CIAP314R-1A2-485

1×RS485 + 1×100M Ethernet Ports 2.4GHz WiFi 4 Industrial Wireless Client



- Support 1×RS232 + 1×100M Ethernet Port (WAN/LAN configurable)
- Support 2.4GHz WiFi, AP/STA/AP+STA/Bridging/Routing working mode
- SSL/TLS encryption V1.2, compatible with lower version
- 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-1A2-485 is an industrial RS485 to Wi-Fi/Ethernet serial device server designed for reliable, long-distance wireless communication between on-site serial devices and remote SCADA or IoT systems. It supports IEEE 802.11 b/g/n wireless standards and offers flexible networking modes including AP, STA, AP+STA, bridge, and repeater. The device enables transparent or protocol-based transmission between RS485 and Wi-Fi/Ethernet networks, supporting key protocols such as TCP, UDP, HTTP, MQTT, and Modbus RTU/TCP.

CIAP314R-1A2-485 supports SSL/TLS encryption and two-way certificate authentication to ensure secure data transmission, protecting sensitive information from potential leaks. It provides Modbus RTU–TCP conversion, Modbus polling, custom heartbeat packets, registration packets, and WebSocket functionality for real-time interaction between serial devices and web interfaces.

The device is compact, DIN-rail mountable, and operates reliably in industrial environments with a wide operating temperature range of -40℃ to 85℃ and a wide DC 5~36V input. Hardware protections including ESD, surge, overcurrent, and reverse-polarity protection, along with a dual hardware and software watchdog, ensure stable operation in harsh conditions. Clear LED indicators for PWR, Link, RX, and TX simplify monitoring. CIAP314R-1A2-485 is ideal for smart agriculture, medical device data collection, factory monitoring, industrial automation, and other IoT applications requiring secure, stable, and efficient serial-to-network communication.

Product Features

- 1 × RS232/485 serial port, 1×10/100M RJ45 (WAN/LAN configurable)
- 5KV electrostatic protection for Ethernet port
- Support IEEE 802.11 b/g/n and high-power Wi-Fi for long-range coverage
- Support AP, Station, AP+Station, bridge, and repeater modes
- Support TCP Server/Client, UDP Server/Client, HTTP Client, MQTT client
- SSL/TLS encryption V1.2, two-way certificate authentication
- Transparent transmission between RS485 and Wi-Fi/Ethernet
- Modbus RTU–TCP conversion and Modbus polling
- Support heartbeat packets, registration packets, timeout reset
- WebSocket support for real-time serial-to-web interaction
- Support one-key factory reset
- Support configuration via web server, software, serial AT commands, or network AT commands
- Clear LED indicators: PWR, Link, RXD, TXD
- Wide DC 5~36V input via 3-pin terminal block
- DIN-rail mounting for easy installation
- Hardware watchdog for enhanced system stability
- Remote firmware upgrade support
- Communication distance up to 150m in open line-of-sight conditions
- Industrial-grade design: ESD Level 4, Surge Level 3, EFT Level 3
- Operating temperature: -40℃ to 85℃; Storage temperature: -40℃ to 125℃

Technical Specifications

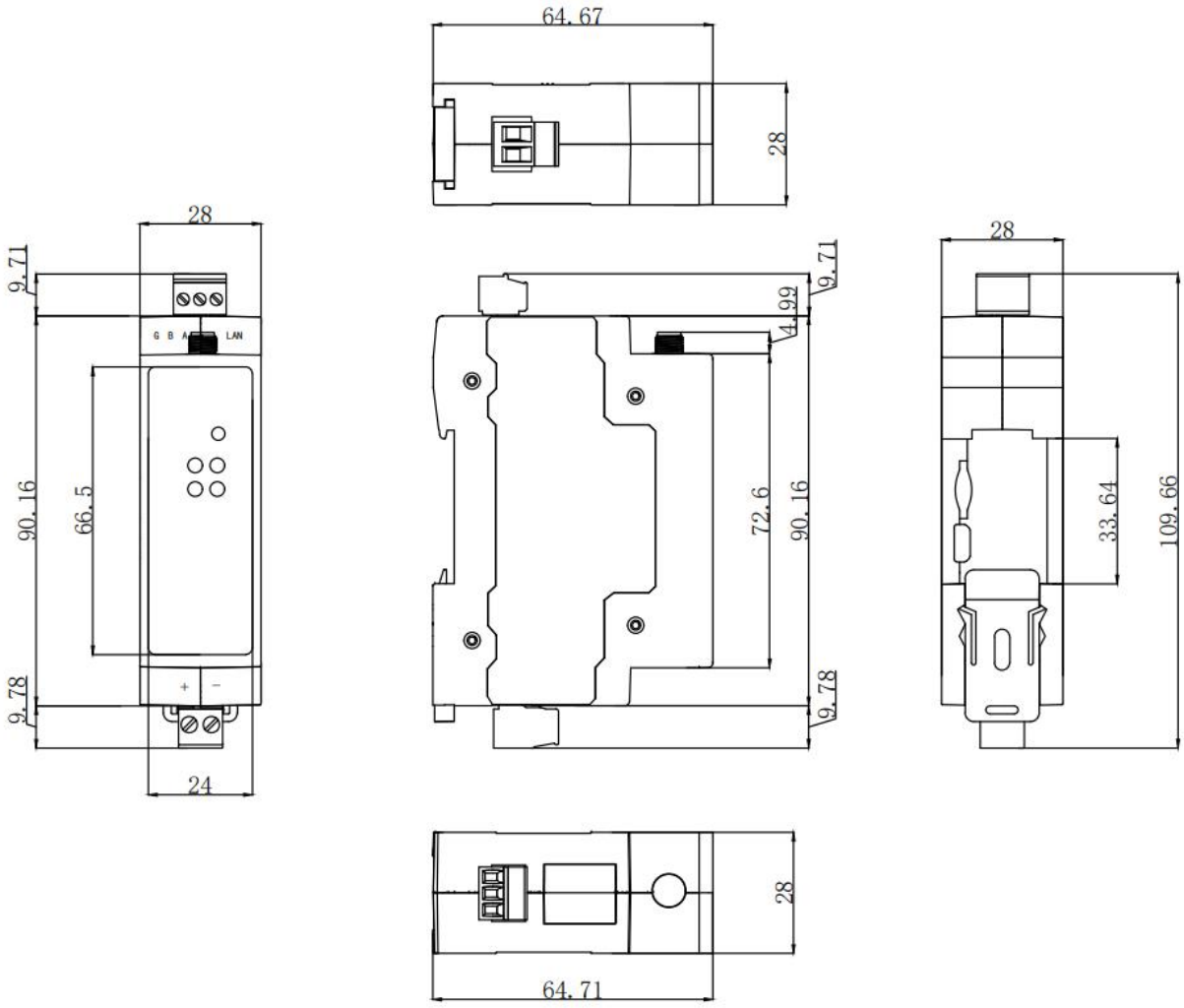
Power	
Power Supply	DC 5~36V
Connection	2 pin terminal block
Working Current	127~289 mA @5V
Wi-Fi	
Standard	IEEE 802.11 b/g/n
Frequency Range	2.412~2.484GHz
Power Output	802.11b: +19dBm (Max.@11Mbps)
	802.11g: +18dBm (Max.@54Mbps)
	802.11n: +17dBm (Max.@HT20, MCS7) +17dBm (Max.@HT40, MCS7)
Receive Sensitivity	802.11b: -89dBm(@11Mbps)
	802.11g: -81dBm(@54Mbps)
	802.11n: -73dBm (@HT20, MCS7) -71dBm (@HT40, MCS7)
Wi-Fi Antenna	SMA-female
Wi-Fi Security	WPA-PSK(TKIP)/WPA2-PSK(TKIP)/WPA-PSK(AES)/WPA2-PSK(AES)
Ethernet Port	
Port Number	1 × RJ45, WAN/LAN configurable
Rate	10 /100 Mbps, auto MDI/MDX
Protection	1.5KV electromagnetic isolation
Serial Port	

Port Number	1 × RS485
Connection	3-pin terminal block (A, B, G)
Baud rate	300, 600, 1200, 1800, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 345600, 460800
Data Bits	5, 6, 7, 8
Stop Bit(s)	1, 2
Parity Bit	None, Even, Odd
Serial Sending cache	4K Bytes
Serial Receiving cache	4K Bytes
Packeting mechanism	Default
Physical	
Dimensions(mm)	28 × 64.71 × 109.66 mm (L*W*H)
Operating Temperature	-40℃~+85℃
Storage Temperature	-40℃~+125℃
Operating Humility	5% ~ 95% （Non-condensing）
Storage Humility	5% ~ 95% （Non-condensing）
Installation	DIN rail mounting
Software	
Network protocol	IP, TCP, UDP, HTTP, HTTPS, MQTT, SSL/TLS, ARP, DHCP
IP Assignment	Static/DHCP
DNS Service	Support
Built-in Webpage	Support

Config Method	Built-in Webpage, Config Software, AT Command
Work Mode	TCP Server/TCP client/UDP Server/UDP Client/HTTPD client
MQTT	MQTT client, Standard MQTT protocol
Modbus Gateway	Modbus TCP/RTU protocol conversion Multi-host polling: up to 16 hosts
WebSocket	Support
RF2217 Similar	Support
Registration Packet	Support
Heartbeat Packet	Support
SSL Encryption	Support
Ethernet Receiving Cache	64K Bytes
Ethernet Sending Cache	4K Bytes
Others	
Certificate	CE, FCC, RoHS

Dimensions

Unit: mm



Ordering Information

Standard Model	100M WAN/LAN Port	RS485 Port	WiFi	Input Voltage
CIAP314R-1A2-485	1	1	2.4GHz	DC 5~36V

Contact Us

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