RG-AP630

Outdoor Wireless Access Point Series Datasheet

Ruijie RG-AP630 Series is a family of top-class 802.11ac wireless access points for next-gen high-speed wireless network applications. The RG-AP630 Series consists of 3 models RG-AP630(IDA2), RG-AP630(IODA) and RG-AP630(CD).

The RG-AP630 (IODA) offers access rates up to 1.75 Gbps, the RG-AP630(IDA2) supports 2.533Gbps access rate and the RG-AP630(CD) supports 1.167Gbps access rate. The RG-AP630 Series 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/802.11ac Wave 2 Superior Wireless Performance**
- **Built-in Smart Antenna & Lightning Arrester**
- **Outstanding Environmental Adaptability (IP67, -40-55℃)**

The industrial-class AP enclosure (IP67 rated) can withstand extreme outdoor conditions and hence simplify device installation and maintenance. The RG-AP630 (IDA2) 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. RG-AP630 (CD), equipped with built-in directional antenna, can achieve the outdoor Wi-Fi coverage under extreme outdoor conditions in vast majority of the scenarios. Multi-hop

Outdoor AP Series thereby offers unparalleled productivity in a wide variety of outdoor networking solutions.

RG-AP630(CD)   RG-AP630(IDA2)/(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 Series supports 802.11n@2.4GHz and 802.11ac@5GHz, with RG-AP630 (IODA) offering access rates of up to 1.75Gbps, RG-AP630(IDA2) up to 2.533Gbps and RG-630(CD) up to 1.167Gbps. The outstanding wireless performance greatly optimizes wireless user experience, increases the number of concurrent users and enhances signal coverage.

Built-in Smart Antenna of AP630(IDA2)/ (IODA)

Equipped with built-in antenna, the RG-AP630 Series can achieve a real-time antenna beam switching based on the location of access devices, ensuring optimal wireless experience. The APs also support switching of internal and external antennas
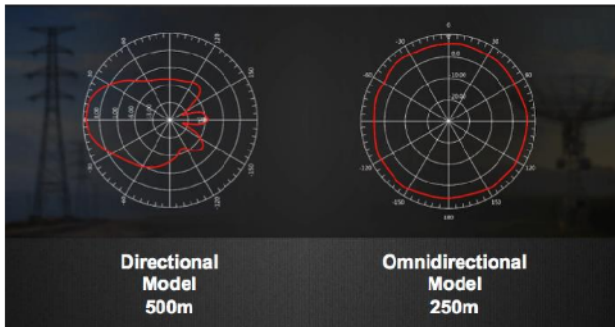
Built-in Directional and Omnidirectional Antennas of AP630

The Industry's Most Flexible Gigabit Uplink

The RG-AP630 Series offers a 10/100/1000Base-T Ethernet uplink port that rids the LAN port of being the wireless access bottleneck, and a 1000M SFP combo port that adapts to wired networking structure under different user scenarios. The SFP Base-X port takes up the data transmission workload for optimal network deployment.

Hardware Highlights

RG-AP630(IODA)

Interfaces
1. Console Port
2. 10/100/1000Mbps ETH2 IN 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.
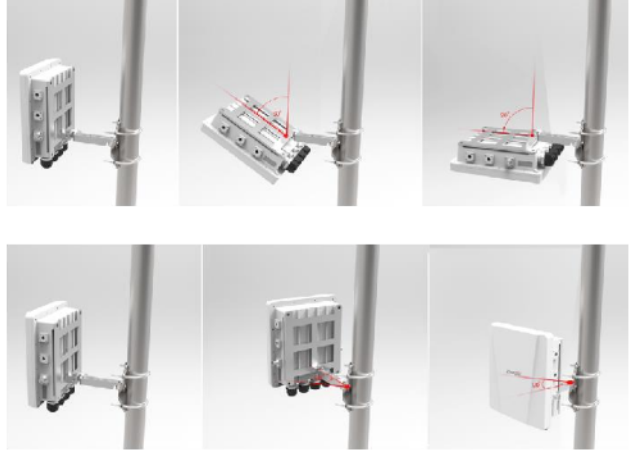
Adjustable Mount-kit of AP630

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.

All-in-one Installation Package

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

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

Deploying with the Ruijie RG-WS Wireless Controller Series,

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

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℃ to 55℃ without any influence on the stability and life span. The design ensures the metal

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 16 ESSIDs (per radio) and 16 802.1Q VLANs. The network administrator can separately encrypt and isolate subnets or VLANs that have the same SSID. A separate authentication mode and encryption

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

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

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

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.

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-

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

PoE Port For Easy Deployment & Maintenance

The RG-AP630(IDA2)/(IODA) support the 802.3at PoE standard while RG-AP630(CD) supports the 802.3af PoE standard. By connecting to a HPoE switch through the AP Ethernet port, the outdoor APs can gain power and support data transmission via cables. The network administrator can

maximizes the cost savings.

TECHNICAL SPECIFICATIONS

Outdoor APs

Model		RG-AP630(IDA2)	RG-AP630(IODA)	RG-AP630(CD)
Target Deployments		For big campus, wireless city, harbor, storage room, mine		
Basic Specifications	Radio	Concurrent dual-radio dual-band		
	Protocol	802.11a/b/g/n/ac Wave2	802.11a/b/g/n/ac	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 Smart Antenna (support external/ internal antenna switching)	Built-in Omnidirectional Smart Antenna (support external/internal antenna switching)	Built-in directional antenna
	Antenna Lobe Orientation	Internal Directional: Horizontal 60 degrees, Vertical 30 degrees	Internal Omnidirectional Gain of external antenna depends on the configured antenna	Internal Directional: Horizontal 60 degrees, Vertical 30 degrees
	Antenna Gain	10dBi	4dBi	10dBi

Model		RG-AP630(IDA2)	RG-AP630(IODA)	RG-AP630(CD)
Basic Specifications	Max Throughput	Build-in antenna model: 800Mbps@2.4G 1733Mbps@5G 2.533Gbps per AP; External antenna model: 600Mbps@2.4G 1300Mbps@5G 1.9Gbps per AP	450Mbps@2.4GHz 1.3Gbps@5GHz 1.75Gbps per AP	300Mbps@2.4G 867Mbps@5G 1.167Gbps per AP
	Spatial Streams	4	3	2
	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, -73dBm@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 transmit power depends on local laws and regulations.		
	Adjustable Power	1dBm		
	IP Rating	IP67		
Ports	Service Port	1 10/100/1000 Base-T ETH1/PoE IN port, 1 10/100/1000 Base-T ETH2 port, 1 1000M SFP port (combo)	1 10/100/1000Mbps ETH1/PoE IN port (RJ45 connector), 1 SFP port (combo with ETH1)	1 10/100/1000Mbps ETH1/PoE IN port (RJ45 connector), 1 SFP port (combo with EHT1)
	Management Port	1 console port (RJ45)	1 console port (RJ45 or Bluetooth)	
Power	Power Supply	PoE+ (802.3at)	PoE+ (802.3at)	PoE (802.3af) Compatible with PoE+
	Power Consumption	<25W	<25W	<12.95W
WLAN	Maximum clients per AP	Up to 512	Up to 256	Up to 256
	BSSID capacity	Up to 16 per radio Up to 32 per AP		
	SSID hiding	Support		

Model		RG-AP630(IDA2)	RG-AP630(IODA)	RG-AP630(CD)
WLAN	Configuring the authentication mode, encryption mechanism, and VLAN attributes for each SSID	Support		
	Remote Intelligent Perception Technology (RIPT)	Support		
	X-speed	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 position tracking	Support		
	Dynamic Frequency Selection (DFS)	Future Release Support		
Security	PSK, Web, and 802.1x authentication	Support		
	Data encryption	WPA (TKIP) , WPA2 (AES), WPA-PSK, and WEP (64 or 128 bits)		
	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		
	Wireless Intrusion Detection System (WIDS)	Support		
	Wireless Intrusion Prevention System (WIPS)	Support		
Routing	IPv4 address	Static IP address or DHCP reservation		
	IPv6 CAPWAP tunnel	Support		
	ICMPv6	Support		
	IPv6 address			
	ISATAP	Support		
	Multicast	Support	Multicast to unicast conversion	Multicast to unicast conversion

Model		RG-AP630(IDA2)	RG-AP630(IODA)	RG-AP630(CD)
Management and Maintenance	Network management	SNMP v1/v2C/v3, Telnet, SSH, TFTP and web management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and web management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and web management
	Visualized wireless heat map analysis	Support (needs to integrated with SNC)		
	Real-time spectrum analysis	Support (needs to integrated with SNC)		
	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.		
External Characterisitics	Lock	Support		
	LED Indicators	Power status and WDS signal strength		
Relevant Standard	Wi-Fi Alliance Certification	Support		
	Safety Standard	GB4943, EN/IEC 60950-1, EN/IEC 60950-22	GB4943, UL/CSA 60950-1, EN/IEC 60950-1, EN/IEC 60950-22	GB4943, UL/CSA 60950-1, EN/IEC 60950-1, EN/IEC 60950-22
	EMC Standard	GB9254-2008, EN301 489, EN55022	GB9254-2008, EN301 489, EN55022, FCC Part15	GB9254-2008, EN301 489, EN55022, FCC Part15
	Health Standard	EN 50385	FCC Bulletin OET-65C, EN 50385, IC Safety Code 6	FCC Bulletin OET-65C, EN 50385, IC Safety Code 6
	Radio Standard	FCC Part15, EN300328, EN301893		
	Vibration Standard	GB/T 2423		
Specifications	Dimensions (W x D x H) (mm)	276 × 246 × 90		
	Weight	<2.5kg		
Work Environment	Temperature	Operating Temperature: -40℃ to 65℃ (heater module will be enabled at -15℃)	Operating Temperature: -40℃ to 55℃ (heater module will be enabled at -15℃)	Operating Temperature: -40℃ to 55℃ (heater module will be enabled at -15℃)
		Storage Temperature: -40℃ to 85℃	Storage Temperature: -40℃ to 70℃	Storage Temperature: -40℃ to 70℃
	Humidity	Operating Humidity: 0% to 100% (non-condensing)	Operating Humidity: 5% to 95% (non-condensing)	Operating Humidity: 5% to 95% (non-condensing)
		Storage Humidity: 0% to 100% (non-condensing)	Storage Humidity: 5% to 95% (non-condensing)	Storage Humidity: 5% to 95% (non-condensing)
Installation Mode		Wall/pole-mount installation		

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
	Gain	3 × 15dBi	2 × 19dBi (vertical) + 16dBi (dual inclined planes)	8 dBi
	Horizontal beamwidth	65°	21°	360°
	Vertical beamwidth	16°	16°	17°
	Front-to-back ratio	≤ -25 dB	≤ -25 dB	≤ -25 dB
	VSWR	≤ 1.5	≤ 1.5	≤ 1.5
	Polarization	2*VP (vertical polarization) +1*HP (horizontal polarization)	±45° and vertical polarization	VP (vertical polarization)
	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)
	Temperature range	-40℃ to 60℃	-40℃ to 60℃	-40℃ to 60℃
	Unit weight	2.3 kg	1.3 kg	1.2 kg
	Dimensions	400 × 240 × 35 mm (L × W × H)	380 × 380 × 33 mm (L × W × H)	Φ145 × 330 mm
	Connector	3 × N-K	3 × N-K	6 × N-K

ORDERING INFORMATION

Model	Description
RG-AP630(IDA2)	Outdoor Wireless Access Point, IP67 rating, built-in directional smart antenna and lightning arrester, 4×4 MIMO, 4 spatial streams, support internal/external antenna switching, support concurrent 802.1 1a/b/g/n/ac and Wave 2, FAT/FIT mode, PoE+ (Installation Mount-Kit included, but PoE adaptor sold separately)
RG-AP630(IODA)	Outdoor Wireless Access Point, IP67 rating, built-in omnidirectional smart antenna and lightning arrester, 3×3 MIMO, 3 spatial streams, support internal/external antenna switching, support concurrent 802.11a/b/g/n/ac, FAT/FIT mode, PoE+ (Installation Mount-Kit included, but PoE adaptor sold separately)
RG-AP630(CD)	Outdoor Wireless Access Point, IP67 rating, built-in directional antenna and lightning arrester, 2×2 MIMO, 2 spatial streams, support concurrent 802.11a/b/g/n/ac, FAT/FIT mode, PoE (Installation Mount-Kit included, but PoE adaptor sold separately)
Optional Accessories	
RG-S2910-24GT4SFP-UP-H	24 10/100/1000BASE-T ports for downlink and 4 Gigabit SFP ports (non-combo) for uplink. To support HPoE (Port1-4), PoE+, PoE, 1 console port
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)
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)