CIAP314R-1A2-232

1×RS232 + 1×100M Ethernet Ports 2.4GHz WiFi 4 Industrial Wireless Client



- Support 1×RS232 + 1×100M Ethernet Ports
- Support 2.4GHz WiFi, AP/STA/AP+STA/Bridging/Routing working mode
- Support most WiFi encryption methods and algorithms, including WPA2-PSK and WPA-PSK, with TKIP and AES encryption types
- Support IEEE 802.11 b/g/n. High-power APs used for long-distance coverage mostly use the 802.11n protocol
- Support network protocols: TCP / UDP / ARP/ ICMP/ HTTP/ DNS / DHCP/ MQTT
- Support Modbus RTU–TCP conversion and Modbus polling
- DC5~36V wide input voltage
- DIN rail mount design
- -40℃~+85℃ working temperature

Product Description

CIAP314R-1A2-232 is an industrial RS232 to WiFi and Ethernet serial device server designed for stable long-distance wireless communication. It supports IEEE 802.11 b/g/n and delivers reliable coverage with an external antenna, operating in AP, STA, or AP+STA modes to fit different networking setups. The device enables transparent transmission between RS232 and WiFi or Ethernet networks and supports key protocols including TCP, UDP, MQTT, Modbus, HTTPD Client, and WebSocket.

It supports Modbus RTU-TCP conversion and Modbus polling, along with socket distribution, DHCP, custom heartbeat packets, MAC registration, virtual serial port, and configuration through webpage, software, serial AT commands, or network AT commands. With a wide 5–36V DC input, reverse-polarity protection, surge and ESD protection, and a built-in watchdog, the device maintains stable operation even in harsh conditions. It operates from -40℃ to 85℃ and provides clear status indication through PWR, Link, RX, and TX LEDs.

CIAP314R-1A2-232 integrates easily with cloud platforms such as Alibaba Cloud via MQTT and supports real-time interaction through WebSocket. The DIN-rail mounting design makes it suitable for industrial automation, remote monitoring, smart manufacturing, warehousing, access control, and other IoT applications requiring reliable serial-to-network communication.

Product Features

- Support IEEE 802.11 b/g/n and suit long-range coverage scenarios.
- Support AP, Station, and AP+Station modes, along with routing and bridging.
- Support DHCP for automatic IP assignment and provide DHCP service in AP mode.
- Support major network protocols including TCP, UDP, ARP, ICMP, HTTP, DNS, DHCP, and MQTT.
- Support up to 24 clients in TCP Server mode.
- Support WPA2-PSK and WPA-PSK security with TKIP and AES encryption.
- Support RS232 to WiFi or Ethernet communication with transparent transmission.
- Support transparent mode, serial command mode, HTTPD Client, Modbus, and AT command mode.
- Support Modbus RTU–TCP conversion and Modbus polling.
- Support free framing and auto-framing to improve forwarding efficiency.
- Support WebSocket for real-time serial-to-web interaction.
- Support MQTT and connect to Youyun Cloud and Alibaba Cloud.
- Support MAC registration, custom registration packets, custom heartbeat packets, and socket distribution.
- Support communication distance up to 150 meters between two units in line-of-sight.
- Provide status indicators PWR, Link, RX, TX.
- DIN-rail design ensures easy installation.
- Support maximum baud rate of 460800 bps.
- Support timeout reboot and scheduled reboot.
- Support one-key factory reset by holding the reload button for over 5 seconds.
- Support configuration via web page, configuration software, serial AT commands, and network AT commands.
- Android devices can access the built-in web page directly for easy setup.
- Support wide-range DC 5–36 V input with terminal block power access.
- Support hardware watchdog to improve system stability.
- Support operating temperature from -40 to 85°C and storage temperature from -40 to 105°C.
- Support ESD, surge, over-voltage, and reverse-connection protection.

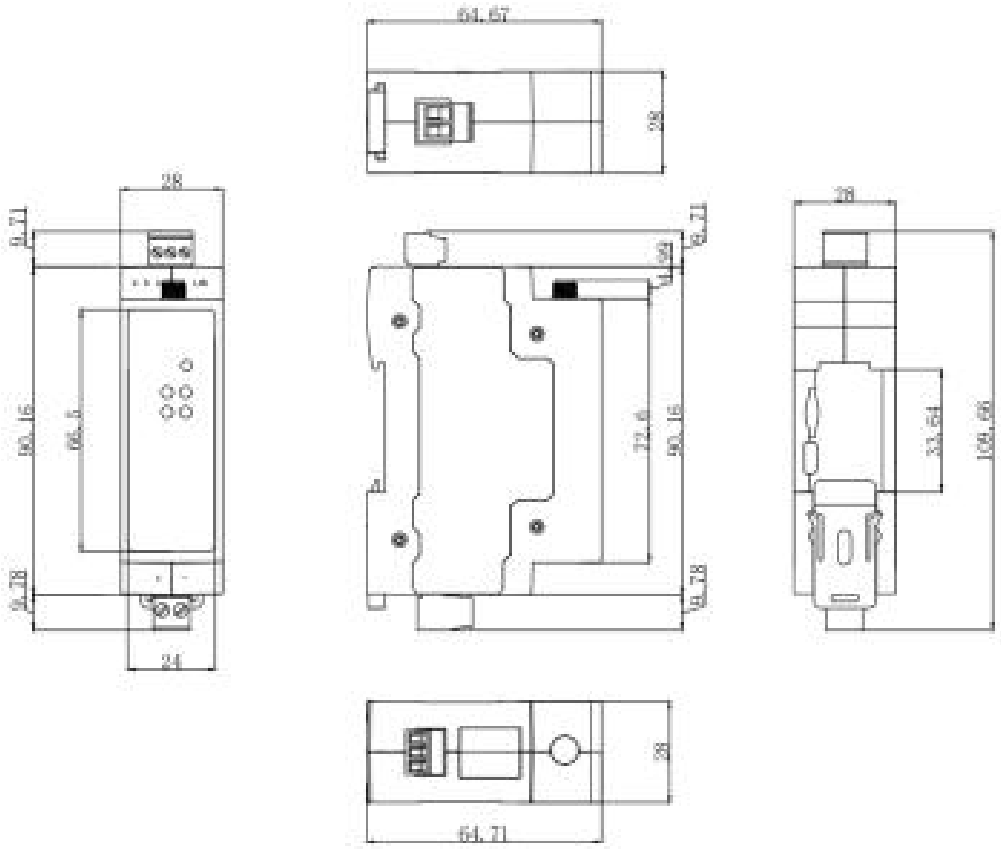
Technical Specifications

Wireless Network Type	
Wireless Standards	802.11b/g/n
Frequency Range	2.412GHz-2.484GHz
Transmit Power	802.11b: +19dBm (Max.)
	802.11g: +18dBm(Max.)
	802.11n: +17dBm(Max.)
Receive Sensitivity	802.11b: -89 dBm
	802.11g: -81dBm
	802.11n: -71dBm
Antenna	SMA male (outer thread, inner pin hole) connector
Transmission Distance	Maximum 150m (line of sight, 3dbi antenna)
Hardware Parameters	
Operating Voltage	DC 5~36V
Operating Current	127~289 mA @5V
Size	109.66 × 28 × 64.71 mm (L*W*H)
Serial Port	
Port Number	1 × RS232
Connection	3.81 mm pitch, 3-pin terminal block
Data Bits	5, 6, 7, 8
Stop Bits	1, 2
Parity Bit	None, Even, Odd

Baud Rate	300~460.8 Kbps
Buffer	RX: 4Kbyte, TX: 4Kbyte
Protection	Reverse polarity protection, surge protection, overvoltage protection, ESD protection
Software Parameters	
Wireless Network Type	Station/AP/AP+Station
Security Mechanism	WPA-PSK/WPA2-PSK
Encryption Type	TKIP/AES
Network Protocol	TCP, UDP, ARP, DHCP, DNS, MQTT
Configuration Method	Network configuration protocol, serial AT commands, built-in web page
Operating Environment	
Operating Temperature	-40℃～85℃
Storage Temperature	-40℃～105℃
Storage Humidity	5%～95% RH （non-condensing）

Dimensions

Unit: mm



Ordering Information

Standard Model	100M RJ45	RS232	WiFi	Input Voltage
CIAP314R-1A2-232	1	1	2.4 GHz	DC 5~36V

Contact Us

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