



# **RG-WS7110**

High-Performance Wireless Access Controller



01

## 01

### **Product Overview**

The RG-WS7110 high-performance wireless access controller (AC) is developed by Ruijie Networks to support next-generation high-speed wireless networks. It can be deployed on either a Layer 2 or Layer 3 network without any architecture or hardware changes, implementing seamless and secure control over wireless networks. The RG-WS7110 can manage up to 32 wireless access points (APs) by default. With licenses for capacity expansion, it can manage up to 512 generic APs or 1,024 wall plate APs.

Through powerful centralized and visualized management and control over wireless networks, the RG-WS7110 can significantly simplify construction and deployment of wireless networks. The RG-WS7110 can be used with Ruijie Networks' APs and RG-WIS — a unified management platform for wired and wireless networks, to achieve flexible control of APs, optimize RF coverage and performance, implement cluster management, and reduce the workload of device deployment.

By adopting enhanced security and clustering technologies, the RG-WS7110 offers identity-based networking services. Multiple ACs in a cluster can share a user database, allowing clients to seamlessly roam in different areas of a network. The cluster design guarantees the security and session integrity during roaming and smooth interaction of data and voice over Wi-Fi applications.

### 02

### **Product Appearance**



Front Top View of the RG-WS7110



Left Top View of the RG-WS7110



Right View of the RG-WS7110



Rear View of the RG-WS7110

## 03 Product Highlights

#### **High-Speed Forwarding**

- Increased forwarding capacity with 10 Gbps connections
- Centralized/Distributed, integrated, and intelligent local forwarding, eliminating the traffic bottleneck of the wireless access controller

#### **Intelligent Management**

- Ruijie Aireorder, achieving advanced airtime fairness
- Intelligent load balancing through band steering
- Dynamic QoS based on channel utilization, unleashing full wireless capacity
- Advanced wireless access controller technology for fast roaming

 Intelligent RF management, enabling flexible AP configuration and optimizing RF coverage and performance

#### **Secure and Reliable Network Systems**

- Advanced AC virtualization technology for high reliability as well as capacity and performance scaling
- Virtual AP technology, managing APs by group to isolate guest and business traffic
- Dynamic network policy for identity-based access control
- Authentication and encryption technologies including WPA3, 802.1X, PSK, WEP, TKIP, and AES for enhanced data security
- Deep Packet Inspection (DPI) based on packet characteristics, identifying thousands of applications

## 04

### **Product Features**

#### **Smart Wireless Experience**

#### **Intelligent Client Identification**

The built-in Portal server of the RG-WS7110 can intelligently identify clients based on characteristics of the clients, and adaptively respond with a portal authentication page of matching size and layout. Intelligent client identification eliminates the need to drag and resize a window, delivering users with a better intelligent wireless experience. This technology supports mainstream intelligent client operating systems, including Apple iOS, Android, and Windows.

#### **Fair Client Access**

The RG-WS7110 works with Ruijie Networks' APs to provide the same access time for clients in compliance with IEEE 802.11g, 802.11n, 802.11ac, 802.11ax, and other standards. This resolves issues such as high latency, slow speed, and low performance of APs caused by outdated NIC in clients or long distance between clients and APs. This also effectively improves the performance of low-speed clients, and ensures consistent and good wireless experience at the same location regardless of the client type.

#### **Intelligent Load Balancing**

In a high-density environment, the RG-WS7110 can monitor the number of clients and traffic on each

associated AP in real time to intelligently distribute clients connected to APs. This balances the traffic load, increases the average client bandwidth and QoS, and improves the availability of network connections.

In addition to client-based and traffic-based intelligent load balancing, the RG-WS7110 also supports load balancing based on the frequency band. Most Wi-Fi devices use the 2.4 GHz frequency band by default, but can achieve increased throughput in the 5 GHz frequency band (IEEE 802.11a/n/ac/ax-compliant). Load balancing based on the frequency band enables dual-radio-capable clients to preferentially use the 5 GHz frequency band. This increases bandwidth utilization by 30% to 40% without additional cost and guarantees a high-speed wireless experience for clients.

### **High Performance and Reliability**

## Centralized/Distributed, Integrated, and Intelligent Forwarding

The RG-WS7110 can be deployed on a Layer 2 or Layer 3 network without changing the original network architecture. It constitutes an overall switching architecture with APs to facilitate the control and processing of data transmission on all APs.

The intelligent local forwarding technology eliminates the traffic bottleneck of an AC. With this technology, the RG-WS7110 can flexibly configure data forwarding modes for connected APs. That is, the RG-WS7110 can determine whether data needs to be forwarded through itself, or directly enters the wired network for local forwarding based on the network SSID and VLAN planning. The local forwarding technology enables the RG-WS7110 to forward data that is sensitive to the delay and requires real-time high-performance transmission through a wired network. Facing high throughput of 802.11ac- and 802.11axcompliant clients, this technology can greatly reduce the traffic forwarding pressure of the RG-WS7110 to better adapt to future wireless networks such as high definition (HD) Video on Demand (VoD) and Voice over Wireless Local Area Network (VoWLAN) transmission.

#### **Intelligent RF Management**

The RG-WS7110 enables an AP to perform on-demand RF scanning on the wireless network. The RG-WS7110 can scan wireless frequency bands and channels, identify unauthorized APs and wireless networks, and notifies network administrators of alarms, providing all-round protection in a security-sensitive environment. Moreover, the RG-WS7110 can control the RF scanning function of APs in real time, and measure the signal strength and interference. It can dynamically regulate the traffic load, transmit power, RF coverage area, and channel allocation using software tools to maximize the AP coverage and capacity.

#### **Network-Wide Seamless Roaming**

The RG-WS7110 supports the advanced AC cluster technology. Multiple RG-WS7110 controllers in a cluster can synchronize online connection information and roaming records of all clients in real time. When a client roams, the client can roam freely on the entire network based on shared client information and authorization information in the cluster. Furthermore, the client can roam seamlessly and securely, and keep the IP address and authentication status unchanged, so as to achieve fast roaming and voice support.

#### **Abundant QoS Policies**

The RG-WS7110 supports abundant QoS policies such as bandwidth limiting in multiple modes and preferential bandwidth guarantee for key data applications.

#### **Wireless IPv6 Access**

The RG-WS7110 fully supports IPv6 features, ensuring IPv6 forwarding on wireless networks. IPv4 and IPv6 clients can automatically connect to the RG-WS7110 through tunnels to provide IPv6 services on wireless networks.

#### **Advanced AC Virtualization**

The RG-WS7110 supports the cutting-edge AC

virtualization technology. The technology can virtualize up to four ACs into one logical AC, achieving high reliability and capacity expansion without additional hardware devices.

- **Simplified topology:** All member ACs of the logical AC use the same IP address. Regardless of whether the logical AC connects to an AP or an authentication server, there is no need to assign an IP address to each member AC.
- Simplified configuration: Multiple member ACs can be managed as one AC. Any configuration of the master AC can be automatically synchronized to all member ACs.
- **High reliability:** N+M hot standby is supported. The breakdown of any AC will not affect the overall system.
- Smooth capacity expansion: The AP and client capacity can be expanded by adding a physical AC.
- License sharing: A license installed on any member AC of the logical AC can be shared by other member ACs.

## Advanced Application Recognition and Policy Control

The RG-WS7110 supports application recognition and application-level QoS mapping technology for wireless clients. The RG-WS7110 in centralized forwarding mode applies Deep Packet Inspection (DPI) to packet characteristics to support over 2,500 applications. It can identify applications, collect statistics on applications, and employ QoS mapping, helping you understand the application usage on the network. Then QoS can be performed for application traffic.

#### Flexible and Comprehensive Security Policies

#### **Local Authentication**

With a built-in local user database and a built-in Portal server, the RG-WS7110 authenticates wireless clients locally through web-based authentication. Local authentication eliminates the need to deploy an authentication server such as the external Portal server and RADIUS server. Moreover, this authentication mode simplifies the entire network architecture and greatly reduces the network construction cost, meeting requirements for secure access to small- and medium-sized wireless networks.

#### **Client Data Encryption Security**

The RG-WS7110 supports a full range of data security protection mechanisms, including Wired Equivalent Privacy (WEP), Temporal Key Integrity Protocol (TKIP), and Advanced Encryption Standard (AES), to ensure data

transmission security on wireless networks.

#### **Standard Communication Protocol**

The RG-WS7110 communicates with APs over Control and Provisioning of Wireless Access Points (CAPWAP) tunnels for encrypted communication. This achieves isolation from a wired network and ensures confidentiality of real-time communication between the RG-WS7110 and APs. Additionally, the RG-WS7110 can use CAPWAP to control third-party APs in the future, facilitating network expansion as well as protecting existing investment.

#### Virtual AP Technology

With the virtual AP technology, the RG-WS7110 can allocate multiple SSIDs on a network. Network administrators can separately isolate and encrypt subnets or VLANs using the same SSID, and can configure the separate authentication mode and encryption mechanism for each SSID.

#### **RF Security**

The RG-WS7110 can be flexibly configured with the RF probe scanning mechanism to discover unauthorized APs or other RF interference sources in real time. It reports corresponding alarms to the network management system (NMS) in real time, so a network administrator can monitor potential network threats and usage in each wireless environment at any time.

#### **Virus and Attack Prevention**

The RG-WS7110 has various built-in security mechanisms to effectively protect a network against virus and network traffic attacks, deny unauthorized network access, and allow access from authorized clients. The security mechanisms include binding of IP addresses, MAC addresses, WLANs, and other elements, hardware ACL, and data stream-based rate limiting, so the RG-WS7110 is suitable for campus, hospital, and enterprise networks where access control of guests is strengthened and access of unauthorized clients is restricted.

#### **Secure Client Access**

The RG-WS7110 supports web-based authentication. Clients can complete the authentication process by using a browser.

The RG-WS7110 supports 802.1X authentication on clients to guarantee network security. Moreover, it ensures host security because the 802.1X authentication client is embedded on a host for access control. Unlike web-based authentication, 802.1X authentication is applicable to security-sensitive areas. Furthermore, IP addresses, MAC addresses, WLANs, and other elements can be bound after authentication. This ensures that only authorized clients can access the network.

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

The RG-WS7110 supports conventional web authentication and 802.1X authentication for monitoring network access behaviors. It also provides MAC authentication bypass

(MAB) for customers based on actual scenarios. When accessing a network through MAB authentication, a wireless client only needs to enter the username and password upon first login. The username and password are no longer required when the wireless client is restarted and connected to the network.

#### **ARP Anti-Spoofing**

The ARP inspection function can effectively prevent increasing ARP gateway and ARP host spoofing attacks on a network, so as to ensure normal network access. Automatic IP-MAC binding can greatly save the labor cost and simplify management in dynamic or static IP allocation mode. An attacker may maliciously use scanning tools to flood ARP packets, which occupy network bandwidth and result in network congestion. To address this issue, the RG-WS7110 implements ARP rate limiting to control the rate of sending ARP packets.

#### **Rogue AP Containment**

Rogue AP containment can effectively detect unauthorized APs on a wireless network. The RG-WS7110 can instruct an AP to send a probe packet to surrounding APs and wait for a response. It can detect the unauthorized AP that does not send a response packet, thereby ensuring network-wide security.

#### **DHCP Snooping**

DHCP snooping enables the RG-WS7110 to allow only DHCP Reply packets from trusted interfaces, preventing unauthorized DHCP server attacks. This is because unauthorized DHCP server seriously affects IP address allocation and management, resulting in network access failures. With DHCP snooping configured, the RG-WS7110 can dynamically check source IP addresses of ARP packets to prevent ARP spoofing attacks and source IP address spoofing attacks in the environment where the DHCP server dynamically allocates IP addresses.

#### **Management Information Security**

Through the Secure Shell (SSH) and Simple Network Management Protocol version 3 (SNMPv3), the RG-WS7110 encrypts management information in Telnet and SNMP processes, ensuring information security of management devices and preventing hackers from attacking and controlling devices. Telnet access control based on the source IP address means fine-grained device management and control. With this function, only the devices with IP addresses configured by administrators can connect to the RG-WS7110, enhancing network management security.

#### **Rich Management Policies**

## Multiple Management Modes and Unified Management Platform

The RG-WS7110 supports the CLI and other management modes to perform centralized, effective, and low-cost

planning, deployment, monitoring, and management of network-wide APs. The RG-WIS, a unified management platform for wired and wireless networks developed by Ruijie Networks, manages APs uniformly. The RG-WS7110 works with the RG-WIS to implement various wireless network management functions, including topology generation, AP working status monitoring, online client status monitoring, network-wide RF planning, client locating, security alarm, link load and device utilization monitoring, roaming record, and report output. The RG-WS7110 allows an administrator to monitor and manage

the running status of the entire network in a data center.

#### **Eweb Management**

The RG-WS7110 provides the Eweb, on which O&M personnel can complete wireless configuration easily, and manage the wireless network uniformly. On the Eweb, O&M personnel can manage APs and connected clients, limit the client rates, and restrict network access behaviors of the connected clients. With the Eweb, O&M personnel can plan, manage, and maintain wireless networks conveniently.

### **Product Specifications**

#### **Hardware Specifications**

Hardware Specifications	RG-WS7110
System specifications	
Memory	4 GB
Flash memory	16 MB
Dimensions and Weight	
Unit dimensions (W x D x H)	440 mm x 200 mm x 43.6 mm (17.32 in. x 7.87 in. x 1.72 in., without rack-mount brackets) 486.2 mm x 205 mm x 43.6 mm (19.14 in. x 8.07 in. x 1.72 in., including rack-mount brackets)
Rack size	1 RU
Unit weight	2.7 kg (5.95 lbs)
Shipping weight	3.5 kg (7.72 lbs)
Mounting	Rack-mount
Port Specifications	
Fixed service port	<ul> <li>8 x 10/100/1000BASE-T ports</li> <li>2 x 1GE SFP/RJ45 combo ports</li> <li>RJ45 ports support 10/100/1000BASE-T.</li> <li>Port 9/MGMT can also be used as a management port.</li> <li>2 x 10GE SFP+ ports</li> </ul>
Fixed management port	1 x RJ45 console port 2 x USB 3.0 ports, compatibility with USB 2.0
Status LED	1 x system status LED 1 x power status LED 8 x 10/100/1000BASE-T port LEDs 2 x 1GE SFP/RJ45 combo port LEDs 2 x 10GE SFP+ port LEDs
Button	<ul> <li>1 x Reset button</li> <li>Press the button for shorter than 3 seconds. Then the device restarts.</li> <li>Press the button for longer than 3 seconds. Then the device restores to factory settings.</li> </ul>



Note

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel and can be used as the optical or electrical port at one time. When either of the Ethernet ports is working, the other port is automatically shut down. You can select a port type as required.

Hardware Specifications	RG-WS7110
Power Supply and Consumption	
Maximum power consumption	30 W
Power input	100 V AC to 240 V AC, 50 Hz to 60 Hz
Power output	12 V/3.33 A
Environment and Reliability	
Temperature	Operating temperature: $0^{\circ}$ C to $45^{\circ}$ C ( $32^{\circ}$ F to $113^{\circ}$ F) Storage temperature: $-40^{\circ}$ C to $+70^{\circ}$ C ( $-40^{\circ}$ F to $+158^{\circ}$ F) Note: At an altitude in the range of 1,800–4,000 m (5,905.51–13,123.36 ft.), every time the altitude increases by 166 m ( $544.62$ ft.), the maximum temperature decreases by $1^{\circ}$ C ( $1.8^{\circ}$ F).
Altitude	Operating altitude: –500 m to +4,000 m (–1,640.42 ft. to +13,123.36 ft.) Storage altitude: –500 m to +4,000 m (–1,640.42 ft. to +13,123.36 ft.)
Humidity	Operating humidity: 10% to 90% RH (non-condensing) Storage humidity: 5% RH to 95% RH (non-condensing)

### **Software Specifications**

Software Specifications	RG-WS7110	
Applicable Software Version		
Applicable software version	RGOS11.9(6)W3B15	
Performance Indicators		
Default number of managed APs	32 Note: The default number of APs that can be managed by the RG-WS7110 is subject to the AP model. For details, see the Ordering Information.	
Maximum number of configurable APs	2,048	
Maximum number of managed APs	512 Note: The maximum number of APs that can be managed by the RG-WS7110 is subject to the AP model. For details, see the Ordering Information.	
Maximum number of managed clients	5,120  Note: The maximum number of clients that can be managed by the RG-WS7110 is subject to the network environment. Contact technical support team for details.	
Forwarding capacity	10 Gbps (subject to the wireless network environment)	
VLAN	4,094	
Maximum number of clients supported by the built-in Portal server	1,500	
ACL	4,096	
MAC address table	32,768	
ARP table	32,768	
Intra-AC roaming handoff time	< 50 ms	
WLAN		
IEEE 802.11 protocols	802.11, 802.11b, 802.11a, 802.11g, 802.11d, 802.11h, 802.11w, 802.11k, 802.11v, 802.11r, 802.11i, 802.11e, 802.11n, 802.11ac, and 802.11ax  Layer 2 and Layer 3 topology supported 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	

Software Specifications	RG-WS7110
Roaming	Intra-AC Layer 2 or Layer 3 roaming Inter-AC Layer 2 or Layer 3 roaming Intra-AC Layer 2 or Layer 3 roaming in local forwarding mode Inter-AC Layer 2 or Layer 3 roaming in local forwarding mode
Forwarding mode	Centralized forwarding Local forwarding Service-based flexible forwarding
Wireless QoS	AP/WLAN/STA-based bandwidth limiting (STA-based rate limit range: 8–261,120 in the unit of 8 kbps. For example, if you set the value to 8, the rate limit is 8 x 8 kbps = 64 kbps.) Static and intelligent rate limiting based on STA quantity Fair scheduling
User isolation	AC-based user isolation AP-based user isolation WLAN-based user isolation
Reliability	AC virtualization AC failover Multi-AC hot standby (1+1 A/A and A/S hot standby, and N+1 hot standby) Multi-AC cluster (N-to-N) Remote intelligent perception technology (RIPT) Non-stop service during upgrade
STA management	Access control based on the number of STAs associated with the AP Access control based on the number of STAs associated with the SSID Balanced access control based on the number of STAs associated with the AP Balanced access control based on the AP traffic Band steering Configuration of the RSSI threshold in dBm (range: 0–100) Configuration of the STA idle timeout period in seconds (range: 60–86,400)
WLAN optimization	Adjustment of the transmit power for beacon or probe response frames
RF management	Country or region code setting Manual setting of the transmit power Automatic setting of the transmit power Manual setting of the operating channel Automatic setting of the operating channel Automatic adjustment of the data rate Coverage Hole Detection AP load balancing based on traffic and STA quantity Band selection Radio frequency interference (RFI) detection and mitigation
Security	
IPv4 security authentication	Web-based authentication 802.1X authentication MAB authentication
IPv6 security authentication	802. 1X authentication Web-based authentication

Software Specifications	RG-WS7110
IEEE 802.11 security and encryption	Multi-SSID mode SSID hiding IEEE 802.11i-compliant PSK authentication WPA and WPA2 WEP (WEP/WEP128) TKIP CCMP ARP anti-spoofing
CPP	Supported
NFPP	Supported
WIDS	Supported
AP virtualization	Supported
Protocols	
IPv4 protocols	Ping and Traceroute DHCP server, DHCP client, DHCP relay, and DHCP snooping DNS client NTP Telnet TFTP server and TFTP client FTP server and FTP client
IPv6 protocols	DNSv6 client DHCPv6 relay and DHCPv6 server TFTPv6 client FTPv6 server and FTPv6 client IPv6 CAPWAP ICMPv6 IPv6 ping Manual tunnels, automatic tunnels, and ISATAP Manually configured IP addresses and automatically created local addresses IPv6 traceroute Neighbor discovery
IPv4 routing	Static routing, RIP, and OSPF
IPv6 routing	Static routing
Management	
Network management	SNMP v1/v2c/v3 RMON Syslog Remote probe
Network management platform	Eweb RG-WIS Wi-Fi heat map
User access management	Console port login, Telnet login, SSH login, and FTP upload

### **Regulatory Compliance**

Regulatory Compliance	RG-WS7110
Safety regulation	IEC 62368-1, EN 62368-1
EMC regulation	EN 55032, EN 55035, EN 61000-3-3, EN IEC 61000-3-2, and EN 300 386

## 06 Ordering Guide

Take the following ordering procedure:

- Order an RG-WS7110.
- To use an optical port, select an optical module.
- The RG-WS7110 supports up to 32 APs by default. To increase the number of supported APs, purchase a corresponding license.

## 07

## **Ordering Information**

#### **Main Unit**

Model	Description
RG-WS7110	The next-generation wireless access controller provides 8 x 10/100/1000BASE-T ports, 2 x 1GE SFP/RJ45 combo ports, and 2 x 10GE SFP+ ports.  It supports 32 licenses by default, and up to 512 licenses are available.  The maximum number of APs that can be managed by the RG-WS7110 is subject to the AP model:  • A generic AP occupies one license. The RG-WS7110 can manage up to 512 generic APs.  • A wall plate AP occupies half of the license. The RG-WS7110 can manage up to 1,024 wall plate APs.  • An i-Share micro AP occupies no license. The RG-WS7110 can manage up to 1,024 i-Share micro APs.  • The number of licenses occupied by an i-Share master AP is subject to the model. For details, see the Ordering Information in the datasheet of corresponding i-Share master AP.

### **Optical Transceivers**

#### 1GE

Model	Description	
MINI-GBIC-ZX80-SM1550	1000BASE-ZX, SFP transceiver, 1550 nm, Duplex LC, 80 km over SMF	
MINI-GBIC-LH40-SM1310	1000BASE-LH, SFP transceiver, 1310 nm, Duplex LC, 40 km over SMF	
MINI-GBIC-SX-MM850	1000BASE-SX, SFP transceiver, 850 nm, Duplex LC, 500 m over MMF	
MINI-GBIC-LX-SM1310	1000BASE-LX, SFP transceiver, 1310 nm, Duplex LC, 10 km over SMF	
GE-SFP-LH40-SM1310-BIDI	1000BASE-LH, SFP transceiver, Tx1310/Rx1550, BiDi LC, 40 km over SMF	
GE-SFP-LH40-SM1550-BIDI	1000BASE-LH, SFP transceiver, Tx1550/Rx1310, BiDi LC, 40 km over SMF	
GE-SFP-LX03-SM1310-BIDI-I	1000BASE-LX, SFP transceiver, TX1310/RX1550, BiDi LC, 3 km over SMF	
GE-SFP-LX03-SM1550-BIDI-I	1000BASE-LX, SFP transceiver, TX1550/RX1310, BiDi LC, 3 km over SMF	

#### 2.5**G**E

Model	Description
2.5G-SFP-LX03-SM1310-BIDI-I	2.5GBASE-LX, SFP transceiver, TX1310/RX1550, BiDi LC, 3 km over SMF
2.5G-SFP-LX03-SM1550-BIDI-I	2.5GBASE-LX, SFP transceiver, TX1550/RX1310, BiDi LC, 3 km over SMF

#### **10GE**

Model	Description	
XG-SFP-LR-SM1310	10GBASE-LR, SFP+ transceiver, 1310nm, Duplex LC, 10 km over SMF	
XG-SFP-SR-MM850	10GBASE-SR, SFP+ transceiver, 850nm, Duplex LC, 300 m over MMF	
XG-SFP-AOC3M	10GBASE, SFP+ active optical cable (AOC), 3 m, including one cable and two optical transceivers	
XG-SFP-AOC5M	10GBASE, SFP+ active optical cable (AOC), 5 m, including one cable and two optical transceivers	
XG-SFP-LR10-SM1270-BIDI-I	10GBASE-LR, SFP+ transceiver, TX1270/RX1330, BiDi LC, 10 km over SMF	
XG-SFP-LR10-SM1330-BIDI-I	10GBASE-LR, SFP+ transceiver, TX1330/RX1270, BiDi LC, 10 km over SMF	

### License

Model	Description	
RG-LIC-WS-16	The number of capacity expansion licenses for the RG-WS series wireless controller can be expanded to 16. Each license supports one generic AP or two wall plate APs. For the number of licenses occupied by an i-Share master AP, see the Ordering Information.	
RG-LIC-WS-32	The number of capacity expansion licenses for the RG-WS series wireless controller can be expanded to 32. Each license supports one generic AP or two wall plate APs. For the number of licenses occupied by an i-Share master AP, see the Ordering Information.	
RG-LIC-WS-128	The number of capacity expansion licenses for the RG-WS series wireless controller can be expanded to 128. Each license supports one generic AP or two wall plate APs. For the number of licenses occupied by an i-Share master AP, see the Ordering Information.	
RG-LIC-WS-512	The number of capacity expansion licenses for the RG-WS series wireless controller can be expanded to 512. Each license supports one generic AP or two wall plate APs. For the number of licenses occupied by an i-Share master AP, see the Ordering Information.	
RG-LIC-WS-1024	The number of capacity expansion licenses for the RG-WS series wireless controller can be expanded to 1,024. Each license supports one generic AP or two wall plate APs. For the number of licenses occupied by an i-Share master AP, see the ordering information.	

## 08 Package Contents

Item	Quantity
RG-WS7110 AC	1
Power cord	1
Rubber pad	4
M4 x 8 mm Phillips countersunk screw	6
Warranty Card and Hazardous Substance Table	1
Console cable	1
Grounding wire	1
Rack-mount bracket	2
Power cord retention clip	1
Product Manual	1
Quick Installation Guide	1
Ruijie wireless product management software (pre-installed on the AC)	1

## 09 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/service\_41

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

### 10

### **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

