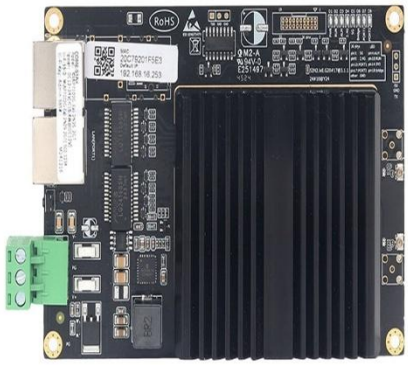
# CIAP726-2A25-Exi Series

## 2-Port Gigabit Dual-Band Wi-Fi 6 Embedded Intrinsically Safe Industrial Wireless AP



- 1 x 1G WAN port (SFP port or RJ45), 1 x 1G LAN port (RJ45), and 2 x 2.4GHz/5GHz antenna interfaces
- Support dual-band Wi-Fi 6 WLAN with OFDMA+MU-MIMO technology
- Support five operating modes: Router, AP, Repeater, Bridge, and Client to accommodate diverse application scenarios
- Support Wi-Fi Mesh and wired Mesh self-organizing network functionality
- Support IPv6 services for IPv6 network access; this device and connected terminals can automatically obtain IPv6 addresses
- Support advanced settings such as short protection time intervals, segment thresholds, RTS thresholds, pure G mode, and pure 11n mode
- Support firewall and service functions including port forwarding, IP/MAC/domain name filtering, NAT translation, DMZ, internal network penetration, DDNS, VPN, SNMP, and LLDP;
- DC 12~24V power input with intrinsically safe circuit design
- -40℃~+75℃ operating temperature range

## Product Description

The CIAP726-2A25-Exi series is a dual-band Wi-Fi 6 embedded intrinsically safe industrial wireless AP with two Gigabit ports, specifically designed for industrial communication network applications. It achieves a dual-band concurrent throughput of up to 2976 Mbps. This series offers versatile interfaces including 1 x 1G WAN port, 1 x 1G LAN port, and 2 x 2.4GHz/5GHz antennas. The WAN port supports either a Gigabit SFP port or a Gigabit Ethernet port, while antennas can be connected via IPEX Gen1 board-side antenna connectors or SMA-K (male threaded, female socket) interfaces. Supports 12-24V DC power input, compliant with intrinsic safety design requirements. Embedded installation accommodates diverse network deployment scenarios.

The CIAP726-2A25-Exi series supports web-based configuration for multiple network management functions, including: Router/AP/Repeater/Bridge/Client modes, Universal/WDS bridging, AC control, Dynamic/PPPoE dial-up networking, DHCP server, IP/MAC binding, 2.4G/5G band settings, blacklist/whitelist, static routing, network diagnostics, firewall, internal network penetration, DDNS, and static/PPPoE dial-up networking, DHCP server, IP/MAC binding, 2.4G/5G settings, black/white lists, static routing, network diagnostics, firewall, network penetration, DDNS, VPN, SNMP, LLDP, NTP, etc. The system provides multi-level user management, supports local/remote log management, scheduled reboots, configuration backup/restore, firmware upgrades, and factory reset. Hardware features wide-temperature and intrinsically safe design, supporting one-button restart or factory reset via physical key. Indicator lights are externally accessible. Industrial-grade components ensure operation from -40℃ to +75℃. Power supply complies with intrinsically safe circuit standards, passing rigorous functional, safety, and EMC testing to meet demanding industrial environments. Widely applicable in industrial automation, integrated energy systems, intelligent transportation, smart cities, and smart mining.

## Features and Benefits

- Support OFDMA+MU-MIMO technology, enabling multi-user concurrent connections in both the frequency domain and physical space to enhance multi-user high-density access;
- Support Wi-Fi 6 dual-band WLAN, with a theoretical maximum speed of 574Mbps on the 2.4GHz band and 2402Mbps on the 5GHz band;
- Support router mode, connecting to external networks via dynamic/static/PPPoE dial-up to enable wired and wireless terminal networking;
- Support AP mode, converting wired networks into wireless networks for wireless terminal access to wired networks, controllable by an Access Controller (AC);
- Support repeater mode, amplifying upstream wireless networks and converting them into combined wired/wireless networks for dual-mode terminal access;
- Support bridge mode, converting wireless networks into wired and wireless networks for wired and wireless terminal access;
- Support client mode, converting wireless networks into wired networks for wired terminal access to wireless networks;
- Support DHCP server for centralized dynamic management and configuration of user IP addresses;
- Support DHCP access device management, binding client IPs to MAC addresses to prevent IP changes or conflicts;
- Support 2.4GHz+5GHz dual-band operation, transmit power adjustment, user count limits, SSID hiding, user isolation, WDS bridging, and more;
- Support short protection interval, segmented threshold, RTS threshold, pure G mode, pure 11n mode, and more;
- Support WPA PSK, WPA2 PSK, WPA3 SAE, and WPA2+WPA3 encryption methods;
- Support wireless user management with black/white lists for filtering wireless users, allowing or blocking specific access;
- Support static routing to precisely control network routing choices, enhance network performance, and guarantee bandwidth;
- Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, and packet capture for network diagnostics or fault analysis;
- Support firewall functions including SYN-flood defense, port forwarding, IP/MAC/domain name filtering, NAT, iptables, DMZ, and UPnP;
- Support NTP client and server functions for clock synchronization or providing a clock source;

- Support hierarchical user permission management with SSH and HTTP/HTTPS access control;
- Record multi-level kernel, application, and network logs, supporting local download, scheduled saving, and remote monitoring;
- Support Peanut Shell internal network penetration, enabling remote device login and management via Peanut Shell dynamic domain names;
- Support dynamic DNS functionality, allowing remote device login and management through designated domain names;
- Support VPN client and server for private network construction. Clients support PPTP, L2TP, GRE, GRETAP, OpenVPN, and other tunnel protocols; servers support PPTP, L2TP, IPSec, and other protocols;
- Support SNMPv1/v2c and SNMP Trap. Enables centralized management through MIB for information querying, modification, and troubleshooting;
- Support LLDP to obtain LLDP neighbor device information, monitor link status, and facilitate topology management and fault localization;
- Support enhanced roaming in client mode, enabling seamless and rapid roaming to effectively ensure real-time data transmission and enhance wireless network reliability;
- Support DDM (Digital Diagnostic Monitoring) to monitor parameters such as operating temperature, voltage, current, and transmit/receive optical power of DDM SFP optical modules.

## Specifications

| Software | |
|---|---|
| Network Management | Support traffic statistics, operational status, network status, local address, and other status information or wireless details<br><br>Support router mode, AP mode, repeater mode, bridge mode, and client mode<br><br>Support static addresses, DHCP, and PPPoE external network connections<br><br>Support DHCP server, IP/MAC binding, and wireless user black/white lists<br><br>Support short protection intervals, segment thresholds, RTS thresholds, pure G mode, pure 11n mode<br><br>Support static routing, IPv6 services<br><br>Support Peanut Shell internal network penetration, dynamic DNS, SNMP, LLDP<br><br>Support PPTP/L2TP/GRE/GRETAP/TUN/TAP protocol VPN clients<br><br>Support PPTP/L2TP/IPSec protocol VPN servers |

| | |
|---|---|
| Firewall | Support SYN flood defense, dynamic IP spoofing, MSS throttling, and inbound/outbound data control<br><br>Support TCP/UDP port mapping for WAN/LAN ports<br><br>Support IP/MAC/domain name filtering, iptables, NAT, DMZ, UPnP, and IP/MAC/QoS rate limiting |
| System Management | Supports optical module DDM<br><br>Supports IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, and network packet capture<br><br>Supports time zone settings, NTP client/server, management port configuration, scheduled tasks, and remote/local logging<br><br>Supports user permission management, SSH access, HTTP/HTTPS, and certificate upload<br><br>Supports online reboot, scheduled reboot, configuration backup/restore, firmware flashing, and factory reset |
| Wi-Fi 6 | |
| Wireless Standard | IEEE 802.11b/g/n/ax (2.412 GHz to 2.484 GHz)<br>IEEE 802.11a/n/ac/ax (5.15 GHz to 5.85 GHz) |
| Working Frequency | 2.412 GHz to 2.484 GHz (2.4 GHz ISM Band)<br><br>5.15 GHz to 5.85 GHz (5.0 GHz ISM Band) |
| Modulation | DBPSK, DQPSK, CCK, OFDM, 16-QAM, 64-QAM, 256-QAM, 1024-QAM |
| Channel Bandwidth | 20MHz/40MHz/80MHz/160MHz |
| TX Power | 2.412GHz~2.484GHz：<br><br>+19dBm@HE40 -43dB Dynamic EVM<br><br>+26dBm@HT20/40 MCS7 -30dB Dynamic EVM<br><br>+28dBm@HT20/MCS0<br><br>5.15GHz~5.85GHz：<br><br>+18dBm@HE80/MCS11 -43dB Dynamic EVM<br><br>+23dBm@VHT80/MCS9 -35dB Dynamic EVM<br><br>+24dBm@HT20/40 MCS7 -30dB Dynamic EVM<br><br>+26dBm@HT20/MCS0 |

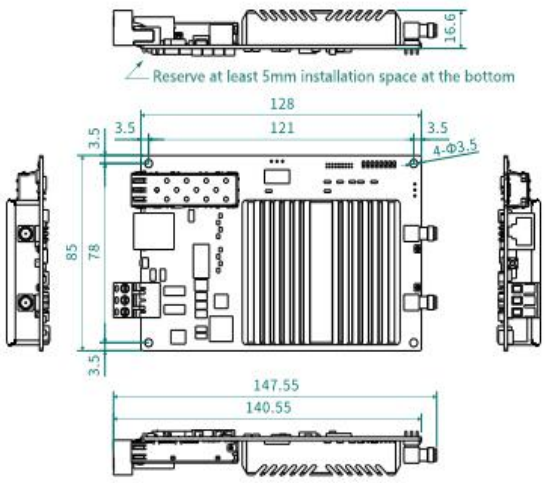
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|---|---|
| RX Sensitivity | 2.412GHz~2.484GHz：<br>-68.5dBm（HT40/MCS7/2SS）<br>-63.0dBm（HE40/MCS11/2SS）<br>5.15GHz~5.85GHz：<br>-64.5dBm（VHT80/MCS9/2SS）<br>-59.0dBm（VHT80/MCS11/2SS）<br>-58.0dBm（HE80/MCS11/2SS） |
| Theoretical Transfer Rate | 2.412GHz~2.484GHz band: 2T2R maximum transmission rate of 574Mbps<br>5.15GHz~5.85GHz band: 2T2R maximum transmission rate of 2402Mbps at 160MHz bandwidth<br>Total wireless rate: 2976Mbps |
| **Interface** | |
| 1G WAN | 1×1000Base-X SFP port or 10/100/1000Base-T(X) RJ45 WAN port. Copper port supports full/half-duplex operation and auto MDI/MDI-X. |
| 1G LAN | 1×10/100/1000Base-T(X) auto-sensing RJ45 LAN ports, full/half-duplex, auto MDI/MDI-X |
| Wi-Fi Antenna | 2×2.4GHz/5GHz antenna interfaces, supporting either IPEX 1 board-side antenna connectors or SMA-K (male threaded, female socket) connectors |
| Button | One-Click Reboot or Factory Reset |
| Status LED | Power indicator, Operation indicator, Alarm indicator, 2.4G indicator, 5G indicator, Bridge indicator, Interface indicator, with support for external signal output |
| **Power Supply** | |
| Power Input | DC12~24V |
| Power Consumption | 1 fiber port, 1 copper port (27dBm): Average ≤11.5W@DC12V, Peak ≤20.3W@DC12V (full load)<br>All copper ports (27dBm): Average ≤12.9W@DC12V, Peak ≤20.9W@DC12V (full load) |

| | |
|---|---|
| Connection | 3-pin 5.08mm terminal block |
| Protection | Reverse polarity protection, pre-charge |
| **Physical Characteristics** | |
| Dimensions | 128×85×16.6mm (excluding connectors) |
| Installations | Embedded |
| Weight | About 0.2kg |
| **Working Environment** | |
| Operating Temp | -40℃~+75℃ |
| Storage Temp | -40℃~+85℃ |
| Relative Humidity | 5%~95% (non-condensing) |
| **Industry Standard** | |
| EMC | IEC 61000-4-5 (Surge): Level 2 (Power supply, Ethernet port: Common mode ±1kV, Differential mode ±0.5kV)<br><br>IEC 61000-4-4 (EFT): Level 2 (Power supply: ±1kV; Ethernet port: ±0.5kV) |

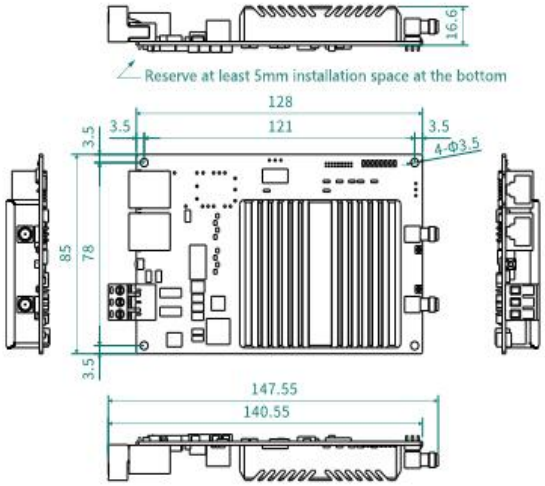
## Dimensions

Unit: mm

CIAP726-2A25-GF-Exi
CIAP726-2A25-GF-Exi-SMAK




CIAP726-2A25-Exi
CIAP726-2A25-Exi -SMAK



## Ordering Information

| Standard Model | 1G Fiber Port (WAN) | 1G Copper Port (WAN) | 1G Copper Port (LAN) | 2.4GHz/5GHz Antenna | | Input Voltage |
|---|---|---|---|---|---|---|
| | | | | IPEX 1 | SMA-K | |
| CIAP726-2A25-GF-Exi | 1 | / | 1 | 2 | / | DC12~24V |
| CIAP726-2A25-GF-Exi -SMAK | 1 | / | 1 | / | 2 | |
| CIAP726-2A25-Exi | / | 1 | 1 | 2 | / | |
| CIAP726-2A25-Exi -SMAK | / | 1 | 1 | / | 2 | |

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