CIAP325-3A25-2D

RS232/485 2.4&5GHz Dual Band WiFi 5 Industrial Wireless Client



- 2×100M LAN, 1×RS232,1×RS485
- 2×2.4 GHz + 1×5 GHz antenna interface.
- Support client mode, allowing wired devices to access Wi-Fi networks through WDS, universal repeater, or wireless NAT
- Support enhanced roaming for seamless and fast handover
- Support maintenance AP function, allowing mobile phones or PCs to connect wirelessly. The AP is for maintenance only
- Support serial device networking with protocol conversion for UDP, TCP, Modbus, HTTPD, WebSocket, MQTT, OPC UA, IEC104, HJ212, and supports virtual COM
- DC 9~36V power input, reverse-polarity protection.
- High-strength aluminum alloy enclosure, IP40-rated housing protection
- -40℃~+75℃ working temperature

Product Description

CIAP325-3A25-2D is a dual-band Wi-Fi 5 industrial wireless client designed for industrial communication networks. It supports wired-to-wireless networking and serial device networking, featuring 2 × 100M LAN ports, 1 × RS232 port, 1 × RS485 port, 2 × 2.4 GHz antenna interfaces, 1 × 5 GHz antenna interface, and a DC 9~36V power input. The device uses a standard DIN-rail installation to fit diverse industrial deployment needs.

This wireless client supports WEB-based configuration with a full set of management features, including client mode, WDS/universal repeater/wireless NAT, enhanced roaming, IPv6, IP conflict detection, DHCP server, wireless settings, network diagnostics, firewall, NTP, and serial-to-network functions. It provides multi-level user management, local/remote log management, scheduled reboot, configuration backup and recovery, firmware upgrade, and factory reset.

Built with an industrial-grade hardware design, this serial to WiFi converter adopts high-quality components, a high-strength aluminum alloy enclosure, low-power and wide-temperature operation, supporting -40℃ to +75℃. It has passed rigorous functionality, high-low temperature, safety, and EMC tests to ensure reliable operation in harsh environments.

CIAP325-3A25-2D is suitable for industrial automation, energy systems, smart cities, intelligent transportation, mining, and smart factory applications.

Product Features

- Support client mode to convert wireless networks into wired networks, allowing wired terminals to access Wi-Fi.
- Wireless NAT supports connection to external networks through DHCP or static IP configuration.
- Support IP conflict detection to quickly locate conflicting devices and prevent network faults.
- Support DHCP server for centralized and dynamic IP address allocation and management.
- Support WEP-OPEN/SHARED-AUTH, WPA/WPA2-PSK security modes and CCMP, TKIP encryption algorithms.
- Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, and packet capture for network diagnostics and troubleshooting.
- Firewall supports port forwarding, custom iptables rules, and NAT translation.
- Support NTP client and server functions for clock synchronization or time-source delivery.
- Support multi-level user access control, including SSH and HTTP/HTTPS login management.
- Log system records kernel, application, and network events with multiple severity levels, supporting local download, scheduled saving, and remote monitoring.
- Wireless NAT supports DHCP or static IP methods for WAN connectivity.
- Support serial-to-network functions, providing UDP Client/Server/Multicast, TCP Client/Server, Modbus RTU/ASCII Master/Slave, Realcom MCP/CCP/MW, Pair Connection Master/Slave, HTTPD Client, WebSocket Client, MQTT Client, OPC UA Server, IEC104 Server, HJ212 Client, enabling serial-to-TCP/UDP/HTTPD/WebSocket/MQTT conversion, and Modbus RTU/ASCII to Modbus TCP/OPC UA/IEC104/HJ212 conversion.
- Support JSON conversion, allowing data collected from Modbus slave devices to be packaged in JSON format and uploaded to the server.

Technical Specifications

Software	
NMS Function	Support for traffic statistics, operating status, network status, and local device information Support for IPv6 services and IP address conflict detection Support for Client mode, WDS mode, Universal Repeater mode, and Wireless NAT connectivity Support for enhanced client roaming and wireless parameter configuration Support for DHCP server functionality Support for serial-to-network conversion
Firewall	WAN/LAN port TCP/UDP port mapping is supported NAT network address translation is supported Custom rules for iptables are supported
System Administration	Support IPv4/IPv6 Ping、IPv4/IPv6 Traceroute、Nslookup、Capture network packets Support time zone, NTP client/server, Crontab, remote/local logging Support user rights management, SSH, HTTP/HTTPS access control, and certificate upload Support online reboot, scheduled restart, configuration backup/restore, flashing firmware, and factory reset
Wi-Fi	
Wireless Standards	IEEE 802.11a/b/g/n/ac
Operating Frequency Band	2.412GHz~2.484GHz, 5.18GHz~5.825GHz
Channel Bandwidth	20MHz/40MHz/80MHz

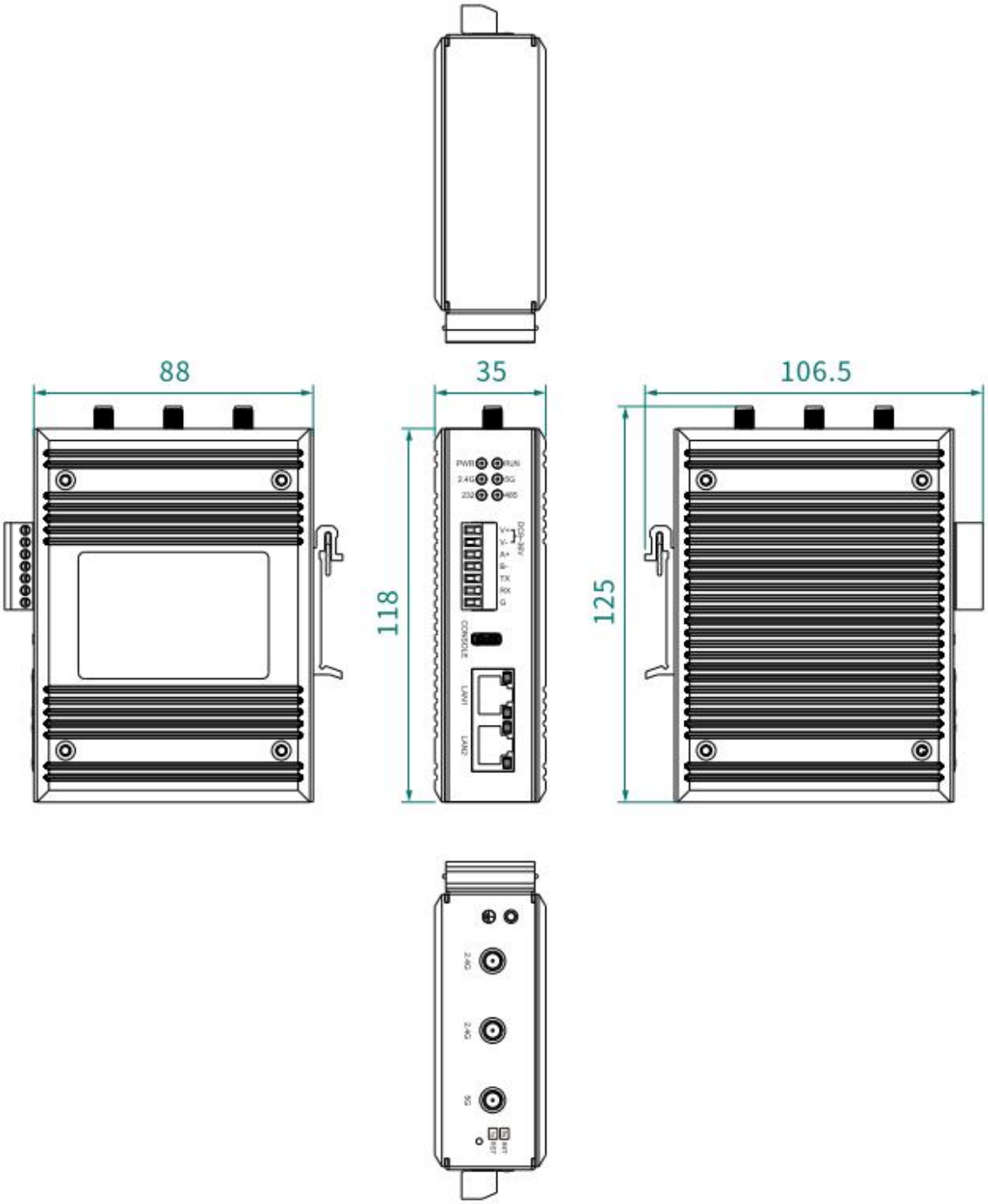
Maximum Transmit Power	IEEE 802.11ac：22±2dBm @HT80 MCS9 /5GHz band IEEE 802.11ac：22±2dBm @HT80 MCS0 /5GHz band IEEE 802.11n：24dBm @HT20/40 MCS7 IEEE 802.11g：25dBm @54MHz IEEE 802.11b：28dBm @11MHz
Receive Sensitivity	VHT80 MCS9: -58dBm@10%PER(MCS9) /5GHz band HT40 MCS7: -69dBm@10% PER(MCS7) HT20 MCS7: -71dBm@10% PER(MCS7) 54M: -74dBm@10% PER 11M: -90dBm@ 8% PER
Maximum Transmission Rate	The maximum transmission rate of 2T2R in the 2.412GHz~2.484GHz frequency band is 300Mbps The maximum transmission rate of 1T1R in the 5.18GHz~5.825GHz frequency band is 433Mbps The theoretical maximum wireless bandwidth is 733Mbps
Distance Covered	2.4GHz coverage radius up to 400m (outdoor air/no interference environment, 5dBi omnidirectional antenna) 5GHz coverage radius up to 700m (outdoor air/interference-free environment, 5dBi omnidirectional antenna)
Interface	
100M LAN	2 × 10/100Base-T(X) auto-sensing RJ45 LAN ports, supporting full/half-duplex and auto MDI/MDI-X

Serial	Serial port type: 1×RS232 and 1×RS485 serial port Connection: 7-position 3.81mm pitch terminal, serial port occupies 5 positions Baud rate:600~460800bps Data bit: 7bit, 8bit Stop bit: 1bit, 2bit Parity bit: None, Odd, Even Number of nodes: RS-485 can connect up to 128 nodes Termination Resistor: RS485 has a built-in 120Ω termination resistor, which can be switched by internal jumper caps
Antenna Interface	3×SMA-K (Male Threaded Internal Hole) antenna connectors, including 2×2.4GHz Wi-Fi antennas and 1×5GHz Wi-Fi antennas
CONSOLE	1×CONSOLE port, USB Type-C interface
Button	Reboot or factory reset button
Indicators	Power indicator, running indicator, 2.4G indicator, 5G indicator, RS232 indicator, RS485 indicator, Ethernet interface indicator
Power Supply	
Power Input	DC9~36V
Power Consumption	＜5.5W @DC24V
Connection	7-position 3.81mm pitch terminal block, power supply occupies 2 positions
Power Protection	Reverse polarity connection
Physical Characteristics	
Dimensions	118×35×88 mm (excluding DIN rail and connector size)
Installation	35 mm standard DIN rail mounting

IP Code	Aluminum alloy shell, IP40 protection level
Weight	About 0.35kg (without antenna).
Working Environment	
Operating Temperature	-40℃~+75℃
Storage Temperature	-40℃~+85℃
Relative Humidity	5%~95% (non-condensing)
Industry Standards	
EMC	IEC 61000-4-2 (ESD): Level 4 (contact discharge±8kV, air discharge±15kV) IEC 61000-4-5(Surge): Level 3 (Power supply: Common mode ±2kV, differential mode ±1kV; Network port: Common mode ±6kV, differential mode ±2kV; RS485: Common mode ±4kV, differential mode ±2kV) IEC 61000-4-4(EFT): Level 4 (Power supply: ±4kV; Ethernet port: ±2kV)

Dimensions

Unit: mm



Ordering Information

Standard Model	100M LAN Port	RS232	RS485	WiFi	2.4GHz Antenna	5GHz Antenna	Input Voltage
CIAP325-3A25-2D	2	1	1	2.4 & 5.8 GHz	2	1	DC9~36V



Contact Us

COME-STAR COMMUNICATION(WUHAN) CO., LTD.

Address: Puneng Industrial Park, Fenghuang Garden 1st Road, East Lake High-Tech Development Zone, Wuhan, China.

Tel: +86-027-59257958

Mail: info@come-star.com

Official site: www.come-star.com

Copyright © Come-Star All rights reserved