CIAP556 Series

5-Port Gigabit Dual-Band Wi-Fi 6 DIN-Rail Industrial Wireless AP



- 1×1G WAN/LAN combo port (fiber/copper port, copper port supports PoE in), 4×1G LAN ports, 2×2.4GHz/5GHz antenna interfaces
- Support Wi-Fi 6 dual-band WLAN with OFDMA+MU-MIMO technology
- PROFINET real-time protocol transmission, Layer 2 Tunnel technology
- AC-controllable, with fast roaming, fast discovery, bulk management, and bulk upgrades
- DC 12~60V wide voltage input, non-polarity
- High-strength aluminum alloy housing with IP40 protection rating
- -40 to 75°C operating temperature range

Product Description

The CIAP556 series is a 5-port Gigabit DIN-rail dual-band Wi-Fi 6 industrial wireless AP that supports 2.4 GHz and 5 GHz dual-band wireless connections, with a combined dual-band data rate of up to 2976 Mbps. It supports web-based configuration of various network management functions and offers different operating modes, including router, AP, repeater, bridge, and client, to enhance network efficiency, reliability, and security, meeting the needs of a wide range of complex networks. The WAN port supports either fiber or copper port, with the copper port supporting IEEE 802.3af/at standard PoE power supply; the LAN ports support wired internal network connections with 10/100/1000 Mbps, full/half-duplex, and auto MDI/MDI-X, providing high-bandwidth, low-latency, and highly reliable network communication for industrial automation applications.

CIAP556 series features 1×Gigabit WAN/LAN combo port (SFP port or RJ45), 4×Gigabit LAN ports, and 2×2.4GHz/5GHz antenna interfaces. Featuring a reliable industrial-grade design, it operates within a temperature range of -40°C to +75°C and has passed rigorous functional, high & low temperature, safety, and electromagnetic immunity tests. It meets the demands of various network environments and harsh industrial conditions, making it widely applicable in fields such as industrial automation, integrated energy, smart cities, intelligent transportation, smart mining, and smart factories.

Product Features

- 1×Gigabit WAN/LAN port (optional fiber or copper port); the copper port supports IEEE 802.3af/at standard PoE powered
- 4×Gigabit LAN ports
- 2×2.4GHz/5GHz antenna ports
- Wi-Fi 6 dual-band WLAN with OFDMA+MU-MIMO technology
- Five operating modes: router, AP, repeater, bridge, and client
- Wi-Fi Mesh wireless and wired self-organizing network functionality
- PROFINET real-time protocol transmission, Layer 2 Tunnel technology
- Enhanced client roaming, wireless NAT, and 5G AP prioritization
- AC-controllable, with fast roaming, fast discovery, and bulk management and upgrades
- Short protection time interval, segment/RTS thresholds, and pure G/11n mode
- Country code, transmit power adjustment, user limit, hidden SSID, user isolation, WDS bridging, and black/white lists
- Firewall and service features including port forwarding, IP/MAC/domain name filtering, NAT, DMZ, UPnP, DDNS, VPN, SNMP, LLDP, etc.
- MW-view management, bulk configuration, and bulk upgrades
- High-grade EMS protection ensures normal and stable operation in complex electromagnetic environments, unaffected by external electromagnetic interference
- DC 12~60V wide-voltage input, non-polarity
- Aluminum alloy housing with efficient heat dissipation, IP40 protection rating
- Operating temperature range: -40°C to +75°C

Specification

Protocol Standard	
IEEE Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3af/at, IEEE 802.11a/b/g/n/ac/ax
Interface	
1G WAN	1×1000Base-X SFP port or 1000Base-T(X) RJ45 WAN/LAN combo port, copper port supports full/half-duplex, auto MDI/MDI-X, standard PoE powered, compliant with IEEE 802.3af/at
1G LAN	4×10/100/1000Base-T(X) auto-sensing LAN ports with RJ45 port, full/half duplex, auto MDI/MDI-X
Antenna Interface	2×2.4GHz/5GHz dual-band Wi-Fi antenna interfaces, using SMA-K (external thread, internal contact) connectors
CONSOLE	1×CONSOLE port, RS232 signal via RJ45 port, for device debugging
Button	Reboot or factory reset button
Status LEDs	Power indicator, Operation indicator, 2.4G indicator, 5.8G indicator, Bridge indicator, PoE indicator (All-copper model), Ethernet port indicator
Wi-Fi6 RF Parameters	
Wireless Standard	IEEE 802.11b/g/n/ax (2.4 GHz), IEEE 802.11a/n/ac/ax (5 GHz)
Working Frequency	2.412 GHz–2.484 GHz (2.4 GHz ISM Band) 5.18 GHz–5.825 GHz (5 GHz ISM Band)
Modulation	DBPSK, DQPSK, CCK, OFDM, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
Channel Bandwidth	20 MHz/40 MHz/80 MHz/160 MHz
TX Power	2.4 GHz: ● +21 dBm HE40 at -45 dB DEVM ● +23 dBm MCS7 HT40 at -44 dB DEVM ● +25 dBm MCS0 HT20/40 ● +27 dBm 1M/11M 5 GHz: ● +21 dBm MCS11 HE80 at -44 dB DEVM ● +21 dBm MCS9 VHT80 at -44 dB DEVM ● +23 dBm MCS7 HT20/40 at -45 dB DEVM

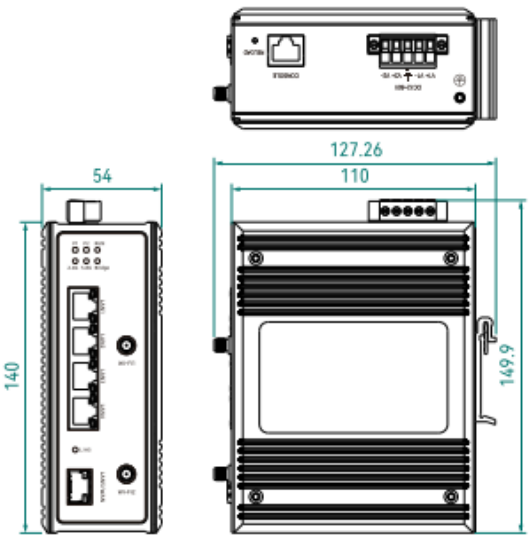
	● +25 dBm MCS0 HT20/40 ● +27 dBm OFDM/6M
RX Sensitivity	2.4GHz： ● -92.0dBm (HT40/ MCS0/ 1SS) ● -74.0dBm (HT40/ MCS7/ 1SS) ● -92.0dBm (HE40/ MCS0/ 1SS) ● -62.0dBm (HE40/ MCS11/ 1SS) 5GHz： ● -97.0dBm (HT20/ MCS0/ 1SS) ● -79.0dBm (HT20/ MCS7/ 1SS) ● -90.0dBm (VHT80/ MCS0/ 1SS) ● -65.0dBm (VHT80/ MCS9/ 1SS) ● -90.0dBm (HE80/ MCS0/ 1SS) ● -60.0dBm (HE80/ MCS11/ 1SS)
Theoretical Transfer Rate	2.4 GHz band: 2T2R maximum data rate of 574 Mbps 5 GHz band: 2T2R maximum data rate of 2402 Mbps at 160 MHz bandwidth Total wireless data rate: 2976 Mbps
Operating Mode	Router mode, AP mode, Repeater mode, Bridge mode, Client mode
Power Supply	
Input Voltage	DC12~60V, dual-power redundancy, non-polarity CIAP556 model's WAN port also supports standard PoE power supply, compliant with IEEE 802.3af/at standards
Power Consumption	CIAP556R-2A25-GF: Average ≤ 13.7 W @ 24 V DC, Peak ≤ 28.9 W @ 24 V DC CIAP556PR-2A25: Average ≤ 12.3 W @ 24 V DC, Peak ≤ 24.7 W @ 24 V DC
Connection Method	5-position 5.08mm pitch locking terminal blocks
Physical Characteristics	
Dimensions	140×54×110 mm (excluding DIN rail and connector)
Installations	Easy installation on 35mm DIN rails
IP Code	Aluminum alloy housing, IP40 protection rating
Weight	About 0.64 kg (CIAP556R-2A25-GF), about 0.69 kg (CIAP556PR-2A25) (excluding antenna)

Working Environment	
Operating Temp	-40°C ~+75°C
Storage Temp	-40°C ~+85°C
Relative Humidity	5%~95% (non-condensing)
Industry Standard	
EMS	IEC 61000-4-2 (ESD): Level 2 (contact discharge ±4 kV, air discharge ±15 kV) IEC 61000-4-5 (Surge): Level 3 (Power supply: common-mode ±2 kV, differential-mode ±2 kV; Ethernet port: common-mode ±4 kV, differential-mode ±2 kV) IEC 61000-4-4 (EFT): Level 4 (Power supply: ±4 kV; Ethernet port: ±2 kV)
Warranty	
Warranty Period	5 years

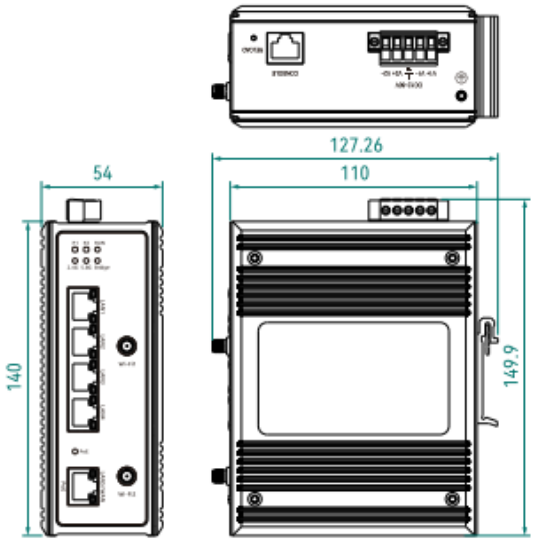
Dimensions

Unit: mm

CIAP556R-2A25-GF



CIAP556PR-2A25



Ordering Information

Standard Model	1G Fiber Port	1G Copper Port	2.4GHz/5GHz Antenna Interface	Input Voltage
CIAP556R-2A25-GF	1	4	2	Dual DC12~60V
CIAP556PR-2A25	/	5	2	Dual DC12~60V PoE DC48V

Contact Us

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