Ruijie i-Share+

Access Point Series Datasheet

Ruijie i-Share+ solution deploys a marketing-leading distributive design and exclusive Gigabit architecture to handle high-density and complex application scenarios with ease. The hierarchical structure consists of three main components - i-Share+ Master AP, Mini AP module and 100-meter Ethernet Cable. The Master AP RG-AM5528 guarantees each room with independent MIMO signal, and supports up to 24 rooms with optimal dual-stream coverage under dual-band 2.4GHz/5GHz. The i-Share+ AP Series offers a wireless solution that embodies high performance, exceptional coverage with an aesthetically pleasing appearance.

HIGHLIGHTS

- Extensible coverage: up to 24-room full WiFi coverage
- Flexible deployment: 2 Mini APs options for wall-mount or faceplate installation
- Scalable performance: concurrent dual-band (IEEE 802.11ac, an and bgn) and throughput up to 1167Mbps
- Simplified management: plug-and-play design (Mini AP)
- Investment saving: no extra PoE switches, reuse existing cables, less AP license, etc.

The Master AP RG-AM5528 implements 802.11ac and supports concurrent 802.11a/n/ac and 802.11b/g/n. The AP adopts a 19-inch rack design for standard deployment in low voltage room or flexible installation on small rack in corridor. The Master AP offers 24-ports RJ45 downlink to connect to i-Share+ Mini APs, which are available in various forms for intelligent and painless deployment in student dormitory, hotel room, enterprise office and other populated network settings.

i-Share+ Master AP RG-AM5528

i-Share+ Mini AP
RG-MAP552

i-Share+ Mini AP
RG-MAP552-W
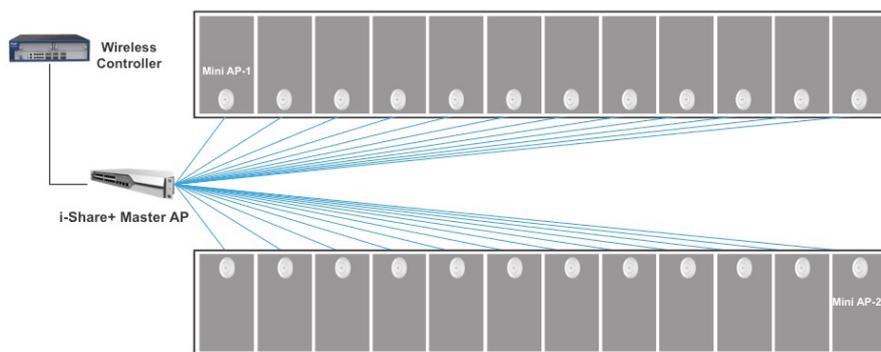
i-Share+ System Architecture

PRODUCT FEATURES

Hierarchical Distributive Architecture

Market-leading Performance

The i-Share+ solution adopts Ruijie's leading hierarchical distributive architecture. The Master AP RG-AM5528 implements a distributive design with data forwarding and service management carried out on different modules. Supplementing with a 10G uplink interface, the Master AP totally eliminates data transmission bottleneck. The Mini APs, which are specifically designed for indoor installation, implement independent CPU for data processing and forwarding. The isolated RF chip enables multi-user scheduling. The innovative Master AP + Mini AP hierarchical architecture offers a comprehensive wireless solution with upgraded user experience.
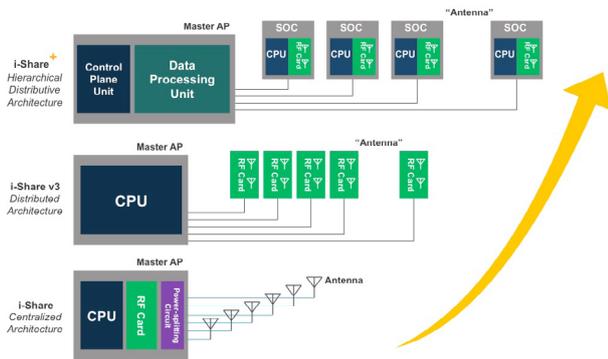
Evolution of i-Share Distributive Architecture

Adaptive to Every Challenging Scenario

The i-Share+ Mini APs offers an impressive dual-band dual-stream 802.11ac performance of 300Mbps+867Mbps. Two models are available to adapt to various challenging scenarios:

• RG-MAP552 enables ceiling or wall mount deployment. The compact AP is an ideal match for large-scale scenarios requiring new cabling.

• RG-MAP552-W resembles a wall AP and supports plug-and-play installation leveraging an existing 86-type faceplate. No additional cabling is required. In addition, the Mini AP offers an anti-theft design and a passthrough port to support renovation work with multiple sharing networks.
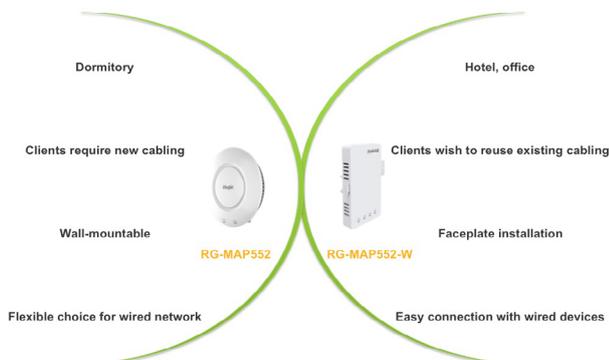
i-Share+ Mini APs Ideal for All Scenarios

Integrated Wired and Wireless Networking

The i-Share+ solution takes care of both wireless and wired network demands. While Wi-Fi connectivity is gaining significance, the solution also addresses the access needs of conventional wired devices (e.g. office desktop PCs and printers). Both Mini APs RG-MAP552 and RG-MAP552-W offer LAN port for easy wireless and wired network integration.

Simplified Site Visit with Extra Precision

The Master AP RG-AM5528, resembling an Ethernet switch, gears up with 24-port downlink, 2-port 1000Base-T and 2-port 1G/10GBase-X SFP+. With reference to the readily available wired network statistics, IT specialists can obtain site visit data for wireless deployment in a faster, more accurate and efficient manner. The i-Share+ solution totally outperforms the traditional to simplify site visit work and maximize implementation precision.

100-Meter Cable for Flexible Deployment

For traditional AP installation/i-Share solution, coaxial cables are usually deployed. To achieve dual-stream MIMO, the conventional solution is to implement dual coaxial cables. In order to reduce signal attenuation and increase deployment distance, the solution sometimes require even thicker cables. However, the downside is increased investment cost and deployment complexity. The new i-Share+ solution, built on the firm foundation of the preceding third-generation structure, further optimizes the architecture by directly using CAT 5 or 6 cables for 100-meter deployment. It does not only support the lossless requirements for hundred meter deployment, but also meets the cabling standard. The solution offers unparalleled ease and flexibility for all the deployment stages.
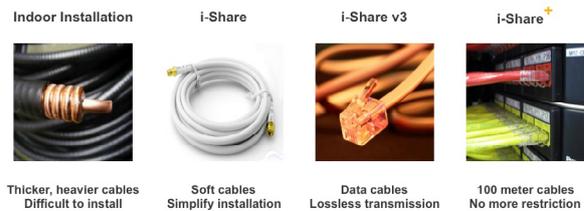
Cable Evolution of i-Share Solution

Unified Management of Large-scale AP Deployment

From the management side, the i-Share+ Master AP and Mini APs can be regarded as one access point. The latter acts like an RF card for the Master AP. No separate management, software upgrade, configuration assignment, AC license or PoE switch is required. To offer wireless coverage for 24 rooms, clients only need one Master AP to largely reduce maintenance resources. For a deployment scenario with up to 10,000 rooms, network administrators merely need to manage a few hundreds of APs in total.

Exceptional Performance and Reliability

Industry-leading Local Forwarding Technology

Employing an industry-leading local forwarding technology, the Master AP RG-AM5528 eliminates the traffic bottleneck of ACs. Teaming up the Ruijie RG-WS wireless controller series, users can flexibly configure the data-forwarding mode of the AP. In other words, the AP can control the data to be forwarded via the AC based on the SSID or user VLAN or enter the wired network for data exchange. The local forwarding technology can forward large-scale, delay-sensitive, and real-time transmission data through the wired network, greatly alleviating the traffic pressure on the AC and fulfill the high traffic transmission requirements of 802.11n and 802.11ac network.

Seamless Roaming Experience

The RG-AM5528 teams up with the RG-WS wireless ACs, allowing wireless users to roam seamlessly on Layer 2 and Layer 3 networks without data interruption.

Abundant QoS Policies

The RG-AM5528 supports an extensive array of QoS policies. For example, it provides bandwidth limitations in WLAN/AP/STA modes that guarantee bandwidth priority for key applications.
The AP also supports the multicast-to-unicast conversion technology and resolves the video interruption problem due to packet loss or long delay in wireless Video on Demand (VoD) system. The RG-AM5528 highly enhances user experience with multicast video over wireless networks.

Wireless IPv6 Access

The RG-AM5528 fully supports the IPv6 features and implements IPv6 forwarding on a wireless network. Both IPv4 and IPv6 users can connect to the ACs over tunnels, enabling IPv6 applications to be borne on the wireless network.

Flexible & Comprehensive Security Policies

User Data Encryption

The RG-AM5528 fully supports the advanced encryption technologies such as Wired Equivalent Privacy (WEP), Temporal Key Integrity Protocol (TKIP), and Advanced Encryption Standard (AES), ensuring end-to-end security of data transmission over the wireless network.

CAPWAP Protocol

Encrypted communication between the RG-AM5528 and RG-WS ACs is enabled with the international standard Control and Provisioning of Wireless Access Points (CAPWAP). The function ensures complete isolation from the wired network and guarantees high security for the real-time communication between the AP and the wireless controller.

RF Security

In collaboration with Ruijie RG-SNC network management system and RG-WS wireless controller series, the RG-AM5528 supports RF probe scanning feature to detect unauthorized access points or other RF interference sources. Once detected, the wireless controller will send real-time alerts to the network management system. Network administrator can hence monitor potential threats and usage status anytime with ease.

Flexible Authentication Modes

The RG-AM5528 also supports PEAP Authentication, SMS Authentication, and QR Code Authentication.

The PEAP Authentication allows users to perform password authentication for once only. That means users are only required to enter credentials during their first network visit.

If the SMS authentication is adopted, users first sign in with their mobile phone numbers and then receive an SMS with login username and password for network access.

QR code authentication is another wireless security highlight. After accessing a wireless network, users will obtain a QR code on their end devices and simply ask any authorized staff's to scan it for network access.
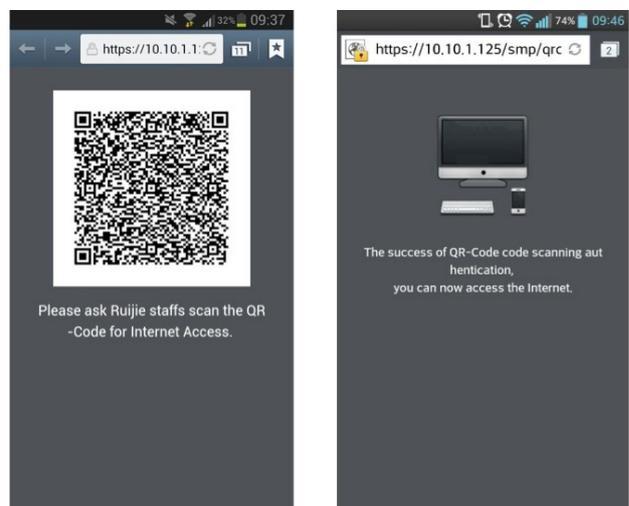
Advanced Guest Wireless Interfaces of the QR Code Authentication

Protection Against ARP Spoofing

Address Resolution Protocol (ARP) detection effectively protects network users against ARP gateway spoofing and host spoofing. Automatic binding can be enabled in both dynamic and static IP address allocation environments to greatly save manpower resources and management costs. The RG-AM5528 can monitor and control the transmission rate of ARP packets to prevent malicious use of scanning tools, which triggers ARP flooding and causes network congestion.

DHCP Security

With Dynamic Host Configuration Protocol (DHCP) snooping, the RG-AM5528 permits DHCP response messages from the trusted ports only. The device can thus prevent unauthorized deployment of any DHCP server to disturb the allocation and management of IP addresses and affect normal operation of the network. With the DHCP monitoring function, the RG-AM5528 can effectively prevent ARP host spoofing and source IP address spoofing in the dynamic IP allocation environment by dynamically monitoring ARP and checking source IP address.

Management Information Security

To ensure the security of devices and offer protection against attacks, the Secure Shell (SSH) and SNMPv3 technologies encrypt management information by Telnet and Simple Network Management Protocol (SNMP). The RG-AM5528 offers Telnet access control based on source IP address, offering a high level of granularity on device management. Only the IP addresses authorized by network administrator can log into the wireless controller, which further enhances the security of device network management.

Unified Network Management

Simple Deployment with Zero Configuration

Under the FIT mode, no configuration is required before deployment. Also, no manual configuration is necessary for on-site installation, maintenance or replacement. Auto-configuration can be completed via the wireless controller. This user-friendly feature can greatly reduce workload and investment costs.

Comprehensive Remote Management

RG-WS wireless controllers can remotely and centrally manage all RG-AM5528 APs (operation parameters such as channel, power ranking, SSID configuration, security configuration, VLAN division, and CPE data and configuration). The feature enhances security and simplifies management for network users.

Web Interface Management

The RG-AM5528 supports AC and AP web management interfaces, which provide simplified wireless configuration and high visibility for the whole network operation. With the AC web interface, the wireless controller can manage both the APs and the associated users, achieving user bandwidth control and network access restriction. Network administrator can hence easily plan, operate and maintain the wireless network.
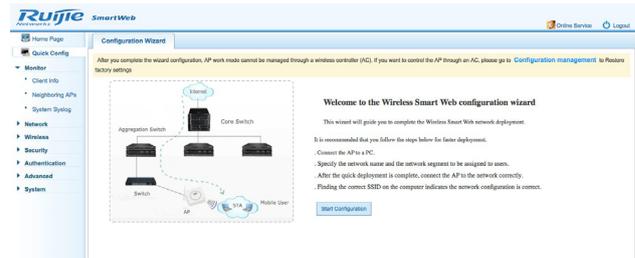
Ruijie Smart Web Management Interface

TECHNICAL SPECIFICATIONS

i-Share+ Master AP

Model	RG-AM5528
Service Port	24-port 10/100/1000BASE-T (PoE), 2-port 1000BASE-T and 2-port 1G/10GBase-X SFP+ uplinks
Management Port	1 console port (RJ45)
LED Indicators	3 status indicators (device, Ethernet and power)
IP Rating	IP41
Health Standard	EN 62311
WLAN	Maximum stations per AP	1,024
	Virtual AP	A maximum of 32 SSIDs
	SSID hiding	Support
	Configuring the authentication mode, encryption mechanism, and VLAN attributes for each SSID	Support
	WDS (bridge mode)	Support
	Remote Intelligent Perception Technology (RIPT)	Support
	X-speed	Support
	Intelligent identification of smart device	Support

Model		RG-AM5528
WLAN	Intelligent load balancing based on the number of users or traffic	Support
	STA control	SSID/radio-based
	Bandwidth control	STA/SSID/AP-based speed control
Security	PSK, Web, and 802.1x authentication	Support
	Data encryption	WPA (TKIP), WPA2 (AES), WPA-PSK and WEP (64 or 128 bits)
	WeChat authentication	Support
	QR code authentication	Support
	SMS authentication	Support
	PEAP authentication	Support
	Data frame filtering	Whitelist, static/dynamic blacklist
	User isolation	Support
	Rogue AP detection and countermeasure	Support
	Dynamic ACL assignment	Support
	RADIUS	Support
	CPU Protection Policy (CPP)	Support
	Network Foundation Protection Policy (NFPP)	Support
	WIDS (Wireless Intrusion Detection System)	Support
Routing	IPv4 address	Static IP address or DHCP reservation
	IPv6 CAPWAP Tunnel	Support
	ICMPv6	Support
	IPv6 address	Manual or automatic configuration
	IPv6 tunnel	Manual or automatic configuration
	IPv6 transparent transmission	Support
	ISATAP	Support
	Multicast	Multicast to unicast conversion
Management and Maintenance	Network management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and Web management
	Fault detection and alarm	Support
	Statistics and logs	Support
Dimensions (W x D x H) (mm)		440 × 260 × 43.6
Weight		<3.5kg
Installation Mode		Low voltage room/cabinet installation

Model	RG-AM5528
Power Supply	AC input: Rated voltage range: 100V-240V Maximum voltage range: 90V~264V Frequency: 50-60Hz
Power Consumption	240W
Temperature	Operating Temperature: 0ºC to 50ºC
	Storage Temperature: -40ºC to 70ºC
Humidity	Operating Humidity: 5% to 95%RH (non-condensing)
	Storage Humidity: 5% to 95%RH (non-condensing)

i-Share+ Mini APs

Model	RG-MAP552	RG-MAP552-W
Radio	Dual	
Protocol	802.11a/b/g/n/ac	
Operating Bands	2.4GHz and 5GHz	
Antenna	Built-in directional antenna (5G) Built-in antenna (2.4G)	Built-in antenna
Spatial Streams	2	
Max Throughput	300Mbps@2.4GHz 867Mbps@5GHz 1.167Gbps per AP	
Modulation	OFDM: BPSK@6/9Mbps QPSK@12/18Mbps 16-QAM@24Mbps 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM and 256QAM	
Receiver Sensitivity	11b: -99dBm(1Mbps), -90dBm(5Mbps), -87dBm(11Mbps) 11a: -92dBm(6Mbps), -87dBm(24Mbps), -84dBm(36Mbps), -75dBm(54Mbps) 11g: -93dBm(6Mbps), -88dBm(24Mbps), -86dBm(36Mbps), -78dBm(54Mbps) 11ng: -94Bm@MCS0, -74dBm@MCS7, -93dBm@MCS8, -73dBm@MCS15 11na: -94dBm@MCS0, -72dBm@MCS7, -93dBm@MCS8, -72dBm@MCS15 11ac HT20: -90dBm (MCS0) , -63dBm (MCS9) 11ac HT40: -85dBm (MCS0) , -60dBm (MCS9) 11ac HT80: -82dBm (MCS0) , -58dBm (MCS9)	
Transmit Power	≤100mW (20dBm, transmit power of the RF card only)	
Adjustable Power	1dBm	

Model	RG-MAP552	RG-MAP552-W
Service Port	1-port 10/100/1000BASE-T uplink (PoE), 2 FE LAN ports	1-port 10/100/1000BASE-T uplink (PoE), 4 FE LAN ports, 1 DC port 1 RJ45 voice/PoE passthrough port (RJ11 combo)
Management Port	N/A	1 Micro USB port
Lock	Standard: Anti-theft screws and ordinary screws Optional: Lock and key	
LED Indicators	1 connection status indicator (switch off upon request)	
IP Rating	IP41	
Safety Standard	GB4943-2001	
EMC Standard	GB9254-2008, GB17625.1-2003	
Health Standard	EN 62311	
Radio Standard	Wireless transmission equipment approval, EN300 328, EN301 893	
Vibration Standard	IEC60068□2-31 ETSI EN300 019 NEBS GR-63-CORE	
Wi-Fi Alliance Certification	Support	

WLAN	Maximum stations per AP	32
	Virtual AP	A maximum of 8 SSIDs
	SSID hiding	Support
	Configuring the authentication mode, encryption mechanism, and VLAN attributes for each SSID	Support
	WDS (bridge mode)	Support
	Remote Intelligent Perception Technology (RIPT)	Support
	X-speed	Support
	Intelligent identification of smart device	Support
	Intelligent load balancing based on the number of users or traffic	Support
	STA control	SSID/radio-based
	Bandwidth control	STA/SSID/AP-based speed control
	Preference for 5 GHz (band select)	Support
	Wireless location	Support

Model		RG-MAP552	RG-MAP552-W
Security	PSK, Web, and 802.1x authentication	Support	
	Data encryption	WPA (TKIP) , WPA2 (AES) , WPA-PSK, and WEP (64 or 128 bits)	
	WeChat authentication	Support	
	QR code authentication	Support	
	SMS authentication	Support	
	PEAP authentication	Support	
	Data frame filtering	Whitelist, static/dynamic blacklist	
	User isolation	Support	
	Rogue AP detection and countermeasure	Support	
	Dynamic ACL assignment	Support	
	WAPI	Support	
	RADIUS	Support	
	CPU Protection Policy (CPP)	Support	
	Network Foundation Protection Policy (NFPP)	Support	
	WIDS (Wireless Intrusion Detection System)	Support	
	Remote probe	Support	
Routing	IPv4 address	Static IP address or DHCP reservation	
	IPv6 CAPWAP Tunnel	Support	
	ICMPv6	Support	
	IPv6 address	Manual or automatic configuration	
	IPv6 tunnel	Manual or automatic configuration	
	IPv6 transparent transmission	Support	
	ISATAP	Support	
	Multicast	Multicast to unicast conversion	
Management and Maintenance	Network management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and Web management	
	Visualized wireless heat map analysis	Support	
	Fault detection and alarm	Support	

Model		RG-MAP552	RG-MAP552-W
Management and Maintenance	Statistics and logs	Support	
Dimensions (W x D x H) (mm)		ø138 × 35 (diameter × height) (Height of AP only, excluding mount kit)	116 × 86 × 39
Weight		0.385kg	0.3kg
Installation Mode		Wall/ceiling mountable	Standard 86-type faceplate installation
Power Supply		Via PoE	
Power Consumption		<7w	
Temperature		Operating Temperature: 0ºC to 50ºC	
		Storage Temperature: -40ºC to 70ºC	
Humidity		Operating Humidity: 5% to 95%RH (non-condensing)	
		Storage Humidity: 5% to 95%RH (non-condensing)	

ORDERING INFORMATION

Model	Description
RG-AM5528	i-Share+ Master AP, built-in 24-port 1000Base-T (PoE), 2-port 1000Base-T and 2-port 1G/10GBase-X SFP+ uplinks, support max 24 Mini APs (Each Master AP counts for 4 managed AP licenses)
RG-MAP552	i-Share+ Mini AP, 1-port 10/100/1000Base-T uplink (PoE) and 2 FE LAN ports, internal antenna, support concurrent 802.11b/g/n and 802.11a/n/ac, access rate up to 300Mbps + 867Mbps, for wall/ceiling mount installation
RG-MAP552-W	i-Share+ Mini AP, 1-port 10/100/1000Base-T uplink (PoE) and 4 FE LAN ports, internal antenna, support concurrent 802.11b/g/n and 802.11a/n/ac, access rate up to 300Mbps + 867Mbps, for standard 86-type faceplate installation

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