Ruijie X-Sense

Wireless Access Point Series Datasheet

Onboard with Ruijie's highly acclaimed Smart Antenna, the X-Sense AP Series is collection of wireless access points ideal for indoor applications of any kind. Regardless of the location of smart device, the X-Sense Smart Antenna customizes and aligns the best signal path to achieve full wireless coverage. The RG-AP740-I AP tops the class by supporting the latest 802.11ac Wave 2 standard, 4x4 SU-MIMO and 4x4 MU-MIMO. The RG-AP520-I(G2) AP in the series exclusively supports Statellite AP expansion to deliver a breakthrough 2.3Gbps performance. The 802.11ac AP pair powers a quad-radio, dual-band design, offering a one-stop-shop solution for coverage and capacity enhancement. The RG-AP520(DA) AP with directional antenna, another featured product in the series, is orchestrated for the best wireless coverage in large-scale venues. All models in the X-Sense AP Series support security, radio frequency (RF) control, mobile access, Quality of Service (QoS) and seamless roaming. Teaming up with Ruijie RG-WS Wireless Controller Series, wireless data forwarding, highperformance security and access control can be accomplished with ease.

HIGHLIGHTS

- IEEE 11ac Wave 2 Ready, up to 2.966Gbps

- Patented "X-Sense" Smart Antenna and X-speed Anti-interference Technology

- Industry's 1st Satellite AP Design with Quad-radio Support for High-density Environments

- Flexible Antenna Design with Omni or Directional Integrated Antenna Options

- Flexible Switching between FAT & FIT Modes

- 200+ Concurrent Users Support

AP320-I
600Mbps 802.11n
2 Spatial Streams

AP520(DA)
867Mbps 802.11ac
300Mbps 802.11n
Directional Antenna

AP520-I(G2)
867Mbps 802.11ac
300Mbps 802.11n
≥2.3Gbps with Satellite AP expansion
"X-Sense 3" Antenna

AP530-I
1300Mbps 802.11ac
600Mbps 802.11n
3 Spatial Streams

AP740-I
802.11ac Wave 2
2.966Gbps
"X-Sense 4" Antenna

PRODUCT FEATURES

Smart Wireless Coverage

Leading "X-Sense 4" Smart Antenna

The RG-AP740-I flagship AP implements the latest "X-Sense 4" Dual-mode Reflector Antenna for an unsurpassed 802.11ac Wave 2 experience. The smart antenna supports automatic switching between Wave 1 and Wave 2 modes. The Wave 1 mode guarantees the best signal experience with ease regardless of the end device location. The Wave 2 mode, on the other hand, enables the reflector feature of the antenna. It does not only make channel evaluation and user grouping more efficient, but gives beam formation a boost by proactively controlling the antenna. In addition, the "X-Sense 4" antenna fully supports 802.11ac Wave 2 features including MU-MIMO and HT160 (80+80), redefining the high-speed wireless standard.

X-Sense 4

X-Sense 3

X-Sense

Dual-mode Reflector Antenna
802.11ac Wave 2

Customized for Mobile Devices
20%+ Better Coverage

Dynamic Antenna Matrix

Fixed Radiation

X-Sense: Leads Antenna Technology Revolution

"X-Sense 4" Smart Antenna

802.11ac Wave 2 Flagship AP

The RG-AP740-I AP tops the class by supporting 802.11ac Wave 2 with a collection of first-rate features:

- Tri-radio, Dual-band Design: The AP supports 2.4G+5G+2.4G or 2.4G+5G+5G operating modes and concurrent 802.11ac Wave 2, 802.11ac Wave 1 and 802.11n. The two main radios deliver up to 1,733Mbps and 800Mbps. The whole AP hence speeds up the performance to up to 2.966Gbps.

- MU-MIMO Support: The Multi-User MIMO feature, which is one of the milestone technologies of 802.11ac Wave 2, enables wireless communication among a set of end users. The RG-AP740-I AP implements an industry-leading design with 4 spatial streams, supporting 4x4 SU-MIMO and 4x4 MU-MIMO.

- HT160 Support: The 802.11ac Wave 2 ready AP deploys 160 MHz channel bandwidths (contiguous 80+80) or 80+80 MHz channel bonding (discontiguous 80+80), multiplying the access speed of one-spatial-stream devices.

MU-MIMO

*Achieve concurrent downlink transmission for 1*1 or 2*2 end device*

HT 160

*Bandwidth doubles and 1*1 device negotiation speed boosts from 433Mhz to 866Mhz*

MU-MIMO and HT160 Support

- "X-Sense 4" Dual-mode Reflector Antenna: By supporting automatic antenna switching, the RG-AP740-I AP offers Wave 1 and Wave 2 devices the best user experience. Under the Wave 1 mode, the AP implements "X-Sense 3" algorithm to achieve signal follow your move. By dynamic antenna selection, the AP enhances the signal strength based on the location of the end device and maximizes the performance 3 times better than general AP. The best signal strength is thereby available in every corner under wireless coverage. There is no need to worry about the radiation level. The enhanced signal is used to compensate for the loss along the transmission path or wall penetration. For the Wave 2 mode, the reflector feature of the antenna is enabled to largely improve the isolation level among antennas. The feature does not only make channel evaluation and user grouping more efficient, but proactively controls the antenna direction during beam formation for boosting the beam formation efficiency. The MU-MIMO performance is hence greatly upgraded, delivering a better and more stable throughput performance for end users.
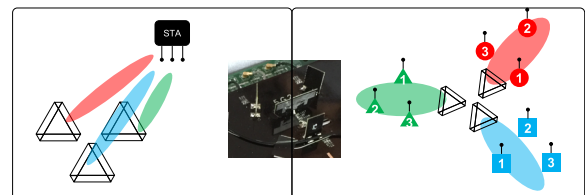

Wave 1 Mode   Wave 2 Mode

"X-Sense 4" Dual-mode Reflector Antenna

- Carrier-class Design: The IP41 rated AP deploys a totally enclosed design for absolute dustproof performance. The case prevents erosion by dripping or condensation to maximize the AP life cycle. In addition, the dual Ethernet ports design of RG-AP740-I AP not only solves the problem of interface data backup, but also provides flexible networking modes for the network which requires intranet and Internet isolation. Both Ethernet ports support PoE for power backup and load power feature. PoE switch (non-

PoE+) can be deployed for dual power supply to save network investment cost. An aviation aluminum bottom case is used here with a zero cooling hole design. The aluminum case achieves high-efficiency cooling with strong adaptability at the same time.
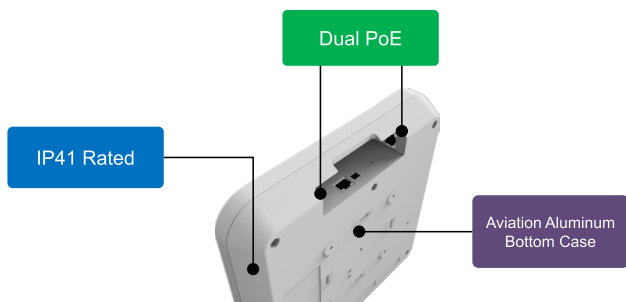
RG-AP740-I Carrier-class Design

Exclusive Satellite AP Expansion

The RG-AP520-I(G2) model delivers unmatched scalability by supporting AP expansion. By gearing up with Satellite AP RG-MAP552(SR), the pair powers a quad-radio, dual-band design and supports up to 300Mbps@2.4GHz (802.11b/g/n) and 867Mbps@5GHz (802.11a/n/ac). The 802.11ac APs together deliver a breakthrough 2.3Gbps performance for indoor wireless scenarios. Onboard with the latest "X-Sense 3" Antenna, the RG-AP520-I(G2) (or referred as Master AP) offers 2 10/100/1000BASE-T uplinks (support PoE and Satellite AP expansion respectively) and 1 USB 2.0 interface (reserved for flexible scalability). The Satellite AP, acting as an expansion accessory for the Master AP, effectively boosts access capacity and requires neither external power supply nor AP license for minimized total cost of ownership. The AP pair offers a one-stop-shop solution for coverage and capacity enhancement.
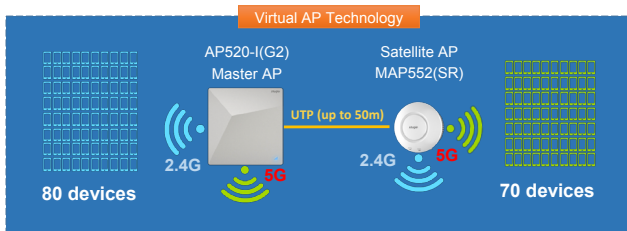
Satellite AP can support 70 additional devices
Cost Effective, Zero Interference

RG-AP520-I(G2) Boosts Performance by Satellite AP Expansion

Extensive Area Coverage

The RG-AP520(DA) AP is another featured model in the X-Sense Series. The AP is especially designed to power large area coverage such as convention centers or stadiums with high ceilings. Built-in with directional antenna, the RG-AP520(DA) AP mounted at heights enables wireless coverage for a designated area without weak signal performance or inter-AP interference.

Together with the interference optimization by software, the AP further enhances user experience at large-scale deployment sites.

The RG-AP520(DA) AP by default comes with a non-adjustable mounting bracket for quick installation and lower deployment costs. The AP supports ceiling, wall or pole mounting. For extra flexibility, an optional adjustable bracket is available for refined horizontal or vertical direction tuning. The adjustable bracket is an accessory sold separately.

Traditional Deployment Solution for High Density, High Ceiling Venues
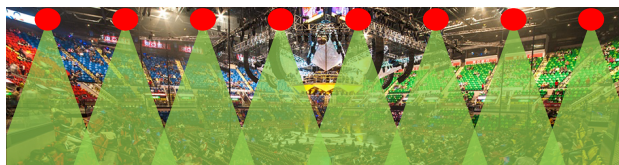

RG-AP520(DA) Solution

Geared up with the directional antenna, the RG-AP520(DA) AP emits the strongest signal forwards. The signal levels at both sides and the back are much lower. Comparing with the omnidirectional antenna solution, the AP effectively reduces interference with APs installed beside and those opposite. The RG-AP520(DA) is especially suitable for long-distance or fixed site deployment.

Unified Wired and Wireless Management

The X-Sense AP Series supports integration with Ruijie's RG-SNC Smart Network Commander (sold separately) to achieve unified network management. The RG-SNC software offers the latest RG-SNC-WLAN module to achieve centralized management of wireless devices. It supports real-time topology display of wireless device operation status, hotspot-based statistical analysis and management on APs and unified management for wireless controllers, FIT APs and end users. It is enriched with real-time spectrum analysis including spectrum chart, duty cycle diagram and real-time FFT chart.
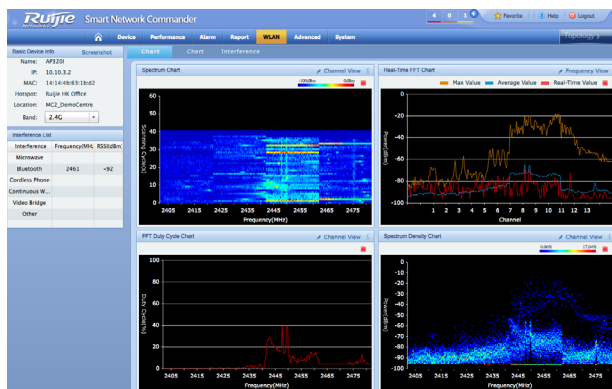

RG-SNC Graphical Display
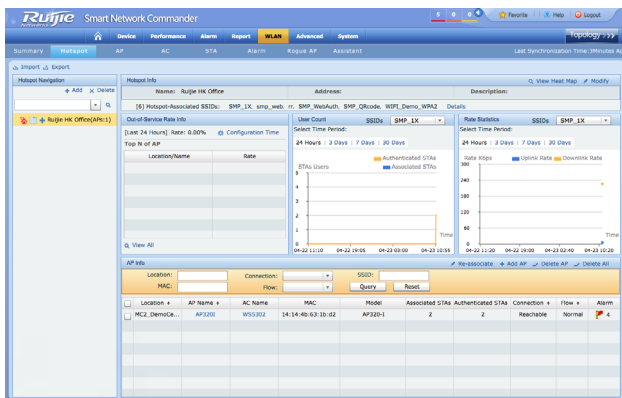
RG-SNC Hotspot Management Display

X-speed Wireless Experience

X-speed allows Ruijie APs to seize the best channel resources in environments with severe interference comparing with other APs. The X-Sense AP Series hence offers equal access time for smart devices running different standards such as 802.11g, 802.11n, 802.11ac, etc. The feature solves the problems such as high latency and low network speed caused by use of an old wireless LAN card which is far away from the AP. The X-Sense AP Series ensures a fair high-speed wireless network for all users with any devices anywhere and anytime.
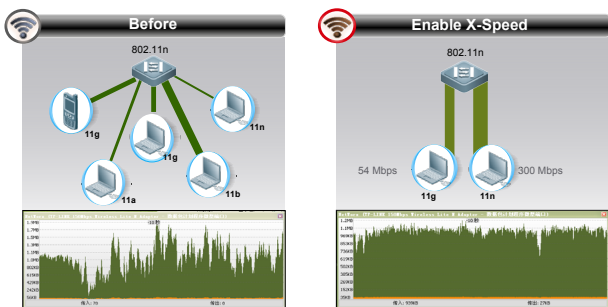
X-speed Technology Gives Wireless Performance a Strong Boost

Industry-leading Local Forwarding Technology

Employing an industry-leading local forwarding technology, the X-Sense AP Series eliminates the traffic bottleneck of ACs. In collaboration with Ruijie RG-WS Wireless Controller Series, users can flexibly pre-set a forwarding mode for the APs. The APs can determine whether to forward data to the AC according to a SSID or user VLAN, or directly send the data to a wired network for data exchange.

The local forwarding technology can forward large-scale, delay-sensitive and real-time transmission data through the wired network. The feature significantly alleviates the traffic pressure on the wireless controllers and better fulfills the high traffic transmission requirements of 802.11ac network.

Abundant QoS Policies

The X-Sense AP Series supports an extensive array of QoS policies. For example, it provides bandwidth limitations in WLAN/AP/STA modes and Wi-Fi multimedia (WMM) that defines different priorities for different service data. The X-Sense AP Series realizes timely and quantitative transmission of audio and video and guarantees smooth operation of multi-media applications.

With the multicast-to-unicast conversion technology, the X-Sense AP Series resolves the video interruption problem due to packet loss or long delay in the wireless Video on Demand (VoD) system. The X-Sense AP Series highly enhances user experience with multicast video over wireless networks.

Comprehensive Security Protection

Advanced Wireless Security Protection

Together with Ruijie's RG-SNC Smart Network Commander and RG-WS Wireless Controllers, the X-Sense AP Series provides a powerful range of wireless security features, such as Wireless Intrusion Detection System (WIDS), RF Interference Location, Rogue AP Countermeasures, Anti-ARP Spoofing, and DHCP. The AP offers a truly secure and reliable wireless network.
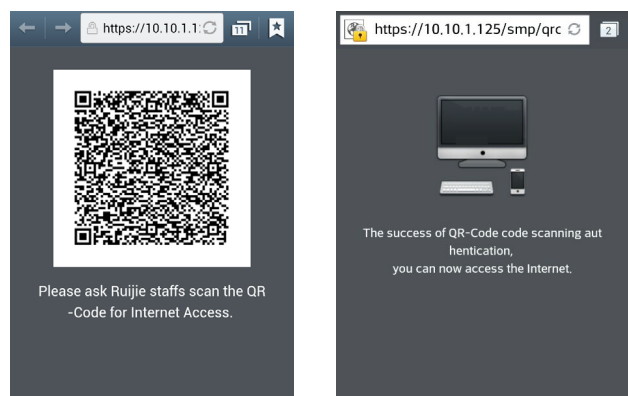
Multiple Easy-to-use Authentication Modes

The X-Sense AP Series supports convenient Protected Extensible Authentication Protocol (PEAP), Web Portal Authentication, SMS Authentication, and QR Code Authentication[1].

If users are authenticated via PEAP, they just need to perform password authentication for once. That means they are only required to enter user credentials during their first network visit.

If users are authenticated via SMS, they need to sign in first with their mobile phone numbers and then obtain usernames and passwords from the SMS sent to their mobile phones.

QR code authentication is another wireless security highlight. After accessing a wireless network, users will obtain a QR code and need to get it scanned by any authorized staff's mobile phones to gain network access.

Advanced Guest Wireless Interfaces of the QR Code Authentication

Note:
[1] SMS Authentication and QR Code Authentication require collaboration with Ruijie RG-SMP Security Management Platform (sold separately).

Flexible Device Management

Flexible Switching Between FAT & FIT Modes

The X-Sense AP Series supports flexible switching over the FAT and FIT modes according to the networking requirements of different industries. When there are few APs, users can adopt the FAT mode for easy, independent network establishment. For large-scale networks, the X-Sense AP Series can operate at FIT mode and works with RG-WS ACs to allow centralized management of all the APs and other aspects such as security, traffic management, QoS and IP management. Smooth transition from one mode to another, the X-Sense AP Series fully protects user investment.

Simple Deployment With Zero Configuration

Under the FIT mode, no configuration is required for the X-Sense AP Series before deployment. Also, no manual configuration is necessary for on-site installation, maintenance or replacement. Download and auto implementation of AP configuration can all be completed via the AC. This user-friendly feature remarkably reduces installation and maintenance workload as well as investment costs.

PoE Port For Easy Deployment & Maintenance

In addition to local power supply, the X-Sense AP Series also supports the 802.3af/802.3at PoE standard. With PoE switch or PoE power adapter, a single Ethernet cable can provide both data connection and electrical power to the AP. The network administrator can remotely control the devices. It also solves the problem of unstable power source, hence simplifying the installation process and maximizing the cost savings.

TECHNICAL SPECIFICATIONS

Model	RG-AP320-I	RG-AP530-I	RG-AP520-I(G2)	RG-AP520(DA)	RG-AP740-I
Radio	Concurrent dual-radio dual-band * RG-AP520-I(G2) supports quad-radio dual-band after Satellite AP expansion * RG-AP740-I supports tri-radio dual-band, 2.4G+5G+2.4G or 2.4G+5G+5G operating modes				
Protocol	802.11a/b/g/n	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n, 802.11ac Wave 1, 802.11ac Wave 2
Operating Bands	802.11b/g/n: 2.4GHz to 2.483GHz 802.11a/n: 5.150GHz to 5.350GHz, 5.47GHz to 5.725GHz, 5.725GHz to 5.850GHz (vary depending on countries) * AP320-I supports 802.11a/n only				
Antenna	Built-in X-Sense Smart Antenna array with 16 antennas and 65,536 antenna combinations 2×2 MIMO	Built-in X-Sense Smart Antenna array with 24 antennas and 16.7 million antenna combinations 3×3 MIMO	Built-in "X-Sense 3" Smart Antenna (Up to 12-direction smart antennas with 4,096 antenna combinations) 2.4G: 2×2 MIMO 5G: 2×3 MIMO	Built-in X-Sense Directional Antenna 2×2 MIMO	Built-in "X-Sense 4" Smart Antenna array with 24 antennas and 16.7 million antenna combinations 4×4 SU-MIMO, 4×4 MU-MIMO
Spatial Streams	2	3	2	2	4
Max Throughput	300Mbps per radio 600Mbps per AP	600Mbps @2.4GHz 1300Mbps@5GHz 1.9Gbps per AP	300Mbps @2.4GHz 867Mbps@5GHz 1.167Gbps per AP ≥2.3Gbps after Satellite AP expansion	300Mbps @2.4GHz 867Mbps@5GHz 1.167Gbps per AP	1733Mbps/ 800Mbps/ 433Mbps per radio 2.966Gbps per AP
Modulation	OFDM: BPSK@6/9Mbps QPSK @12/18Mbps 16-QAM @24Mbps 64-QAM	OFDM: BPSK@6/9Mbps QPSK @12/18Mbps 16-QAM @24Mbps 64-QAM	OFDM: BPSK@6/9Mbps QPSK @12/18Mbps 16-QAM @24Mbps 64-QAM	OFDM: BPSK@6/9Mbps QPSK @12/18Mbps 16-QAM @24Mbps 64-QAM	OFDM: BPSK@6/9Mbps QPSK @12/18Mbps 16-QAM @24Mbps 64-QAM

Model	RG-AP320-I	RG-AP530-I	RG-AP520-I(G2)	RG-AP520(DA)	RG-AP740-I
Modulation	@48/54Mbps DSSS: DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps MIMO-OFDM: MCS 0-15	@48/54Mbps DSSS: DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM and 256QAM	@48/54Mbps DSSS: DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM and 256QAM	@48/54Mbps DSSS: DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM and 256QAM	@48/54Mbps DSSS: DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM and 256QAM
Receiver Sensitivity	11b: -99dBm (1Mbps), -93dBmx (5.5Mbps), -90dBm (11Mbps) 11a/g: -93dBm (6Mbps), -85dBm (24Mbps), -82dBm (36Mbps), -77dBm (54Mbps) 11n: -92dBm@MCS0, -74dBm@MCS7, -92dBm@MCS8, -73dBm@MCS15	11b: -99dBm (1Mbps), -93dBm (5.5Mbps), -90dBm (11Mbps) 11a/g: -93dBm (6Mbps), -85dBm (24Mbps), -82dBm (36Mbps), -77dBm (54Mbps) 11n: -92dBm@MCS0, -74dBm@MCS7, -92dBm@MCS8, -73dBm@MCS15 11ac HT20: -88dBm (MCS0), -63dBm (MCS9) 11ac HT40: -85dBm (MCS0), -60dBm (MCS9) 11ac HT80: -82dBm (MCS0), -57dBm (MCS9)	11b: -99dBm (1Mbps), -93dBm (5.5Mbps), -90dBm (11Mbps) 11a/g: -93dBm (6Mbps), -85dBm (24Mbps), -82dBm (36Mbps), -77dBm (54Mbps) 11n: -92dBm@MCS0, -74dBm@MCS7, -92dBm@MCS8, -73dBm@MCS15 11ac HT20: -90dBm (MCS0), -63dBm (MCS9) 11ac HT40: -85dBm (MCS0), -60dBm (MCS9) 11ac HT80: -82dBm (MCS0), -58dBm (MCS9)	11b: -99dBm (1Mbps), -93dBm (5.5Mbps), -90dBm (11Mbps) 11a/g: -93dBm (6Mbps), -85dBm (24Mbps), -82dBm (36Mbps), -77dBm (54Mbps) 11n: -92dBm@MCS0, -74dBm@MCS7, -92dBm@MCS8, -73dBm@MCS15 11ac HT20: -90dBm (MCS0), -63dBm (MCS9) 11ac HT40: -85dBm (MCS0), -60dBm (MCS9) 11ac HT80: -82dBm (MCS0), -58dBm (MCS9)	11b: -96dBm (1Mbps), -93dBm (5Mbps), -89dBm (11Mbps) 11a/g: -91dBm (6Mbps), -85dBm (24Mbps), -80dBm (36Mbps), -74dBm (54Mbps) 11n: -90dBm@MCS0, -70dBm@MCS7, -89dBm@MCS8, -68dBm@MCS15 11ac HT20: -88dBm (MCS0), -63dBm (MCS9) 11ac HT40: -85dBm (MCS0), -60dBm (MCS9) 11ac HT80: -82dBm (MCS0), -57dBm (MCS9)
Transmit Power	≤100mW (20dBm, transmit power of the RF card only) * RG-AP520-I(G2): 23dBm after Satellite AP expansion				
Adjustable Power	1dBm				
Service Ports	1 10/100/1000 BASE-T Ethernet uplink port (PoE)	2 10/100/1000 BASE-T Ethernet uplink ports (PoE)	RG-AP520-I(G2): 2 10/100/1000 BASE-T Ethernet uplink ports 1 USB 2.0 port Satellite AP: 1 10/100/1000 BASE-T Ethernet uplink port	2 10/100/1000 BASE-T Ethernet uplink ports (one supports PoE) 1 USB 2.0 port	2 10/100/1000 BASE-T Ethernet uplink ports (PoE) 1 USB 3.0 port
Management Port	1 console port				
Lock	Support				
LED Indicator	1 LED (red, green, blue, orange, and flashing modes, breathing flashing mode for smart device access, and the indicator can be switched off to silent mode)				
IP Rating	IP41				
Safety Standard	GB4943, EN/IEC 60950-1				
EMC Standard	GB9254, EN301 489	GB9254, EN301 489	GB9254, GB17618, EN301 489-1, EN301 489-17, EN55022, EN55024	GB9254, EN301 489	GB9254, EN301 489

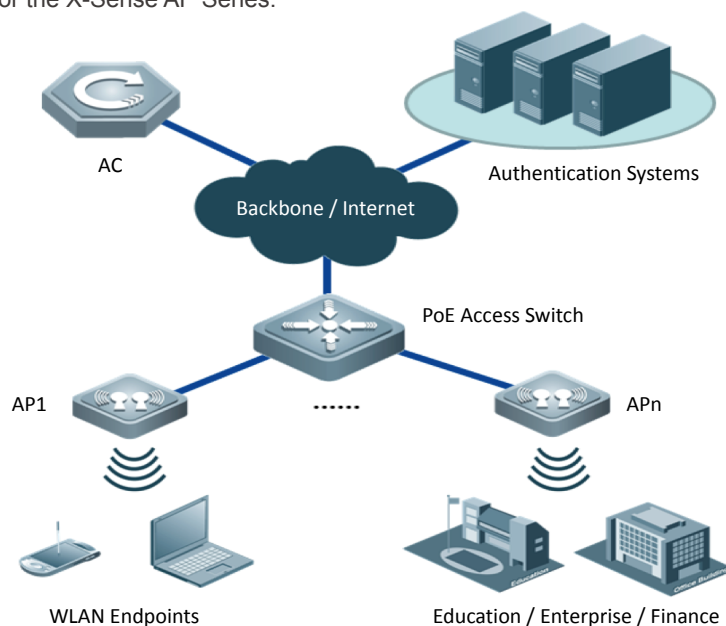| Model	RG-AP320-I	RG-AP530-I	RG-AP520-I(G2)	RG-AP520(DA)	RG-AP740-I
Health Standard	EN 62311				
Radio Standard	EN300 328, EN301 893				
Vibration Standard	IEC60068-2-31, ETSI EN300 019, NEBS GR-63-CORE				
Wi-Fi Alliance Certification	Support				
Bluetooth BT4.0 (BLE)	N/A	N/A	N/A	N/A	Support
iBeacon	N/A	N/A	N/A	N/A	Support
WeChat shake	N/A	N/A	N/A	N/A	Support
WLAN Maximum clients per AP	Up to 256 * RG-AP520-I(G2) supports up to 384 after Satellite AP expansion * RG-AP740-I supports up to 512				
SSID capacity	Up to 16 per radio Up to 32 per AP * RG-AP520-I(G2) supports up to 8 per radio/16 per AP pair after Satellite AP expansion * RG-AP740-I supports up to 48 per AP				
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				
Dynamic Frequency Selection (DFS)	Support * All models support except RG-AP320-I				
Security PSK, Web, and 802.1x authentication	Support				

Model		RG-AP320-I	RG-AP530-I	RG-AP520-I(G2)	RG-AP520(DA)	RG-AP740-I
Security	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 * RG-AP740-I: future release support				
	RADIUS	Support				
	CPU Protection Policy (CPP)	Support				
	Network Foundation Protection Policy (NFPP)	Support				
	Wireless Intrusion Detection System (WIDS)	Support				
	Remote probe	Future release support				
Wi-Fi Probe	Wi-Fi probe	Support				
L2 Features	IGMP snooping	Support				
	VLAN features	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 * All models support except RG-AP740-I				
	Multicast	Multicast to unicast conversion				
Location-based Service	Wireless position tracking	Support				

Model		RG-AP320-I	RG-AP530-I	RG-AP520-I(G2)	RG-AP520(DA)	RG-AP740-I
Management and Maintenance	Network management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and Web management				
	Visualized wireless heat map analysis	Support				
	Real-time spectrum analysis	Future release support	N/A	Support	Support	Support
	Fault detection and alarm	Support				
	One-click collection of device operating status	Support				
	Cloud AC management	Support				
	Statistics and logs	Support				
	FAT/FIT switching	The AP working in FIT mode can switch to the FAT mode through the RG-WS wireless AC. The AP working in FAT mode can switch to the FIT mode through a local console port or Telnet.				
Dimensions (W x D x H) (mm) (Height of AP only, excluding case and mount kit)		205 × 205 × 42	220 × 220 × 42	RG-AP520-I(G2): 205 × 205 × 42 Satellite AP: ø138 × 35 (diameter×height)	205 × 205 × 42	230 × 230 × 42
Weight		0.7kg	1.5kg	0.8kg (1.2kg after Satellite AP expansion)	0.7kg	1.0kg
Installation Mode		Ceiling/wall-mountable * RG520(DA) also supports rod installation (adjustable bracket sold separately)				
Power Supply		Local power supply and PoE (802.3af)	Local power supply and PoE+ (802.3at)	RG-AP520-I(G2): Local power supply (DC 48V) and PoE (802.3af) Satellite AP: PoE 24V	Local power supply (DC 48V) and PoE (802.3af)	Local power supply (DC 48V) and PoE+ (802.3af/802.3at) Support dual PoE for power backup
Power Consumption		10.5W	<20W	<12.95W (<20.95W after Satellite AP expansion)	<12.95W	<25.4W
Temperature		Operating Temperature: -10°C to 45°C				
		Storage Temperature: -40°C to 70°C				
Humidity		Operating Humidity: 5% to 95% (non-condensing)				
		Storage Humidity: 5% to 95% (non-condensing)				

TYPICAL APPLICATIONS

The X-Sense AP Series is an ideal match for spacious buildings densely with high end user density, such as meeting rooms, libraries, classrooms, bars, and recreation centers. Clients can deploy the devices flexibly according to their needs.

Typical topology diagram for the X-Sense AP Series:

ORDERING INFORMATION

Model	Description
RG-AP320-I	Indoor Wireless Access Point, built-in X-Sense Smart Antenna, dual-radio, dual-band, 2 spatial streams, access rate up to 600Mbps per AP, support concurrent 802.11a/n and 802.11b/g/n, FAT/FIT modes, 1 10/100/1000BASE-T uplink port, support PoE and local power supply (PoE and local power adapters sold separately)
RG-AP530-I	Indoor Wireless Access Point, built-in X-Sense Smart Antenna, dual-radio, dual-band, 3 spatial streams, access rate up to 1.9Gbps per AP, support concurrent 802.11ac and 802.11a/b/g/n, FAT/FIT modes, 2 10/100/1000BASE-T uplink ports, support PoE+ and local power supply (PoE+ and local power adapters sold separately)
RG-AP520-I(G2)	Indoor Wireless Access Point, built-in "X-Sense 3" Smart Antenna, dual-radio, dual-band, 2 spatial streams, up to 1.167Gbps per AP, support concurrent 802.11a/n/ac and 802.11b/g/n, FAT/FIT modes, 2 10/100/1000BASE-T uplink ports, 1 USB 2.0 port, support PoE and local power supply (PoE and local power adapters sold separately) * Support quad-radio, dual-band expansion with Satellite AP RG-MAP552(SR), up to 2.3Gbps per AP pair, please refer to Ruijie RG-AP520-I(SR) Satellite AP Solution datasheet for more details
RG-AP520(DA)	Indoor Wireless Access Point, built-in X-Sense Directional Antenna, dual-radio, dual-band, 2 spatial streams, up to 1.167Gbps per AP, support concurrent 802.11a/n/ac and 802.11b/g/n, FAT/FIT modes, 2 10/100/1000BASE-T uplink ports, 1 USB 2.0 port, support PoE and local power supply, non-adjustable mounting bracket included by default (Adjustable bracket, PoE and local power adapters sold separately)
RG-AP740-I	Indoor Wireless Access Point, built-in "X-Sense 4" Smart Antenna, tri-radio, dual-band, 4 spatial streams, access rate up to 2.966Gbps per AP, support concurrent 802.11ac and 802.11a/b/g/n, FAT/FIT modes, 2 10/100/1000BASE-T uplink ports, support PoE+ and local power supply (PoE+ and local power adapters sold separately)

Optional Accessories	
RG-MAP552(SR)	Satellite AP for RG-AP520-I(G2), dual-band, dual-stream, up to 1.167Gbps per AP, support concurrent 802.11ac and 802.11a/b/g/n, connect to RG-AP520-I(G2) via a 10/100/1000BASE-T uplink port for advanced functions such as dead zone compensation, position tracking and spectrum probe
RG-AP520(DA)-bracket	Adjustable Mounting Bracket for RG-AP520(DA) AP, support direction adjustment (horizontal 60°, vertical 90°) for ceiling, wall or pole mounting

Optional Solution Components	
RG-SMP Security Management Platform	
RG-SMP-Pro-EN	RG-SMP 2.X professional edition, supports RADIUS identity authentication, including BYOD and NAC features Software requirements for SMP: • Windows Server 2003 or above • SQL Server 2000 or above
RG-SMP-Pro-EN-License-50	Concurrent User License for RG-SMP 2.X professional edition, includes permission for 50 concurrent users
RG-SNC Smart Network Commander	
RG-SNC-Pro-Base-EN	Basic Component of Smart Network Commander
RG-SNC-Pro-Topo-EN	Topology Management Component of Smart Network Commander
RG-SNC-Pro-WLAN-EN	WLAN Component of Smart Network Commander
RG-SNC-Pro-EN-License-15	SNC License for 15 Nodes
RG-SNC-Pro-EN-License-25	SNC License for 25 Nodes
RG-SNC-Pro-EN-License-50	SNC License for 50 Nodes
RG-SNC-Pro-EN-License-100	SNC License for 100 Nodes
RG-SNC-Pro-EN-License-200	SNC License for 200 Nodes
RG-SNC-Pro-EN-License-500	SNC License for 500 Nodes
RG-SNC-Pro-EN-License-1000	SNC License for 1000 Nodes
RG-SNC-WLAN	Wireless Management Component of Smart Network Commander. Work with Base and Topo components. Node not included
RG-SNC-WLAN-License-50	SNC-WLAN License for 50 FIT APs
RG-SNC-WLAN-License-100	SNC-WLAN License for 100 FIT APs
RG-SNC-WLAN-License-200	SNC-WLAN License for 200 FIT APs
RG-SNC-WLAN-License-500	SNC-WLAN License for 500 FIT APs
RG-SNC-WLAN-License-1000	SNC-WLAN License for 1000 FIT APs
RG-SNC-WLAN-License-2000	SNC-WLAN License for 2000 FIT APs
RG-SNC-WLAN-License-5000	SNC-WLAN License for 5000 FIT APs

RUIJIE
Networks

Innovation Beyond Networks

Beijing
Fax : (8610) 6815-4205
Phone : (8610) 5171-5996
Email: info@ruijienetworks.com
Address : 11/F, East Wing, ZhongYiPengao Plaza,
No. 29 Fuxing Road, Haidian District,
Beijing 100036, China

Malaysia
Fax : (603) 2181-1071
Phone : (603) 2181-1071
Email: sales-MY@ruijienetworks.com
Address : Office Suite 19-12-3A, Level 12, UOA Center,
No. 19 Jalan Pinang, 50450 Kuala Lumpur,
Malaysia

Hong Kong
Fax : (852) 3620-3470
Phone : (852) 3620-3460
Email : sales-HK@ruijienetworks.com
Address: Unit 09, 20/F, Millennium City 2,
378 Kwun Tong Road, Kowloon, Hong Kong

OEM Cooperation Division
Phone: (8610) 5171-5995
Email: OEM@ruijienetworks.com
Address : 11/F, East Wing, ZhongYiPengao Plaza,
No. 29 Fuxing Road, Haidian District,
Beijing 100036, China

For further information, please visit our website http://www.ruijienetworks.com

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