



IAP2300C Series

DIN-Rail or Wall Mounting
Industrial Wireless Client

- Support 2 or 5 100M copper ports, 1 RS-232/485/422 or RS-232/485 serial port (optional)
- Support optional 2.4GHz and 5GHz dual band, 2.4G single band or 5G single band, support up to 4 2.4G/5G dual band antennas to access
- Support optional wireless network modes such as routing, AP, bridge, client, and dual link mode.
- Support multiple serial port modes like RealCom, TCP Server, TCP Client, UDP Server, UDP Client
- Support conversion between Modbus RTU/ASCII and Modbus TCP protocol
- Support 12~36VDC power supply input
- Support -40~75°C wide operating temperature range

Introduction

IAP2300C series are 100M industrial wireless clients. This series have 4 products, providing 100M WAN port, 100M LAN port, 2.4G/5G dual-band antenna interface, serial port and other interfaces. This series of products provides one serial port, and supports serial port server or Modbus gateway, so that serial port devices can be equipped with networking capability immediately or realize the conversion between Modbus RTU/ASCII and Modbus TCP protocol. This series product supports DIN-Rail or wall mounting, which can meet the requirements of different scenes.

The management system supports routing, AP, bridge, client and dual link wireless work mode; Support IEEE802.11a/b/g/n wireless technology, the wireless rate of the 2E single band whole device is up to 300Mbps, the wireless rate of the 2E2E dual band whole device is up to 600Mbps. The device supports wireless encryption methods such as WPA/WPA2/WPA3 personal edition and enterprise edition, and has various security policies such as SSID hiding, wireless user isolation, IP address filtering, MAC address filtering, URL filtering, port forwarding, port redirection, ARP binding, DMZ setting, etc. Support virtual AP, that is, one AP device supports multiple SSIDs. The device supports single-band wireless fast roaming, client efficient roaming, dual-link seamless roaming. And the efficient roaming takes only about 50 milliseconds, which can meet the requirements of rapid roaming and recovery of wireless data in industrial occasions. Dual-link seamless roaming, that is, in the WLAN (Wireless Local Area Network) constituted by multiple AP, user can achieve seamless roaming without conducting the AP switching operation. In serial server mode, each serial port supports 4 TCP or UDP session connections and multiple work modes like RealCom, TCP Server, TCP Client, UDP Server, UDP Client. Under Modbus protocol mode, work modes such as RTU Master, RTU Slave, ASCII Master and ASCII Slave are supported. Up to 256 Modbus TCP Client(Master) devices can be accessed, and 128 Modbus TCP Server(Slave) devices can be connected.

The button can achieve restore factory defaults, enable debugging WLAN(2T) or restart (5T). The hardware adopts fanless, low power consumption, wide temperature, wide pressure design, through strict testing in line with industry standards, can adapt to the industrial site environment with harsh requirements for EMC, can be widely used in the robot industry: sorting robot, small freight robot, etc.

Features and Benefits

- ⊙ Support network modes like routing mode, AP mode, bridge mode, client mode and dual-link mode, support connection methods like WDS and universal bridge
- ⊙ The client mode supports wireless NAT connection, and the wireless network can connect with the external network through PPPoE, static IP and DHCP dynamic acquisition, and implement route switch
- ⊙ Support high-speed wireless connection, the transmission speed of 2E single-band can

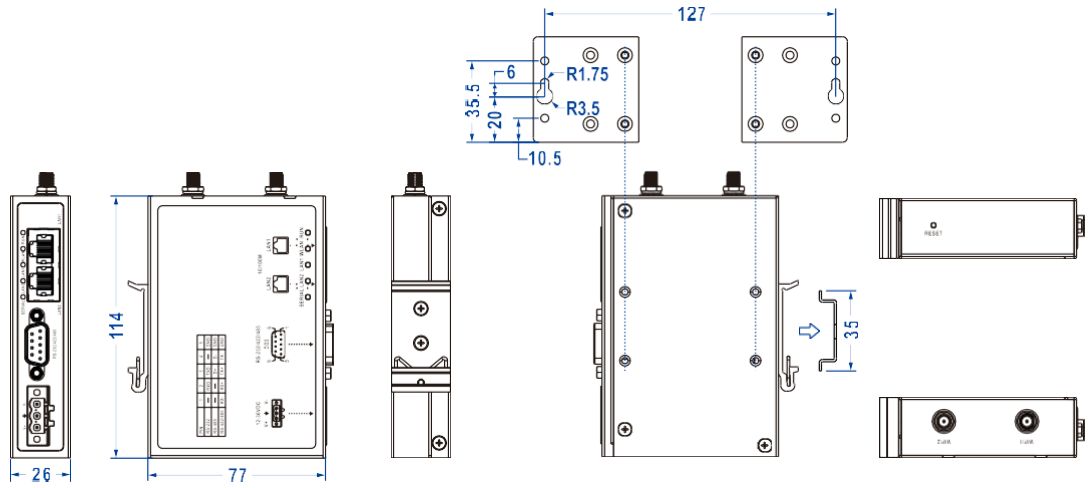
reach up to 300Mbps, the transmission speed of 2E2E dual-band can reach up to 600Mbps

- ⦿ Support multi-AP fast roaming technology, and the switching time of efficient roaming is less than 50ms
- ⦿ Support SNMP network management and Trap alarm, and allow multicast passthrough
- ⦿ Support multiple SSID settings and provide SSID hiding function
- ⦿ Support WPA/WPA2/WPA3 wireless encryption method of both personal edition and enterprise edition and TKIP/AES encryption algorithm
- ⦿ AC management can specify AC device information to realize directional management
- ⦿ Support wireless probe, it can realize personal positioning function with location engine
- ⦿ Roaming proxy can realize roaming proxy host across network segments, effectively avoiding the data interruption caused by the failure to update the forwarding list of upper-level device in time
- ⦿ Support firewall functions like IP filtering, MAC filtering, URL filtering, port forwarding, ARP binding, DMZ isolation area
- ⦿ Support wireless user management and user event, and support blacklist and whitelist filtering rules, wireless user online/offline notification
- ⦿ WMM can achieve better transmission quality of voice, video and other applications in wireless networks
- ⦿ Network detection can realize network diagnosis and specific network recovery operations
- ⦿ Support QoS policy to limit the rate of IP or MAC addresses in specified range
- ⦿ Network diagnosis and troubleshooting could be conducted via Ping and traceroute
- ⦿ Support serial port log and system log management, and realize system log synchronization to remote log server
- ⦿ Serial application can realize immediate networking of serial devices and support virtual COM and TCP/UDP network connection
- ⦿ Support serial port 300bps-115200bps line speed non-blocking communication
- ⦿ Support multiple serial port modes like RealCom, TCP Server, TCP Client, UDP Server, UDP Client, etc.
- ⦿ Support RTU Master, RTU Slave, ASCII Master, ASCII Slave and other Modbus protocol modes
- ⦿ Support up to 256 Modbus TCP client (master) accesses and connect up to 128 Modbus TCP server (slave) devices
- ⦿ Support virtual and real ID mapping to achieve flexible access between Master and Slave devices

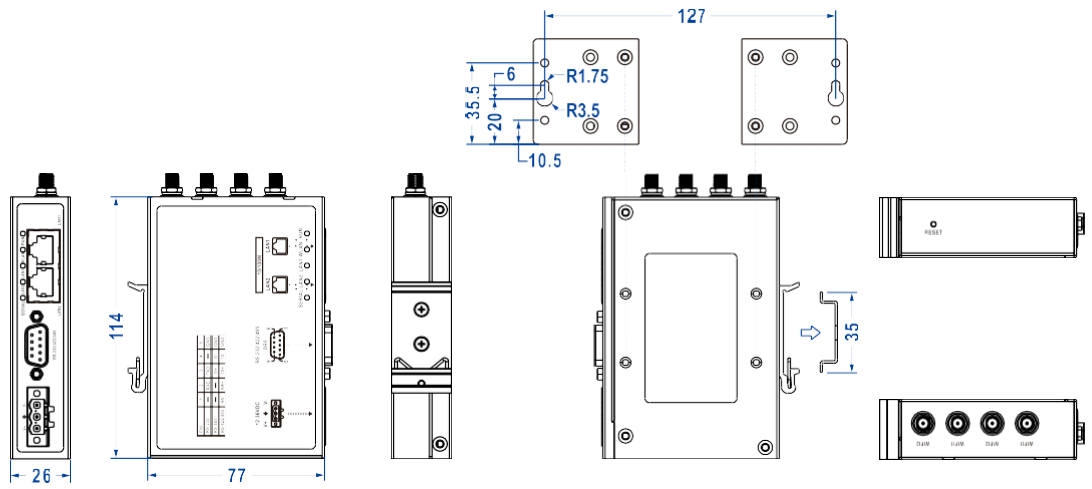
Dimension

Unit: mm

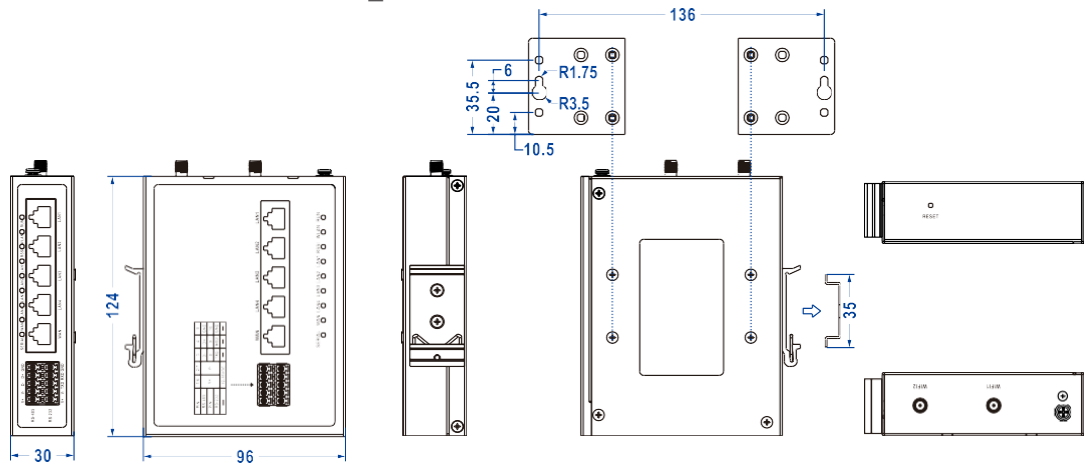
- IAP2300C-2E-2T-1D-P12_36



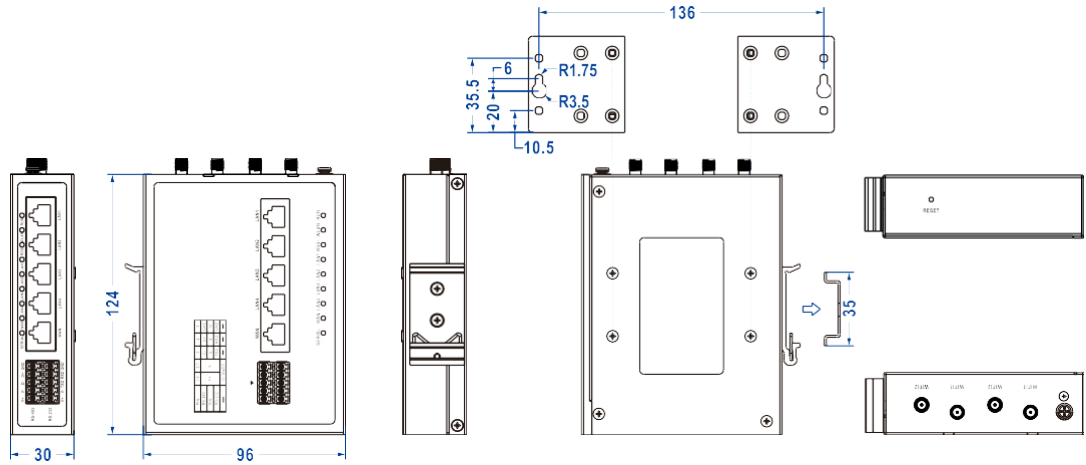
● IAP2300C-2E2E-2T-1D-P12_36



● IAP2300C-2E-5T-1D-P12_36



● IAP2300C-2E2E-5T-1D-P12_36



Specification

<p>Standard & Protocol</p>	<p>IEEE 802.3 for 10Base-T IEEE802.3u for 100Base-TX IEEE802.11a/b/g/n for WLAN IEEE802.11i for wireless security IEEE802.11r for fast roaming IEEE802.11e for WMM</p>
<p>Working Mode</p>	<p>Route mode AP mode Bridge mode (connection: WDS bridge, universal bridge; fast roaming) Client mode (connection: WDS bridge, universal bridge, wireless NAT; fast roaming/efficient roaming) Dual-link mode (connection: Dual-WDS bridge, Dual-universal bridge, Dual-wireless NAT; Seamless roaming)</p> <p>Note: Only 5T (with WAN port) devices support routing mode, AP mode, QoS management, wireless probe and other functions; Only 2E2E dual-band devices support dual-link mode.</p>
<p>WLAN</p>	<p>WAP/WAP2/WAP3 personal/enterprise edition encryption mode, hidden wireless SSID, wireless user isolation, wireless transmission power adjustment, maximum user limit, packet segmentation and RTS threshold, China/US wireless channel, WDS, WMM</p>
<p>Management</p>	<p>Intranet settings, extranet settings (routing mode/wireless NAT), wireless settings-client, wireless settings-AP, AC management, SNMP management, roaming agent, seamless roaming, QoS management, wireless probe, user settings, system upgrade, timed restart, profile management, system log, log management, wireless user list, Wi-Fi real-</p>

time traffic monitoring, serial port application, serial port log, Modbus settings

<p>Security Policy</p>	<p>Wireless users: black/white list of wireless users and event notification of wireless users. Firewall: IP filtering, MAC filtering, URL filtering, port forwarding, Port redirection, ARP binding, DMZ setting</p>
<p>Routing/Switching</p>	<p>Static routing (routing mode/wireless NAT)</p>
<p>Troubleshooting</p>	<p>Network detection, Ping, route tracing</p>
<p>Time Management</p>	<p>NTP Client</p>
<p>Radio Frequency</p>	<p>802.11B/g/n: 2.412GHz~2.4835GHz 802.11a/n: 5.18GHz~5.825GHz RF power output: 20dBm Modulation methods: DBPSK, DQPSK, CCK, OFDM, 16-QAM, 64-QAM</p>
<p>Receiving Sensitivity</p>	<p>802.11b: -95dBm@1Mbps, -89dBm@11Mbps 802.11g: -90dBm@6Mbps, -74dBm@54Mbps 802.11a: -89dBm@6Mbps, -72dBm@54Mbps 802.11n: -85dBm@MCS0, -67dBm@MCS7</p>
<p>Transmitting Power</p>	<p>802.11b: 23dBm@1Mbps, 20dBm@11Mbps 802.11g/a: 23dBm@6Mbps, 20dBm@54Mbps 802.11n: 23dBm@MCS0, 20dBm@MCS7</p>
<p>Interface</p>	<p>Antenna interface: 2.4G/5G dual-band antenna interfaces, RP-SMA-K(Female) 100M WAN: 10/100Base-T(X) RJ45 port 100M LAN: 10/100Base-T(X) RJ45 port Serial port: RS-232/485/422 serial port adopts DB9(Male); RS-232/485 serial port adopts 2*5PIN 3.81mm pitch terminal blocks, the serial port occupies 6 pins</p>
<p>Serial Port Parameter</p>	<p>Standard: EIA RS-232C, RS-485, RS-422 RS-232 signal: RXD, TXD, GND RS-485 signal: D+, D-, GND RS-422 signal: TX+, TX-, GND, RX+, RX- Baud rate: 300~115200bps Data bit: 8bits Parity bit: None, Even, Odd Stop bit: 1bit</p>

	<p>Directional control: RS-485 direction adopts Automatic Data Direction Control technology</p> <p>Load capacity: RS-485/422 end supports 32-node polling environment</p> <p>Pull up/down resistance for RS-485: 4.7kΩ</p> <p>Work mode:</p> <ul style="list-style-type: none"> Serial server: RealCom Mode, TCP Server Mode, TCP Client Mode, UDP Server Mode, UDP Client Mode, each serial port supports 4 TCP/UDP sessions Modbus gateway: RTU Master, RTU Slave, ASCII Master, ASCII Slave, support up to 256 Modbus TCP Client (Master) device accesses and 128 Modbus TCP Server (Slave) device connections
Indicator	Running indicator, WLAN indicator, RSSI indicator, WAN indicator, LAN indicator, serial port indicator
Power Supply	<p>IAP2300C-2E-2T-1D-P12_36, IAP2300C-2E2E-2T-1D-P12_36</p> <ul style="list-style-type: none"> Input voltage: 12~36VDC, support anti-reverse connection Connection mode: 3-pin 5.08mm pitch terminal blocks <p>IAP2300C-2E-5T-1D-P12_36, IAP2300C-2E2E-5T-1D-P12_36</p> <ul style="list-style-type: none"> Input voltage: 12~36VDC, support anti-reverse connection Connection method: 2*5PIN 3.81mm pitch terminal blocks (includes 4-pin power supply)
Power Consumption	<p>IAP2300C-2E-2T-1D-P12_36</p> <ul style="list-style-type: none"> No-load at normal temperature: 2.0W@12VDC, 2.0W@36VDC Full load at normal temperature: 4.6W@12VDC, 4.8W@36VDC Full load at high temperature: 4.7W@12VDC, 5.1W@36VDC <p>IAP2300C-2E-5T-1D-P12_36</p> <ul style="list-style-type: none"> No-load at normal temperature: 2.1W@12VDC, 2.5W@36VDC Full load at normal temperature: 5.5W@12VDC, 5.7W@36VDC Full load at high temperature: 5.5W@12VDC, 5.7W@36VDC
Working Environment	<p>Operating temperature: -40~75°C</p> <p>Storage temperature: -40~85°C</p> <p>Relative humidity: 5%~95% (no condensation)</p>
Physical Characteristic	<p>Housing: IP30 protection, metal</p> <p>Installation: DIN-Rail or wall mounting</p> <p>Dimensions (W x H x D): 26mm×114mm×77mm(2T series) 30mm×124mm×96mm(5T series)</p> <p>Weight: 401g(IAP2300C-2E-5T-1D-P12_36)</p>



Industrial Standard	<p>IEC 61000-4-2 (ESD, electronic static discharge), Level 4</p> <ul style="list-style-type: none">● Air discharge: ± 8kV● Contact discharge: ±6kV <p>IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 3</p> <ul style="list-style-type: none">● Power supply: ±2kV● Signal: ±1kV <p>IEC 61000-4-5 (Surge), Level 3</p> <ul style="list-style-type: none">● Power supply: common mode±2kV, differential mode±1kV● Signal: common mode±2kV, differential mode±1kV <p>Shock: IEC 60068-2-27 Free fall: IEC 60068-2-32 Vibration: IEC 60068-2-6</p>
Mtbf	>1 million hours
Authentication	CE, FCC, RoHS
Warranty	5 years



Ordering Information

Available Models	2.4g/5g Antenna Interface	100m Copper Port		Serial Port		Power Supply
		WAN	LAN	RS- 232/485/ 422	RS- 232/485	
IAP2300C-2E-2T-1D-P12_36	2	—	2	1	—	12~36VDC
IAP2300C-2E2E-2T-1D-P12_36	4	—	2	1	—	
IAP2300C-2E-5T-1D-P12_36	2	1	4	—	1	
IAP2300C-2E2E-5T-1D-P12_36	4	1	4	—	1	

Optional Accessories

Product Type	Product Number	Remark
2.4G/5G omnidirectional antenna, gain 2dBi, frequency 2400-2483MHz, 5150-5850MHz, RP-SMA-J interface, antenna length 108.5mm	3005040132	2E single frequency series (standard) 2E2E dual-frequency series (optional)
Magnetic base cable of suction cup, frequency 0-6GHz, RP-SMA-K/RP-SMA-J interface, black cable length is 1.2m	3005040092	Optional
2.4G/5G omnidirectional antenna, gain 2dBi, frequency 2400-2500MHz, 5150-5850MHz, RP-SMA-J interface, antenna length 108mm.	3005040133	Optional
2.4G/5G omnidirectional antenna, gain 3dBi, frequency 2400-2483MHz, 5150-5850MHz, RP-SMA-J interface	3005040108	Optional