



# RG-AM5532

## i-Share+ Solution

## Master Access Point



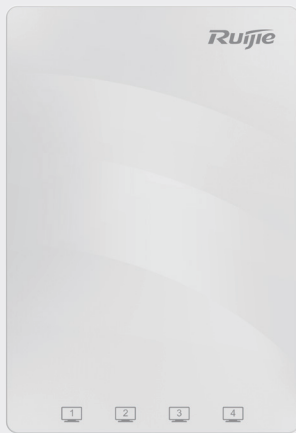
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**Ruijie**

## Product Pictures



RG-AM5532



RG-MAP852 (V3)

## Product Overview

The RG-AM5532 is an i-Share access point (AP) released by Ruijie Networks for complex application environments, such as wireless dormitory networks, hotels, and dense office networks.

The RG-AM5532 supports three modes for data uplink: four optical ports, four electrical ports, and two optical ports and two electrical ports. The uplink electrical ports can be connected to four IEEE 802.3af-compliant powered devices (PDs), two IEEE 802.3at-compliant PDs, or two IEEE 802.3af-compliant PDs and one IEEE 802.3at-compliant PD, to support standard PoE APs.

Based on the IEEE 802.11ax standard, one RG-AM5532 can extend to connect to 24 radio modules that provide two spatial streams at dual bands for each of 24 rooms. Each room can enjoy up to 2.976 Gbps bandwidth, meeting requirements in high-performance access scenarios, such as dormitory networks.

The RG-AM5532 design considers wireless network security, radio control, mobile access, and quality of service (QoS) guarantee, seamless roaming, and other factors to implement data forwarding, security, and access control of wireless users.

# | Product Features

## Multi-Level Distributed System Architecture

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

The requirements for bandwidth of wireless networks are higher and higher. The i-Share+ solution adopts the multi-tier distributed architecture. The master AP (RG-AM5532) adopts the distributed architecture. Different modules are used for data forwarding and service management, and 10G uplink ports are used to eliminate data transmission bottlenecks. Indoor micro i-Share APs use independent CPUs for data processing and forwarding and an independent RF chip for multi-user scheduling on the air interface. The multi-tier distributed architecture design of master AP and micro AP brings higher performance to the i-Share+ solution.

### Practice-Focused: Multiple-Port Modes

The RG-AM5532 supports three modes for data uplink: four optical ports, four electrical ports, and two optical ports and two electrical ports. The uplink electrical ports can be connected to four IEEE 802.3af-compliant powered devices (PDs), two IEEE 802.3at-compliant PDs, or two IEEE 802.3af-compliant PDs and one IEEE 802.3at-compliant PD, to support standard PoE APs. The master AP can supply power to a micro i-Share AP or a settled AP. Therefore, the master AP can supply power to APs in corridors, study rooms, and outdoor environments.

Networking topologies vary and the distance to the uplink device is uncertain. When the distance to the uplink device is shorter than 100 m (328.08 ft) in networking for a building, electrical ports can be used for direct connections, saving optical modules. In long-distance networking, optical ports can be selected for connections with the uplink device.

### Flexible Deployment: Applicable to All Scenarios

The indoor i-Share APs that offer 802.11ac 802.11ax RF specifications are available in different models.

The RG-MAP852(V3) support 802.11ax and MU-MIMO. They can be mounted on a wall, ceiling, or junction box. To enhance the uplink capacity on old laptops, the APs adopt 2x2MIMO at 2.4 GHz to greatly improve signal receiving. Four

1000 Mbps Ethernet downlink ports are applicable to wired and wireless integrated deployment of 1000 Mbps desktop access. i-Share micro APs are compact and elegant, and are applicable to mass deployment of new projects.

### Integrated Networking: Integration of Wired and Wireless Networks

Originally, the wired mode is mainly used, while the wireless mode is a supplement. Although wireless networks are mainly adopted, the i-Share solution meets the access requirements of traditional wired terminals such as office computers and network printers. All i-Share micro APs provide wired network ports. Therefore, a micro AP can connect to both wired and wireless devices to implement integration of wired and wireless network deployment.

### Simplified Site Survey: EasyWireless Deployment

The RG-AM5532 provides the same 24 downlink ports as an Ethernet switch. Meanwhile, the AP provides four 1000 Mbps electrical ports and four 10GE optical ports in auto negotiation mode. You can use information point statistics of a wired network to count wireless sites to obtain accurate site survey statistics quickly and efficiently. Compared with traditional wireless network solutions, the i-Share+ solution effectively avoids complex site survey in the early stage and project deviations in the construction stage.

### Standard Construction: Free 100-Meter Network Cable Deployment

The traditional indoor distribution solution or i-share solution adopts feeders of coaxial cables for deployment. If the project requires dual-stream MU-MIMO, the solution needs to adopt twisted paired cabling. To reduce signal loss and lengthen deployment distance, thicker and stiffer cables are required. As a result, construction cost is higher and deployment is more difficult. Ruijie i-Share+ solution further optimizes the cables based on third-generation i-Share technology. It directly uses CAT5e or CAT6 network cables to deploy a distance of 100 m (328.08 ft). In this way, the solution not only realizes the performance lossless transmission of 100-meter network cables, but also fully complies with the comprehensive cabling specifications and the structured cabling standard. This facilitates early

intelligent weak current design, mid-phase construction, and later management and maintenance.

### **Unified Management: Managing Network Deployment of 10,000 Rooms by 100 APs**

The master AP and i-Share micro APs are managed uniformly by one AP in the i-Share+ system. The i-Share micro APs act as RF cards of the master AP. There is no need to separately manage micro APs or deliver configurations to them. The micro APs do not occupy AC licenses, and PoE switches do not need to be configured. Network administrators can deploy high-performance wireless network in 24 rooms by managing only one master AP to lower the management cost. Network administrators can manage hundreds of APs to deploy wireless network for even tens of thousands of rooms. It is an optimal choice for future wireless network development towards high performance, high density, small scale, and microcell.

## **High Performance and Reliability**

### **Intelligent Local Forwarding**

The RG-AM5532 integrates intelligent local forwarding technology of Ruijie Networks and eliminates traffic bottleneck of ACs. The data forwarding mode of the RG-AM5532 can be pre-configured on Ruijie RG-WS series ACs. Then the RG-AM5532 determines whether data needs to be forwarded by the AC based on the SSID name or STA VLAN, or be sent to a wired network for data exchange.

The local forwarding technology enables the AP to forward data that is sensitive to delay and requires real-time high-performance transmission through a wired network. This greatly reduces the traffic pressure of ACs and copes with heavy-traffic transmission of IEEE 802.11n and 802.11ac networks.

### **Roaming Access**

With RG-WS series ACs, the RG-AM5532 ensures seamless roaming of STAs between Layer 2 and Layer 3 networks. Users will not be aware of data access interruption in this process.

### **Abundant QoS Policies**

The RG-AM5532 supports abundant QoS policies, such as bandwidth limiting in WLAN, AP, and STA modes and prior bandwidth guarantee for key data applications.

The multicast-to-unicast technology supported by the RG-AM5532 solves the problem of video freezing due to

packet loss or long latency 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**

The RG-AM5532 supports IPv6 features, ensuring IPv6 forwarding on wireless networks. IPv4 and IPv6 STAs can automatically connect to ACs through tunnels, so services of IPv6 applications can be transmitted on wireless networks.

## **Flexible and Complete Security Policies**

### **STA Data Encryption Security**

The RG-AM5532 supports a complete data security protection mechanism. It supports WEP, TKIP, and AES encryption technologies to ensure data transmission security on wireless networks.

### **RF Security**

With Ruijie unified NMS RG-WIS and RG-WS series ACs, the RG-AM5532 can enable the RF probe scanning mechanism, discover unauthorized APs or other RF interference sources in real time, and report corresponding alarms to the NMS in real time. Then, network administrators can monitor potential threats and resource usage status in each wireless environment anytime.

### **Multiple Easy-to-Use Authentication Modes**

The RG-AM5532 not only supports traditional Web page authentication and IEEE 802.1x client authentication for monitoring STAs' network access behavior, but also provides convenient authentication methods for customers based on actual scenarios. The AP cooperates with RG-WS series ACs to implement MAB authentication, SM-based and QR code-based visitor authentication.

When accessing the Internet by MAB authentication, wireless users only need to enter their usernames and passwords upon first login. They can directly access the Internet without entering the usernames and passwords again in their future access.

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

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

### **DHCP Snooping**

The AP supports DHCP snooping and allows the DHCP responses from trusted ports only. This feature prevents users from setting up a DHCP server without permission of the administrator, which disrupts the assignment and management of IP addresses and affects normal network access of users. Based on DHCP snooping, dynamic ARP monitoring and source IP address detection are performed to prevent ARP spoofing and source IP address spoofing when a DHCP server dynamically assigns IP addresses.

### **Anti-ARP Spoofing**

Address Resolution Protocol (ARP) spoofing (or poisoning) is a type of common and influential network attacks. The RG-AM5532 supports anti-ARP spoofing in multiple modes. Regardless of whether STAs automatically obtain addresses from a DHCP server or use static IP addresses, the RG-AM5532 records STAs' authentic IP and MAC addresses, and compares addresses in ARP packets with recorded IP and MAC addresses when ports receive ARP packets from hosts. It forwards only ARP packets whose addresses match the recorded IP and MAC addresses and discards fake ARP packets. In this way, ARP spoofing packets are blocked from the network to protect network STAs against ARP attacks.

### **Proactive Defense Against Various DoS Attacks**

Due to network openness, computers may be infected with viruses or attackers may attack network devices and servers for various purposes, resulting in network unavailability. The common cases are as follows. ARP flood attacks cause the gateway to fail to respond to requests. Internet Control Message Protocol (ICMP) flood attacks paralyze network devices due to high CPU load. DHCP flood attacks deplete addresses of a DHCP server, and users cannot obtain IP addresses for network access. The RG-AM5532 adopts the innovative Network Foundation Protection Policy (NFPP) technology to limit the rate of sending ARP packets, ICMP requests, DHCP requests, and other packets

to networks. The AP discards packets whose rate exceeds the threshold, identifies attacks, and isolates STAs launching attacks. In this way, basic networks are protected against network attacks, guaranteeing network stability.

### **Management Information Security**

Through Secure Shell (SSH) and Simple Network Management Protocol version 3 (SNMPv3), the RG-AM5532 encrypts management information in telnet and SNMP processes, ensuring information security of management devices and preventing hackers from attacking or controlling the devices. Based on source IP address control, telnet access control provides more precise device management and control. Users can log in to the AP only through the devices with IP addresses configured by administrators, thereby enhancing network management security.

## **Abundant Management Policies**

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### **Simple Zero-Touch Provisioning Installation**

When the RG-AM5532 works in the fit mode, pre-configuration is not required before installation. During onsite installation and subsequent maintenance, re-configuration is not required after product replacement. The AP can automatically inherit configuration information from the AC to complete configuration, which dramatically reduces the implementation and maintenance workload and costs.

### **Comprehensive Remote Management**

The remote RG-WS series ACs can centrally process the working parameters of the RG-AM5532 deployed in any network position, such as channel numbers, power classes, SSID settings, security settings, and VLAN division. This reduces the consumption of local management resources and centralizes the management permissions, improving the security and management efficiency of wireless networks.

### **Web GUI Management**

O&M personnel can manage the RG-AM5532 through the web GUI on an AC. O&M personnel can complete wireless network configuration easily and manage the wireless network centrally. On the AC web GUI, O&M personnel can manage both the AP and the STAs connected to the AP and restrict the rates and network access of the STAs. With the web GUI, O&M personnel can plan, manage, and maintain wireless networks conveniently.

# Master AP Hardware Product Specifications

## Hardware Specifications

### Dimensions and Weight

Dimensions and Weight	RG-AM5532
Dimensions ( W x D x H)	Main unit: 360 mm x 440mm x 44mm (14.17 in. x 17.32 in. x 1.73 in.) Shipping: 550mm x 470 mm x 255 mm (21.65 in. x 18.50 in. x 10.04 in.)
Rack height	1 RU
Weight	Main unit: 5.8 kg (12.79 lbs, including the package) Shipping: 6.2 kg (13.67 lbs)
Mounting	Wall/Workbench/Rack-mount

### System Specifications

System Specifications	RG-AM5532
Memory	512 MB
Flash memory	512 MB
Switching capacity	68 Gbps
Packet forwarding rate	101 Mpps

### Port Specifications

Port Specifications	RG-AM5532
Fixed service port	Uplink: 4 x 1000BASE-T ports 4 x 10GE SFP+ ports Downlink: 24 x 10/100/1000BASE-T ports
Fixed management port	1 x RJ45 console port
Status LED	1 x system status LED 28 x RJ45 port LEDs 4 x SFP+ port LEDs
Button	1 x Power button

## Power Supply and Consumption

Power Supply and Consumption	RG-AM5532
Input power supply	Rated voltage range: 100 V AC to 240 V AC Maximum voltage range: 90 V AC to 264 V AC Frequency: 50/60 Hz Rated current: 3 A
External power supply	Supported
Maximum power consumption	300 W

## Environment and Reliability

Environment and Reliability	RG-AM5532
Temperature	Operating temperature: -10°C to +45°C (14°F to 113°F) Storage temperature: -40°C to +70°C (-40°F to +158°F) 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 (544.62 ft.), the maximum temperature decreases by 1°C (1.8°F).
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.)
Humidity	Operating humidity: 5% RH to 95% RH (non-condensing) Storage humidity: 5% RH to 95% RH (non-condensing)
Fan	Dual-fan design
Safe fan speed	9000 rpm
Shock and vibration	GB/T 2423.6
Environmental standard	Storage and operating environment: NEBS GR-63-CORE_Issue3_2006 GB/T 2423.6-1995
Mean Time Between Failure (MTBF)	400,000 hours (44 years) at the operating temperature of 25°C (77°F)

## Regulatory Compliance

Regulatory Compliance	RG-AM5532
Regulatory compliance	EN 55032, EN 55035, EN 61000-3-3, EN IEC 61000-3-2, ETSI EN 300 386, IEC 62368-1, and EN 62368-1

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

## Software Specification

### Applicable Software Version

Applicable Software Version	RG-AM5532
Applicable software version	RGOS 11.9(6)W2P1 or later

### WLAN Features

WLAN	RG-AM5532
Maximum number of associated STAs	2,048
STA management	SSID hiding Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. 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-AM5532
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 (TKIP), WPA-PSK, WPA2 (AES)
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Wireless Intrusion Detection System(WIDS) User isolation
ACL	Dynamic ACL assignment based on 802.1X authentication (used with the AC) IPv6 ACL Time range-based ACL ACL based on a Layer 2 interface ACL based on a Layer 3 interface
CPP	CPU Protect Policy (CPP)
NFPP	Network Foundation Protection Policy (NFPP)



## Routing and Switching

Routing and Switching	RG-AM5532
MAC	MAC address learning and aging Static and dynamic MAC addresses Source MAC address filtering Limitation on the number of MAC addresses learned on an interface
Ethernet	Jumbo frame length: 1518 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)
VLAN	Interface-based VLAN assignment Maximum number of SVIs: 4,094 Maximum number of VLANs: 4,094 VLAN ID range: 1 to 4,094
ARP	ARP entry aging and proxy ARP Maximum number of ARP entries: 1,024 ARP check
IPv4 services	Static and dynamic IPv4 addresses DHCP server and DHCP client DNS client NTP server and NTP client
IPv6 services	Static and dynamic IPv6 addresses Neighbor Discovery (ND), IPv6 ND proxy, ICMPv6, and IPv6 ping DNSv6 client NTPv6 server and NTPv6 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 IGMP Snooping

## Network Management and Monitoring

Network Management and Monitoring	RG-AM5532
Network management	SNMPv1/v2c/v3 Fault detection and alarm
Network management platform	Web management (Eweb)
User access management	Console, Telnet, SSH, FTP client, FTP server, and TFTP client

# Micro AP Product Specifications

## Hardware Specifications

### Dimensions and Weight

Dimensions and Weight	RG-MAP852(V3)
Unit dimensions (W x D x H)	125 mm × 86 mm × 30 mm (4.92 in. × 3.38 in. × 1.18 in.)
Shipping dimensions (W x D x H)	180 mm × 137 mm × 52 mm (7.09 in. × 5.39 in. × 2.05 in.)
Unit weight	0.31 kg (0.68 lbs)
Shipping weight	0.35 kg (0.77 lbs)
Mounting	Wall/Ceiling/Junction box-mount

### System Specifications

System Specifications	RG-MAP852(V3)
Memory	256 MB
Flash memory	128 MB

### Wi-Fi Radio

Wi-Fi Radio	RG-MAP852(V3)
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> .

Wi-Fi Radio	RG-MAP852(V3)
Date rates	<p>Combined peak data rate: 2.976 Gbps</p> <p>Radio1: 2.4GHz, 574Mbps</p> <ul style="list-style-type: none"> <li>• Two spatial stream Single User (SU) MIMO for up to 574 Mbps wireless data rate to individual 2SS HE40 802.11ax client device (maximum)</li> <li>• Two spatial stream SU MIMO for up to 287 Mbps wireless data rate to individual 2SS HE20 802.11ax client device (typical)</li> </ul> <p>Radio2: 5GHz, 2.402Gbps</p> <ul style="list-style-type: none"> <li>• Two spatial stream Single SU MIMO for up to 2.402 Gbps wireless data rate to individual 2SS HE160 802.11ax client device (maximum)</li> <li>• Two spatial stream SU MIMO for up to 1.201 Gbps wireless data rate to individual 2SS HE80 802.11ax client device (typical)</li> </ul>
Data rate set	<p>The following 802.11-compliant data rates in Mbps are supported:</p> <p>2.4 GHz</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>• 802.11ac: 6.5 to 400 (MCS0 to MCS9, NSS = 1 to 2, VHT20 to VHT40)</li> <li>• 802.11ax: 8.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40)</li> </ul> <p>5 GHz</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 1732 (MCS0 to MCS9, NSS = 1 to 2, VHT20 to VHT160)</li> <li>• 802.11ax: 8.6 to 2402 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE160)</li> </ul>
Packet aggregation	802.11n/ac/ax: A-MPDU, 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 dBi.</li> <li>• 5 GHz: two built-in omnidirectional antennas, 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> </ul> <p>5 GHz</p> <ul style="list-style-type: none"> <li>• Maximum transmit power: 21 dBm (125.89 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,</p> <p>802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM</p> <p>802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-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(V3)	
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
2.4GHz 802.11b	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
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

Wi-Fi Radio Frequency Performance	RG-MAP852(V3)		
Frequency Band and Protocol	Data Rate	Maximum Transmit Power per Transmit Chain	Maximum Receive Sensitivity per Receive Chain
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	-47 dBm

## Port Specifications

Port Specifications	RG-MAP852(V3)
Fixed service port	Uplink: 1 x 10/100/1000BASE-T port, compliant with IEEE 802.3af/at/bt standard (PoE/PoE+/PoE++) Downlink: 4 x 10/100/1000BASE-T ports
Fixed management port	1 x RJ45 console port (serial console port)
Status LED	1 x multi-color 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>

## Power Supply and Consumption

Power Supply and Consumption	RG-MAP852(V3)
Input power supply	PoE/PoE+/PoE++ (IEEE 802.3af/at/bt-compliant), powered by an i-Share+ master AP
Maximum power consumption	9 W

## Environment and Reliability

Environment and Reliability	RG-MAP852(V3)
Temperature	Operating temperature: -10°C to +45°C (14°F to 113°F) Storage temperature: -40°C to +70°C (-40°F to +158°F) Note: At an altitude in the range of 2,000–5,000 m (6,561.68–16,404.20 ft.), every time the altitude increases by 166 m (544.62 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 +5,000 m (-1,640.42 ft. to +16,404.20 ft.) Storage altitude: -500 m to +5,000 m (-1,640.42 ft. to +16,404.20 ft.)
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)

## Regulatory Compliance

Regulatory Compliance	RG-MAP852(V3)
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, and EN 62368-1

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

## Software Specification

### Software

Software	RG-MAP852(V3)
Applicable software version	RGOS11.9(6)W2B5 or later

### WLAN

WLAN	RG-MAP852(V3)
Maximum number of associated STAs	1,024 (up to 512 STAs per radio)

WLAN	RG-MAP852(V3)
Maximum number of BSSIDs	16 (up to 8 BSSIDs per radio)
Maximum number of WLAN IDs	8
STA management	SSID hiding Band steering Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. Intelligent load balancing based on the STA quantity or traffic 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 CAPWAP through NAT MTU setting and fragmentation over CAPWAP tunnels Encryption over CAPWAP data channels
Data forwarding	Centralized and local forwarding
Wireless roaming	Layer 2 and Layer 3 roaming
Wireless locating	MU and TAG device locating

## Security and Authentication

Security and Authentication	RG-MAP852(V3)
Authentication and encryption	PSK and web authentication QR code-based guest authentication, SMS authentication, and MAC address bypass (MAB) authentication Data encryption: WEP (64/128 bits), WPA (TKIP), WPA-PSK, WPA2 (AES)
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Wireless Intrusion Detection System(WIDS) User isolation Rogue AP detection and containment
ACL	Dynamic ACL assignment based on 802.1X authentication MAC extended ACLACL based on a Layer 2 interface ACL based on a Layer 3 interface Ingress ACL based on a wireless interface
CPP	CPU Protect Policy (CPP)
NFPP	Network Foundation Protection Policy (NFPP)

## Routing and Switching

Routing and Switching	RG-MAP852(V3)
MAC	Static and filtered MAC addresses MAC address table size: 1,024 Maximum number of static MAC addresses: 1,024 Maximum number of filtered MAC addresses: 1,024
Ethernet	Jumbo frame length: 1518 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)
VLAN	Interface-based VLAN assignment Maximum number of VLANs: 4094 VLAN ID range: 1–4094
ARP	ARP entry aging and proxy ARP Maximum number of ARP entries: 1,024 ARP check
IPv4 services	Static and dynamic IPv4 addresses DHCP server and DHCP client DNS client NTP server and NTP client
IPv6 services	Static and dynamic IPv6 addresses Neighbor Discovery (ND), IPv6 ND proxy, ICMPv6, and IPv6 ping DNSv6 client NTPv6 server and NTPv6 client
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

## Network Management and Monitoring

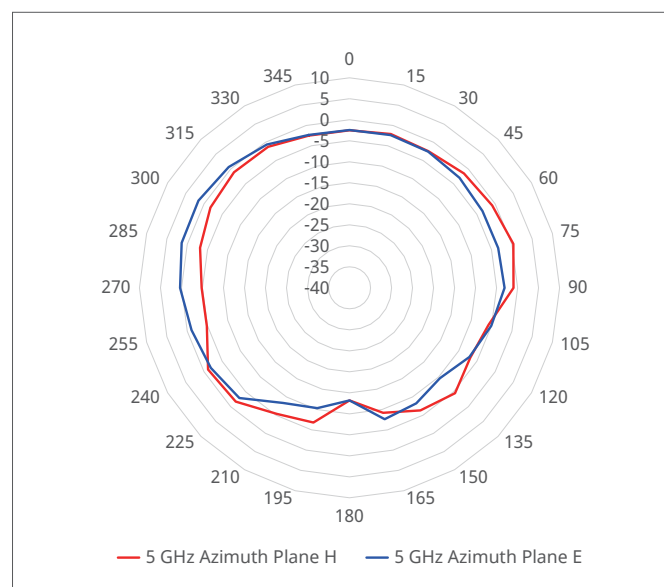
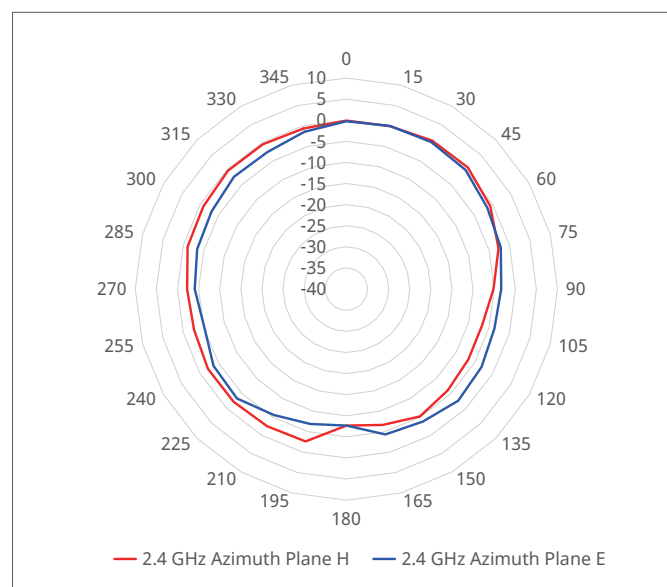
Network Management and Monitoring	RG-MAP852(V3)
Network management	SNMPv1/v2C/v3 Fault detection and alarm Information statistics and logging
Network management platform	Web management (Eweb)
User access management	Telnet and TFTP



# Antenna Pattern Plots

## Vertical Planes (Side View)

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



Note: Operating frequency bands are country-specific.

## Ordering Guide

Order the RG-AM5532 (i-Share+ solution master AP) first. Then order the RG-MAP852(V3) (i-Share+ solution micro AP).

## Ordering Information

Model	Description
RG-AM5532	The master AP of the i-Share+ solution APs with 24 downlink 1000 Mbps PoE ports, four uplink 1000 Mbps PoE electrical ports and four uplink 10GE SFP+ ports in auto negotiation mode. The uplink ports support three mutually exclusive modes: two 1000 Mbps electrical ports and two 10GE optical ports (supporting up to two settled APs), four 1000 Mbps electrical ports (supporting up to three settled APs) and four 10GE optical ports (not supporting settled APs). The master AP supports up to 24 i-Share micro APs. Each master AP uses four wireless controller licenses.
RG-MAP852(V3)	A universal Wi-Fi 6 dual-radio i-Share micro AP. The AP supports up to four spatial streams and the maximum access rate of 2.976 Gbps. It complies with IEEE 802.11b/g/n/ax and IEEE 802.11a/n/ac/ax standards. The AP provides one 1000 Mbps uplink port and four 1000 Mbps downlink ports. The AP can be mounted on a wall, ceiling, or junction box.

# Package Contents

## RG-AM5532

Name	Quantity
Main unit	1
Power cord	1
Mounting bracket	2
Rubber pad	4
Mounting Bracket Installation Guide	1
<i>Warranty Card and Hazardous Substance Table</i>	1
M4 x 8 mm Phillips countersunk head screw, GB819-85	6
Green/Yellow grounding cable	1
Management software	1

## RG-MAP852(V3)

Name	Quantity
Main unit	1
M4 × 40 mm Phillips pan head screw	2
<i>Warranty Card and Hazardous Substance Table</i>	1

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



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