RG-AP630

Outdoor Wireless Access Point Series Datasheet

Ruijie RG-AP630 Outdoor AP Series is a family of top-class 802.11ac wireless access points for next-gen outdoor network applications, offering access rates of up to 1.75Gbps. The series consists of two models - RG-AP630(IDA) and RG-AP630(IODA) - and takes full care of security, RF control, mobile access, QoS, seamless roaming and other Wi-Fi aspects. Teaming up with Ruijie RG-WS Wireless Controller Series/Cloud AC, the APs offer Wi-Fi user data forwarding, advanced security and access control with ease.

HIGHLIGHTS

- 802.11ac Superior Wireless Performance
- Built-in X-Sense Smart Antenna & Lightning Arrester
- Outstanding Environmental Adaptability (IP67, -40-65°C)
- Unique PoE OUT Design

The industrial-class AP enclosure (IP67 rated) can withstand extreme outdoor conditions and hence simplify device installation and maintenance. The RG-AP630(IDA) is built-in with directional antenna while the RG-AP630(IODA) offers internal omnidirectional antenna. An extensive collection of external antennas is also available to overcome various deployment challenges. Both AP models support automatic switching between the external and internal antennas. In addition, the Outdoor AP Series uniquely supports a PoE OUT interface of 802.3at standard, facilitating streamlined integration with other monitoring devices for high-quality, real-time transmission of surveillance data. The PoE deployment makes the APs more adaptive to outdoor scenarios such as large campuses, enterprises, hospitals, commercial towers and settings alike. Multi-hop and point-to-multipoint wireless bridge features further enhance the deployment flexibility. The RG-AP630 Outdoor AP Series thereby offers unparalleled productivity in a wide variety of outdoor networking solutions.

RG-AP630(IDA)/(IODA)

Outdoor Antennas (from left to right):
RG-ANTx3-2400D, RG-ANTx3-5800D & RG-ANTx3-2400&5800(O)

PRODUCT FEATURES

High Performance & Reliability

802.11ac Superior Wireless Performance

The RG-AP630 Outdoor AP Series supports 802.11n@2.4GHz and 802.11ac@5GHz, offering access rates of up to 1.75Gbps. The outstanding wireless performance greatly optimizes wireless user experience, increases the number of concurrent users and enhances signal coverage.

Built-in Leading X-Sense Smart Antenna

Two AP models are available for extra flexibility - the RG-AP630(IDA) is built-in with directional antenna while the RG-AP630(IODA) offers internal omnidirectional antenna. Both built-in antennas achieve real-time antenna beam switching, offering the best wireless experience regardless of the end device location. The APs also support switching of internal and external antennas to flexibly adapt to any deployment scenarios.

| Directional Model 500m | Omnidirectional Model 250m |
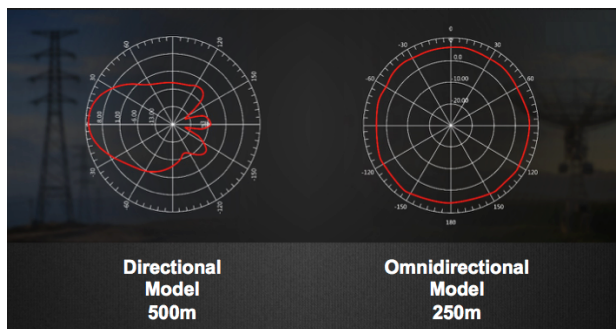
The Industry's Most Flexible Gigabit Uplink

The APs offer a 10/100/1000BASE-T Ethernet uplink port and a Gigabit SFP combo port. The former enables PoE adapter deployment while the latter takes up the data transmission workload. The design rids the LAN port of being the wireless access bottleneck and provides more flexible and convenient networking options.

Unique PoE OUT Design

By supporting a unique PoE OUT design, both outdoor APs can directly provide power to video surveillance equipment at the deployment location. The surveillance video data can be transmitted back to the control room in real time via the wired or wireless network. This feature not only reduces the difficulty of surveillance device installation, but also lowers the cost on new cabling. When the optional Ruijie HPoE Switch (with up to 90W output) is deployed, the APs can power other 802.3at PDs via the ETH2/PoE OUT port. It also enables the data to be transmitted back to the AP uplink port.

PoE OUT Design
With downlink port for Surveillance IP Camera

Hardware Highlights

Interfaces

1. Console Port
2. 10/100/1000Mbps ETH2/PoE OUT Port
3. 10/100/1000Mbps ETH1/PoE IN Port
4. SFP Port (Combo with ETH1)
5. 3 2.4GHz N-K Type RF Connectors
6. 3 5GHz N-K Type RF Connectors

Easy-to-use Mount-Kit

An adjustable mount-kit is available by default for painless deployment optimization. The APs can be easily adjusted -60° to 60° horizontally and -60° to 90° vertically to adapt to various scenarios.
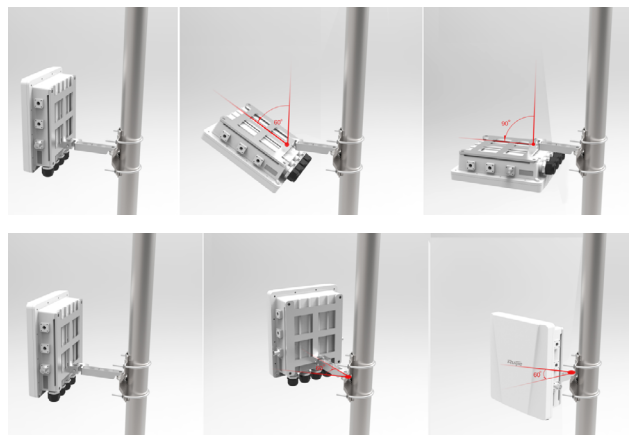
All-in-one Package for Painless Deployment

The RG-AP630 Outdoor AP Series offers you a one-stop installation package. Everything you need is included, from external antennas to lightning arresters and coaxial cables, for effortless outdoor deployment.

RG-AP630
built-in with Internal Antenna (optional external antenna) & Lightning Arrester
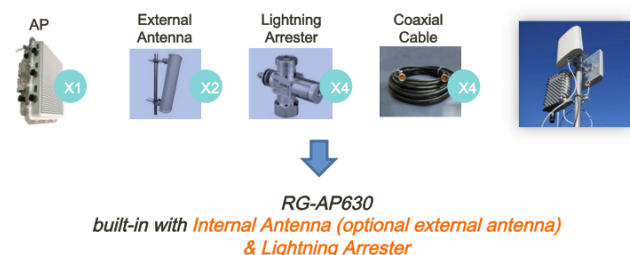
Flexible WDS Mode

The APs implement WDS (Wireless Distribution System) to support interconnection of multiple APs or wireless bridging under 5 hops. Wireless bridging can be achieved even for a long distance. The outdoor APs also support point-to-multipoint bridging (CPE application scenarios) for more flexible networking. The features get over the outdoor deployment problems to support large-scale and remote high-speed wireless coverage.

Intelligent Device Recognition

The APs support intelligent recognition of end devices running mainstream operating systems such as iOS and Android.

Industry-leading Local Forwarding Technology

Employing an industry-leading local forwarding technology, the APs eliminate the traffic bottleneck of wireless access controllers. Deploying with the Ruijie RG-WS Wireless Controller Series, users can flexibly pre-configure the data-forwarding mode of the outdoor APs. The APs also control if the data will be forwarded via the wireless controller. The local forwarding technology can forward large-scale, delay-sensitive, and real-time transmission data to greatly alleviate the traffic pressure on the wireless LAN controllers and fulfill the high traffic transmission requirements of the 802.11ac network.

Seamless Roaming Experience

The APs team up with the RG-WS Wireless Controllers in perfect harmony, allowing wireless users to roam seamlessly on Layer 2 and Layer 3 networks without data interruption.

Abundant QoS Policies

The AP supports a wide range of QoS policies. For example, it provides WLAN/AP/STA-based bandwidth limitation modes that prioritize key services over others.

Outstanding Environmental Adaptability

The outdoor APs offer an IP67-rated enclosure that fulfills waterproof, dustproof, moisture-proof and flame retardant requirements to withstand harsh environments such as wind erosion, rain and high humidity. The features greatly lengthen the equipment life span and effectively reduce the maintenance cost.

Wide Operating Temperature Range

All the AP components and enclosures can withstand a wide temperature range from -40°C to 85°C without any influence on the stability and life span. The design ensures the metal components cool down efficiently at high temperatures. The built-in heater module guarantees stable operation under freezing conditions.

Comprehensive Security Policies

User Data Encryption

The outdoor APs offer protected Wi-Fi access with the support of cutting-edge encryption technologies such as WEP, TKIP and AES, guaranteeing the data transmission security of the wireless network.

Virtual AP Technology

With the virtual AP technology, the AP can offer up to 14 ESSIDs and 14 802.1Q VLANs. The network administrator can separately encrypt and isolate subnets or VLANs that have the same SSID. A separate authentication mode and encryption mechanism for each SSID can also be configured flexibly.

Standard CAPWAP Encryption

CAPWAP (Control and Provisioning of Wireless Access Points) enables communication between RG-WS Wireless Controllers and the outdoor APs. The standard ensures secure data transmission.

RF Security

In collaboration with Ruijie's RG-SNC Smart Network Commander and RG-WS Wireless Controllers, the APs enable the RF probe scanning mechanism to detect unauthorized access points or other RF interference sources. Once detected, the APs will alert network administrator to monitor potential threats and usage status in the wireless environment.

User Access Control

The APs support a wide range of authentication methods such as Web, 802.1x, MAC address and local authentication. The APs also support Ruijie's advanced Security Management Platform (SMP) BYOD Solution which complies with a standard access control system. The system has a set of control policies in terms of user access, authorization, host compliance check, network behavior monitoring, network attack defense, etc. All these control features ensure that users are authenticated before accessing the network services securely.

Wireless Protection

Together with Ruijie's RG-SNC Smart Network Commander and RG-WS Wireless Controllers, the APs provide 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 protection for a truly secure and reliable wireless network.

Wireless IPv6 Access

Comprehensive IPv6 features are available to enable 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 Authentication Modes

The APs support convenient Protected Extensible Authentication Protocol (PEAP), 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.

Flexible Device Management Mode

Flexible Switching Between the FAT & FIT Modes

The APs support 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 APs can operate in FIT mode which allows centralized management of all the APs and other aspects such as security, traffic management, QoS and IP management when deployed with the RG-WS Wireless Controllers. Smooth transition from one to another, the APs fully protect user investment.

Simple Deployment With Zero Configuration

Under the FIT mode, no AP 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 AC. This user-friendly feature can greatly reduce workload and investment costs.

Comprehensive Remote Management

The RG-WS Wireless Controllers or Cloud AC can remotely and centrally manage all AP operations such as channel, power ranking, SSID configuration, security configuration, VLAN division and so on. The feature enhances security and simplifies the wireless network management.

PoE Port For Easy Deployment & Maintenance

The outdoor APs support the 802.3at PoE standard. By connecting to a PoE switch or PoE adapter through the AP Ethernet port, the outdoor APs can gain power supply and support data transmission via cables. The network administrator can remotely perform configuration. It also solves the problem of unstable power source, simplifies the installation process and maximizes the cost savings.

TECHNICAL SPECIFICATIONS

Outdoor APs

Model	RG-AP630(IDA)	RG-AP630(IODA)
Radio	Dual	
Protocol	802.11a/b/g/n/ac	
Operating Bands	802.11b/g/n: 2.4GHz to 2.483GHz 802.11a/n/ac: 5.150GHz to 5.350GHz, 5.47GHz to 5.725GHz, 5.725GHz to 5.850GHz (vary depending on countries)	
Antenna	Built-in Directional X-Sense Antenna (support external/internal antenna switching) Gain: 10dBi	Built-in Omnidirectional X-Sense Antenna (support external/internal antenna switching) Gain: 4dBi
External Antenna Connector	6 N-K type RF connectors (2.4GHz x3, 5GHz x3) Built-in lightning arrester (6KV)	
Spatial Streams	3	
Max Throughput	450Mbps@2.4GHz 1.3Gbps@5GHz 1.75Gbps per AP	

Model	RG-AP630(IDA)	RG-AP630(IODA)
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), -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)	
Maximum Transmit Power	27dBm Note: The transmit power is configurable to up to 15dBm in 1dBm steps. The actual transmit power depends on local laws and regulations.	
Adjustable Power	1dBm	
Service Ports	1 10/100/1000Mbps ETH1/PoE IN port (RJ-45 connector) 1 10/100/1000Mbps ETH2/PoE OUT port (RJ-45 connector) 1 SFP port (combo with ETH1)	
Management Port	1 console port (RJ-45 connector)	
Lock	Support	
LED Indicators	Power status and WDS signal strength	
IP Rating	IP67	
Safety Standard	GB4943, UL/CSA 60950-1, EN/IEC 60950-1, EN/IEC 60950-22	
EMC Standard	GB9254-2008, EN301 489, EN55022, FCC Part15	
Health Standard	FCC Bulletin OET-65C, EN 50385, IC Safety Code 6	
Radio Standard	FCC Part15, EN300328, EN301893	
Vibration Standard	GB/T 2423	
Wi-Fi Alliance Certification	Support	
Bluetooth (for device management)	Support	
WLAN	Maximum stations per AP	256
	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
	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
	TDMA	Support

Model		RG-AP630(IDA)	RG-AP630(IODA)
WLAN	802.11w	Support	
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	
	Real-time spectrum analysis	Support	
	Fault detection and alarm	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)		276 × 246 × 90	
Weight		<2.5kg	
Installation Mode		Wal/pole-mount installation	
Power Supply		802.3at Support Ruijie 60W PoE adaptor@PSE (PoE OUT)	
Power Consumption		<25W	
Temperature		Operating Temperature: -40°C to 65°C (heater module will be enabled at -15°C)	
		Storage Temperature: -40°C to 85°C	
Humidity		Operating Humidity: 0% to 100% (non-condensing)	
		Storage Humidity: 0% to 100% (non-condensing)	

Outdoor Antennas

Model	RG-ANTx3-2400D	RG-ANTx3-5800D	RG-ANTx3-2400&5800(O)
Type of External Antenna	Directional	Directional	Omnidirectional
Electrical Specifications — Frequency range	2.4 to 2.483GHz	5.125 to 6.100GHz	2.4 to 2.5GHz; 5.125 to 6.100GHz
Electrical Specifications — Gain	3 × 15dBi	2 × 19dBi (vertical) + 16dBi (dual inclined planes)	8 dBi
Electrical Specifications — Horizontal beamwidth	65°	21°	360°
Electrical Specifications — Vertical beamwidth	16°	16°	17°
Electrical Specifications — Front-to-back ratio	≤ -25 dB	≤ -25 dB	≤ -25 dB
Electrical Specifications — VSWR	≤ 1.5	≤ 1.5	≤ 1.5
Electrical Specifications — Polarization	2 × VP + 1 × HP	±45° and vertical polarization	Vertical
Electrical Specifications — Input impedance	50 ohms	50 ohms	50 ohms
Mechanical Specifications — Mounting mode	Pole mounting (pole diameter 30 to 50 mm)	Pole mounting (pole diameter 50 to 120 mm)	Pole mounting (pole diameter 40 to 70 mm)
Mechanical Specifications — Temperature range	-40°C to 60°C	-40°C to 60°C	-40°C to 60°C
Mechanical Specifications — Unit weight	2.3 kg	1.3 kg	1.2 kg
Mechanical Specifications — Dimensions	400 × 240 × 35 mm (L × W × H)	380 × 380 × 33 mm (L × W × H)	Φ145 × 330 mm
Mechanical Specifications — Connector	3 × N-K	3 × N-K	6 × NK

ORDERING INFORMATION

Model	Description
RG-AP630(IDA)	Outdoor Wireless Access Point, built-in Directional X-Sense Smart Antenna, support internal/external antenna switching, dual-radio, dual-band, 3 spatial streams, access rate up to 1.75Gbps per AP, support concurrent 802.11a/n/ac and 802.11b/g/n, FAT/FIT modes, support PoE+, Installation Mount-Kit included by default (PoE adaptor sold separately)
RG-AP630(IODA)	Outdoor Wireless Access Point, built-in Omnidirectional X-Sense Smart Antenna, support internal/external antenna switching, dual-radio, dual-band, 3 spatial streams, access rate up to 1.75Gbps per AP, support concurrent 802.11a/n/ac and 802.11b/g/n, FAT/FIT modes, support PoE+, Installation Mount-Kit included by default (PoE adaptor sold separately)
Optional Accessories	
RG-S2910C-24GT4SPF-UP-H	24 10/100/1000M BASE-T ports, 4 1000M non-combo SFP ports, support PoE/PoE+/HPoE
Optional External Antennas	
RG-ANTx3-2400D	2.4GHz MIMO Outdoor Directional Antenna Kit, include: 15dBi panel antenna (1 set); 1-meter N-N coaxial cables (3 sets); waterproof materials (1 set)
RG-ANTx3-5800D	5.8GHz MIMO Outdoor Directional Antenna Kit, include: 19dBi panel antenna (1 set); 1-meter N-N coaxial cables (3 sets); waterproof materials (1 set)

Model	Description
RG-ANTx3-2400&5800(O)	2.4GHz & 5.8GHz MIMO Outdoor Omnidirectional Antenna Kit, include: 8dBi panel antenna (1 set); 1-meter N-N coaxial cables (6 sets); waterproof materials (2 sets)

RUIJIE
Networks
Innovation Beyond Networks

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

INNOVATION BEYOND NETWORKS