS series AC. This reduces local management resource consumption and centralizes the management permission, improving the security and management efficiency of the wireless network.

### **Web GUI Management**

RG-MAP852-SF-M performs web GUI management through the AC. 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 STAs connected to the AP, and restrict the rates and network access behaviors of the STAs. With the GUI, O&M personnel can plan, manage, and maintain wireless networks conveniently.

# Product Specifications

## Hardware Specifications

Hardware Specifications	RG-MAP852-SF-M
Dimensions and Weight	
Unit dimensions (W x H x D)	86 mm x 160 mm x 32.5 mm (3.39 in. x 6.30 in. x 1.28 in.)
Shipping dimensions (W x H x D)	123 mm x 180 mm x 67 mm (4.84 in. x 7.09 in. x 2,64 in.)
Unit weight	Main unit: 0.30 kg (0.66 lbs.) Mounting bracket: 0.05 kg (0.11 lbs.)
Shipping weight	0.5 kg (1.10 lbs)
Mounting	Ceiling/Wall/86 mm junction box-mount
Color	White
Lock option	Securing latch
System Specifications	
Memory	256 MB
Flash memory	128 MB
Wi-Fi Radio	
Radio design	Dual-radio Four spatial streams per device Radio 1: 2.4 GHz, 2 spatial streams: 2x2, MU-MIMO Radio 2: 5 GHz, 2 spatial streams: 2x2, MU-MIMO
Operating frequencies	Radio 1, 802.11b/g/n/ax: <ul style="list-style-type: none"> <li>2.400 GHz to 2.4835 GHz, channels 1 to 13</li> </ul> Radio 2, 802.11a/n/ac/ax: <ul style="list-style-type: none"> <li>5.150 GHz to 5.250 GHz, U-NII-1, channels 36, 40, 44, and 48</li> <li>5.250 GHz to 5.350 GHz, U-NII-2A, channels 52, 56, 60, and 64</li> <li>5.470 GHz to 5.725 GHz, U-NII-2C, channels 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, and 140</li> <li>5.725 GHz to 5.850 GHz (HE80), U-NII-3/ISM, channels 149, 153, 157, 161, and 165</li> </ul> Note: Available frequency bands may vary with countries or regions. To use the above-mentioned frequency bands, ensure that they are supported in your country or region. For details, see <a href="#">WLAN Country or Region Codes and Channel Compliance</a> .

Hardware Specifications	RG-MAP852-SF-M
Data rate set	<p>The following 802.11-compliant data rates in Mbps are supported:</p> <p>2.4 GHz radio</p> <ul style="list-style-type: none"> <li>● 802.11b: 1, 2, 5.5, 11</li> <li>● 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54</li> <li>● 802.11n: 6.5 to 300 (MCS0 to MCS15, HT20 to HT40)</li> <li>● 802.11ax: 8.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40)</li> </ul> <p>5 GHz radio</p> <ul style="list-style-type: none"> <li>● 802.11a: 6, 9, 12, 18, 24, 36, 48, 54</li> <li>● 802.11n: 6.5 to 300 (MCS0 to MCS15, HT20 to HT40)</li> <li>● 802.11ac: 6.5 to 1,732 (MCS0 to MCS9, NSS = 1 to 2, VHT20 to VHT160)</li> <li>● 802.11ax: 8.6 to 2,402 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE160)</li> </ul>
Packet aggregation	802.11n/ac/ax: A-MPDU and A-MSDU
Antenna	<p>Wi-Fi</p> <ul style="list-style-type: none"> <li>● 2.4 GHz: two built-in omnidirectional antennas, with peak antenna gain of 2.22 dBi</li> <li>● 5 GHz: two built-in omnidirectional antennas, with peak antenna gain of 6.45 dBi</li> </ul> <p>Bluetooth</p> <ul style="list-style-type: none"> <li>● One built-in omnidirectional antenna, with peak antenna gain of 2 dBi</li> </ul>
Transmit power	<p>2.4 GHz</p> <ul style="list-style-type: none"> <li>● Maximum transmit power: 21 dBm (125.89 mW)</li> <li>● Minimum transmit power: 8 dBm (6.31 mW)</li> </ul> <p>5 GHz</p> <ul style="list-style-type: none"> <li>● Maximum transmit power: 21 dBm (125.89 mW)</li> <li>● Minimum transmit power: 8 dBm (6.31 mW)</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>● Adjusting the transmit power by percentage (recommended) and in 1dBm increments.</li> <li>● The transmit power is limited by local regulatory requirements. For details, see <a href="#">WLAN Country or Region Codes and Channel Compliance</a>.</li> </ul>
Power increment	Configurable in increments of 1 dBm or in percentage (recommended)
Radio technologies	<p>802.11b: Direct-Sequence Spread-Spectrum (DSSS)</p> <p>802.11a/g/n/ac: Orthogonal Frequency-Division Multiplexing (OFDM)</p> <p>802.11ax: Orthogonal Frequency Division Multiple Access (OFDMA)</p>
Modulation types	<p>802.11b: BPSK, QPSK, CCK</p> <p>802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM</p> <p>802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM</p> <p>802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM</p>

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

Wi-Fi Radio Frequency Performance	RG-MAP852-SF-M		
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum Receive Sensitivity per Receive Chain
2.4GHz 802.11b	1 Mbps	18 dBm	-91 dBm
	2 Mbps	17 dBm	-91 dBm
	5.5 Mbps	16 dBm	-90 dBm
	11 Mbps	15 dBm	-87 dBm
2.4GHz 802.11g	6 Mbps	18 dBm	-89 dBm
	24 Mbps	16 dBm	-82 dBm
	36 Mbps	16 dBm	-78 dBm
	54 Mbps	15 dBm	-72 dBm
2.4GHz 802.11n (HT20)	MCS0	18 dBm	-85 dBm
	MCS7	15 dBm	-67 dBm
2.4GHz 802.11n (HT40)	MCS0	18 dBm	-82 dBm
	MCS7	15 dBm	-64 dBm
2.4GHz 802.11ax (HE20)	MCS0	18 dBm	-85 dBm
	MCS11	12 dBm	-58 dBm
2.4GHz 802.11ax (HE40)	MCS0	18 dBm	-82 dBm
	MCS11	12 dBm	-54 dBm
5GHz 802.11a	6 Mbps	18 dBm	-89 dBm
	24 Mbps	16 dBm	-82 dBm
	36 Mbps	16 dBm	-78 dBm
	54 Mbps	15 dBm	-72 dBm

Wi-Fi Radio Frequency Performance	RG-MAP852-SF-M		
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum Receive Sensitivity per Receive Chain
5GHz 802.11n (HT20)	MCS0	18 dBm	-85 dBm
	MCS7	15 dBm	-67 dBm
5GHz 802.11n (HT40)	MCS0	18 dBm	-82 dBm
	MCS7	15 dBm	-64 dBm
5GHz 802.11ac (VHT20)	MCS0	18 dBm	-85 dBm
	MCS9	15 dBm	-60 dBm
5GHz 802.11ac (VHT40)	MCS0	18 dBm	-82 dBm
	MCS9	15 dBm	-57 dBm
5GHz 802.11ac (VHT80)	MCS0	18 dBm	-79 dBm
	MCS9	15 dBm	-53 dBm
5GHz 802.11ax (HE20)	MCS0	18 dBm	-85 dBm
	MCS11	12 dBm	-58 dBm
5GHz 802.11ax (HE40)	MCS0	18 dBm	-82 dBm
	MCS11	12 dBm	-54 dBm
5GHz 802.11ax (HE80)	MCS0	18 dBm	-79 dBm
	MCS11	12 dBm	-52 dBm
5GHz 802.11ax (HE160)	MCS0	16 dBm	-75 dBm
	MCS11	9 dBm	-48 dBm

Hardware Specifications	RG-MAP852-SF-M
<b>Bluetooth Radio</b>	
Bluetooth	Bluetooth 5.1
Antenna type	Built-in omnidirectional antenna
Maximum antenna gain	2 dBi, with a downtilt angle of roughly 30 degrees
Maximum transmit power	10 dBm (Class 1)
Receive sensitivity	-98 dBm
<b>Port Specifications</b>	
Fixed service port	1 x 2.5GE SFP port 4 x 10/100/1000BASE-T ports
Fixed management port	1 x micro USB console port
Status LED	1 x system status LED
Button	1 x Reset button <ul style="list-style-type: none"> <li>• Press the button for shorter than 2 seconds. Then the device restarts.</li> <li>• Press the button for longer than 5 seconds. Then the device restores to factory settings.</li> </ul>
<b>Power Supply and Consumption</b>	
Input power supply	(1) 48 V DC/0.5 A power input (2) IEEE 802.3af-compliant PoE power input using hybrid cables
Maximum power consumption	Maximum power consumption: 11 W <ul style="list-style-type: none"> <li>• DC power: 11 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2.</li> <li>• 802.3at (PoE+) : 11 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2.</li> <li>• 802.3af (PoE) : 11 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2.</li> <li>• Idle mode: 7.44 W</li> </ul>
<b>Environment and Reliability</b>	
Temperature	Operating temperature: -10°C to +40°C (14°F to 104°F) Storage temperature: -40°C to +70°C (-40°F to +158°F) Note: At an altitude in the range of 1,800–3,000 m (5,905.51–9,842.52 ft.), every time the altitude increases by 220 m (721.78 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)
Altitude	Operating altitude: -500 m to +3,000 m (-1,640.42 ft. to +9,842.52 ft.) Storage altitude: -500 m to +4,000 m (-1,640.42 ft. to +13,123.36 ft.)

Hardware Specifications	RG-MAP852-SF-M
Mean Time Between Failure (MTBF)	200,000 hours (22 years) at the operating temperature of 25°C (77°F)

## Software Specifications

Software Specifications	RG-MAP852-SF-M
Basic Functions	
Applicable software version	RGOS11.9(6)W1B9 or later
WLAN	
Maximum number of associated STAs	1,024 (up to 512 STAs per radio)
Maximum number of BSSIDs	16 (up to 8 BSSIDs per radio)
WLAN service	Maximum number of WLAN IDs: 8 Maximum number of users per WLAN: 1,024
STA management	SSID hiding Band steering Intelligent load balancing based on client count, traffic, or radio frequency Enabling or disabling the radio as scheduled Intelligent STA identification technology Rate set settings Remote Intelligent Perception Technology (RIPT) Parameter adjustment for enhanced user experience: client RSSI threshold, client idle timeout, client average rate threshold, transmit power of beacon frames and probe responses
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	WLAN QoS rate limiting, fair scheduling, and Wi-Fi Multimedia (WMM)
CAPWAP	IPv4/IPv6 CAPWAP Layer 2 and Layer 3 topology between an AP and an AC An AP can automatically discover the accessible AC. An AP can be automatically upgraded through the AC. An AP can automatically download the configuration file from the AC. CAPWAP through NAT
Data forwarding	Centralized and local forwarding

Software Specifications	RG-MAP852-SF-M
Wireless roaming	Layer 2 and Layer 3 roaming
Wireless locating	MU and TAG device locating
Application management	Application identification
<b>Security and Authentication</b>	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK and web authentication QR code-based guest authentication, SMS authentication, and MAC address bypass (MAB) authentication Data encryption: WEP (64/128 bits), WPA-Personal, WPA-Enterprise, WPA2-Personal (PSK, TKIP, CCMP), WPA2-Enterprise, WPA3-Personal (SAE, WPA2/WPA3 transition mode), WPA3-Enterprise (CCMP)
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Wireless Intrusion Detection System(WIDS) User isolation Rogue AP detection and containment
ACL	IP standard ACL, MAC extended ACL, IP extended ACL, and expert-level ACL 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 the AC)
CPP	CPU Protect Policy (CPP)
NFPP	Network Foundation Protection Policy (NFPP)
<b>Routing and Switching</b>	
MAC	Static and filtered MAC addresses MAC address table size: 2048 Maximum number of static MAC addresses: 2,048 Maximum number of filtered MAC addresses: 2,048
Ethernet	Jumbo frame length: 1,518 bytes Full-duplex and half-duplex modes of interfaces IEEE802.1p and IEEE802.1Q Optical module information display, alarms about faults, and diagnosis parameter measurement (QSFP+/SFP+/SFP)

Software Specifications	RG-MAP852-SF-M
VLAN	Interface-based VLAN assignment, VLAN group Maximum number of SVIs: 100 Maximum number of VLANs: 4,094 VLAN ID range: 1 to 4,094
ARP	ARP entry aging, gratuitous ARP learning, and proxy ARP Maximum number of ARP entries: 1024 ARP check
IPv4 services	IPv4 ping and IPv4 traceroute DNS client DHCP Server, DHCP client, and DHCP Relay DHCPv4 Snooping IPv4 Source Guard
IPv6 services	Static and dynamic IPv6 addresses Neighbor Discovery (ND) IPv6 ping and IPv6 traceroute IPv6 transparent transmission ICMPv6 IPv6 DHCP client
IP routing	IPv4/IPv6 static routing Maximum number of static IPv4 routes: 1,024 Maximum number of static IPv6 routes: 1,000 Static black hole routing
Multicast	Multicast-to-unicast conversion
VPN	PPPoE client IPsec VPN
<b>Network Management and Monitoring</b>	
Network management	NTP server and NTP client SNTP client SNMPv1/v2c/v3 Fault detection and alarm Information statistics and logging
Network management platform	Web management (Eweb)

Software Specifications	RG-MAP852-SF-M
User access management	Telnet and TFTP client
Switchover among Fat, Fit, and cloud modes	<p>When the AP works in Fit mode, it can be switched to Fat mode through an AC.</p> <p>When the AP works in Fat mode, it can be switched to Fit mode through the console port or Telnet mode.</p> <p>When the AP works in cloud mode, it can be managed through WIS Cloud.</p>

## Regulatory Compliance

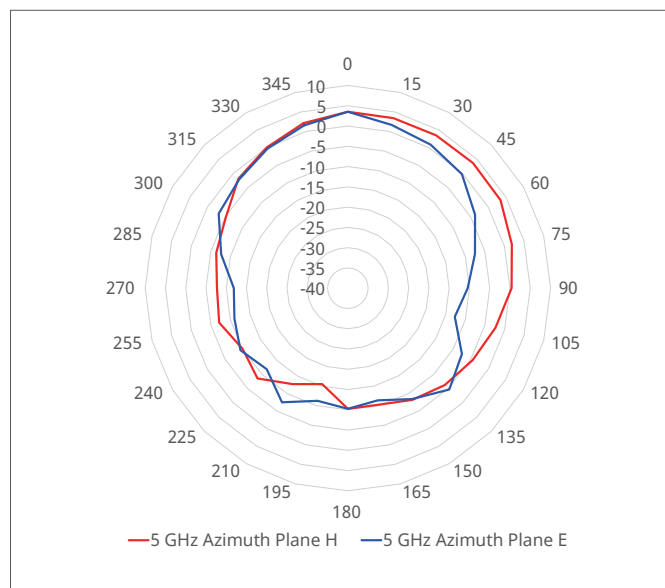
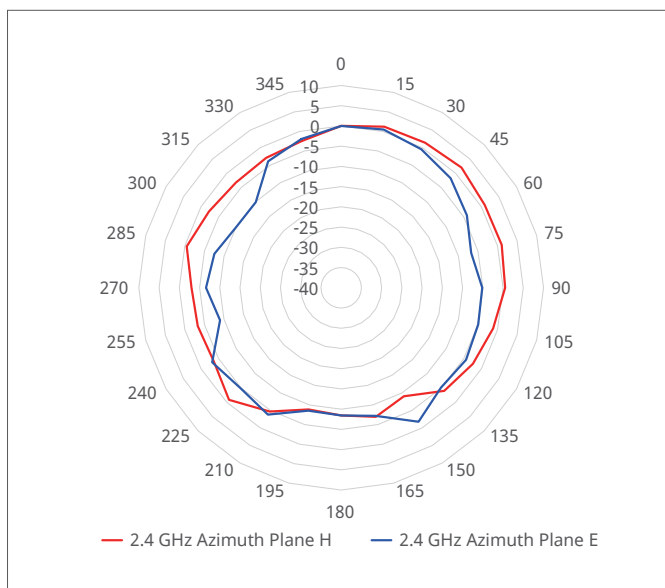
Regulatory Compliance	RG-MAP852-SF-M
Regulatory compliance	<p>EN 55032, EN 55035, EN 61000-3-3, EN IEC 61000-3-2, EN 301 489-1, EN 301 489-3, EN 301 489-17, EN 300 328, EN 301 893, EN 300 440, FCC Part 15, EN 62311, EN IEC 62311, EN 50665, IEC 62368-1, and EN 62368-1</p>

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

# Antenna Pattern Plots

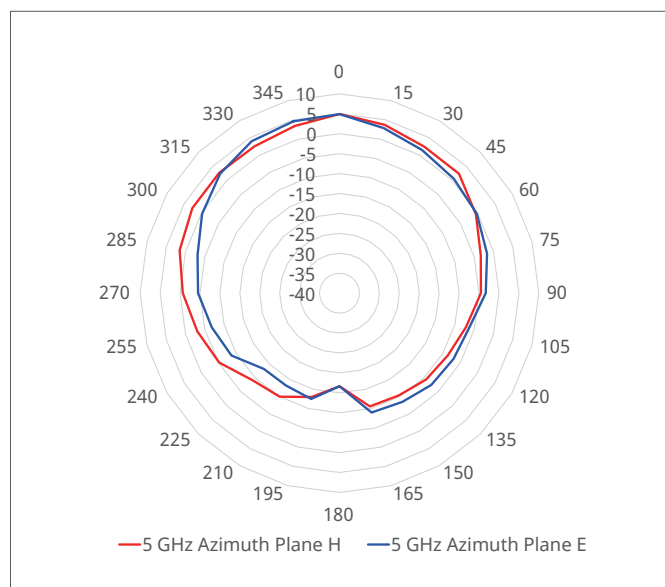
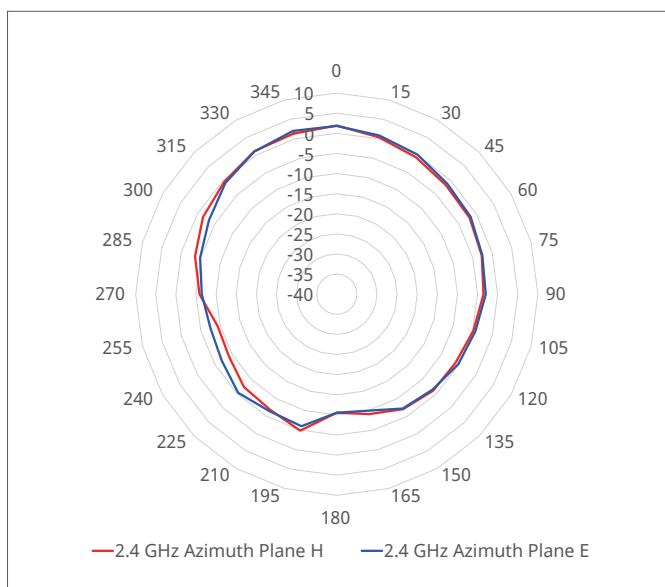
## Horizontal Planes (Top View)

The following figures show the azimuth antenna pattern at 2.4 GHz and 5 GHz radios.



## Vertical Planes (Side View, AP Facing Down)

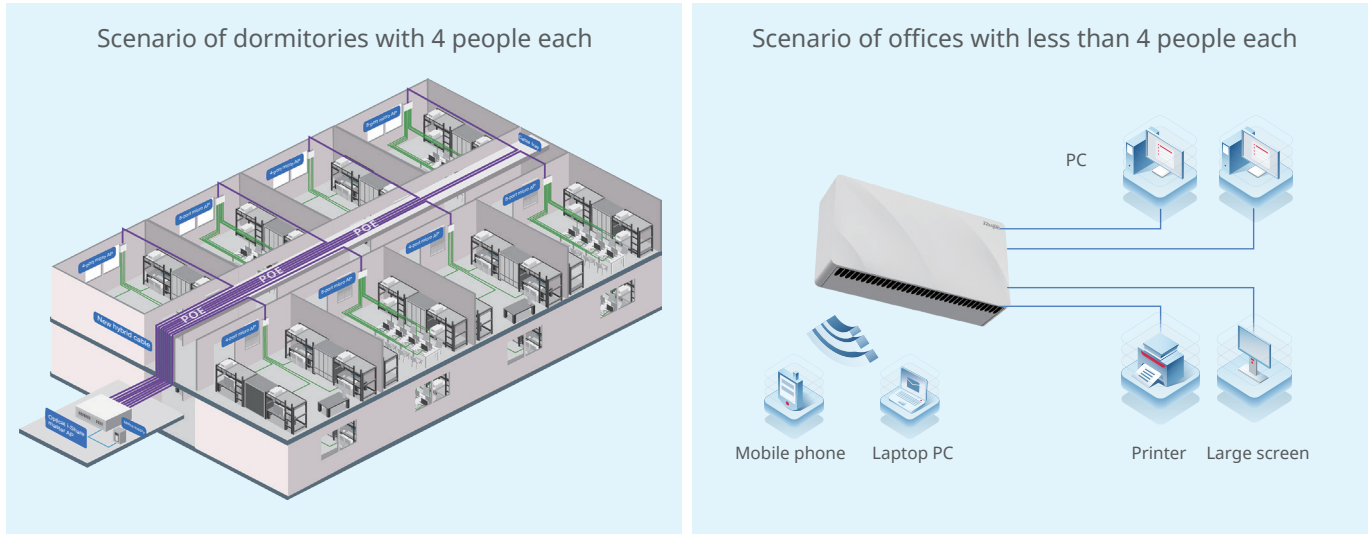
The following figures shows the elevation antenna pattern at 2.4 GHz and 5 GHz radios.



Note: Operating frequency bands are country-specific.

# Typical Applications

## Dormitory and Office Scenarios



Multiple ports, integrated wired and wireless coverage

### Application features:

SOE Solution implements long-distance optical communication and high bandwidth deployment through hybrid cables. It also effectively solves the problem of AP power supply. RG-MAP852-SF-M provides four wired ports to meet expansion requirements in dormitory and office environments.

# Ordering Information

Model	Description
RG-AM5528-SF	Optical i-Share+ master AP for Ruijie SOE Solution 24 × downlink 1G/2.5G SFP ports and 24 × PoE/PoE+ power supply ports. Four power supply ports support PoE/PoE/PoE++ power supply. 4 × uplink 10G SFP+ ports, low noise, and power supply included In i-Share mode, each master AP occupies eight wireless controller licenses.
RG-MAP852-SF-S	Wi-Fi 6 dual-radio wall plate micro AP for Ruijie SOE Solution 1 × SFP port 1 × 10/100/1000Base-T Ethernet port with auto-negotiation 2.4 GHz and 5 GHz frequency bands A wireless data rate of up to 1.775 Gbps per device BOB structure, one 1G optical module of the master AP

Model	Description
RG-MAP852-SF-M	Wi-Fi 6 dual-radio wall plate micro AP for Ruijie SOE Solution 1 × 2.5G SFP port 4 × 10/100/1000Base-T Ethernet ports with auto-negotiation 2.4 GHz and 5 GHz frequency bands, A wireless data rate of up to 2.976 Gbps per device Support for Bluetooth, Wall-mounted, ceiling-mounted, and junction box-mounted installation. One 2.5G optical module for the micro AP and one 2.5G optical module for the master AP are delivered with this AP.
RG-HybridBox	The hybrid box for Ruijie SOE Solution supports input of 24 hybrid pigtailed and output of 24 hybrid cables, which is used to connect the hybrid pigtailed to the hybrid cables.
RG-OEHC-SM-1B6A2-2x0.5-I-305	Indoor single-core 2 × 0.5 mm <sup>2</sup> hybrid cable, single roll, with a length of 305 m
RG-OEHC-SM-2B6A2-2x0.4-I-305	Indoor dual-core 2 × 0.4 mm <sup>2</sup> photoelectric hybrid cable, single roll, with a length of 305 m (1000.66 ft)
RG-OEHC-SM-2B6A2-2x1.0-I-305	Indoor dual-core 2 × 1.0 mm <sup>2</sup> photoelectric hybrid cable, single roll, with a length of 305 m (1000.66 ft)
RG-OEHC-SM-2B6A2-2x1.5-O-1000	Outdoor dual-core 2 × 1.5 mm <sup>2</sup> hybrid cable, single roll, with a length of 1000 m
2.5G-SFP-LX03-SM1310-BIDI-I	SFP 2.5G BIDI Transceiver-TX1310/RX1550, 3 km, LC
2.5G-SFP-LX03-SM1550-BIDI-I	SFP 2.5G BIDI Transceiver-TX1550/RX1310, 3 km, LC

Note: Currently, only some supported optical transceiver models are displayed. For more information about optical transceiver models, contact Ruijie pre-sales engineers.

## Package Contents

Item	Quantity
RG-MAP852-SF-M micro AP	1
Mounting bracket	1
Key to the securing latch	1
M4 x 20 mm Phillips pan head screws	2
External optical module	1

Item	Quantity
Wire saddle	3
<i>Quick Installation Guide</i>	1
<i>Warranty Card and Hazardous Substance Table</i>	1
<i>Package Contents</i>	1
Ruijie wireless product management software (pre-installed on the AP)	1

## Warranty

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

- Warranty terms: <https://www.ruijie.com/support/servicepolicy>
- Warranty period: <https://www.ruijie.com/support/servicepolicy/Service-Support-Summary/>

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

## 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.ruijie.com/>
- Online support: <https://www.ruijie.com/support>
- Hotline support: <https://www.ruijie.com/support/hotline>
- Email support: [EBGITSC@ruijie.com.cn](mailto:EBGITSC@ruijie.com.cn)
- *WLAN Country or Region Codes and Channel Compliance*: [https://www.ruijie.com/support/documents/slide\\_wlan-country-codes-overview](https://www.ruijie.com/support/documents/slide_wlan-country-codes-overview)

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**Ruijie Networks Co., Ltd.**

For more information, visit [www.ruijie.com](http://www.ruijie.com) or call 86-400-620-8818.