

MIAP7102G-Exi

Industrial Mining Intrinsically Safe(IS) Gigabit Dual-Band Wi-Fi 6 Wireless AP



- Support 1*RJ45 Gigabit LAN port and 1*SFP Gigabit WAN port
- Support Wi-Fi6 dual-band WLAN wireless LAN, 2.4G theoretical maximum rate 574Mbps, 5G supports 160MHz bandwidth, theoretical maximum rate 2402Mbps
- Support five working modes of routing, AP, relay, bridge and client to meet different application scenarios
- Support Wi-Fi SON wireless self-organizing network function
- Wired network ports Support 10/100/1000Mbps rate
- Support virtual SSID and SSID hiding
- Support user isolation and adjustable transmit power, and Support country code setting
- Support Wi-Fi short protection time interval, packet fragmentation threshold and RTS threshold
- Support static routing, PPPoE, DHCP, and static IP functions





Product Description

MIAP7102G-Exi is a gigabit mining intrinsically safe dual-band Wi-Fi6 industrial-grade wireless AP independently developed by Wuhan Maiwe Communications Co., Ltd. This product uses professional industrial-grade qualcomm chips and can provide 2.4GHz and 5GHz dual-band Wireless service support high-speed wireless connection, with a 2.4GHz transmission rate up to 574Mbps and a 5GHz transmission rate up to 2402Mbps.

The MIAP7102G-Exi dual-band base station has the characteristics of high performance, high gain, high receiving sensitivity, and high bandwidth. It can not only cover a larger range, but also Support fast and seamless roaming technology between multiple APs to provide higher wireless transmission. Performance and stability. The hardware adopts a fanless, low-power, wide-temperature and wide-voltage design. It has passed strict testing in compliance with Industry Standards and can adapt to industrial field environments with strict EMC requirements. It can be widely used in wireless communications, wireless video transmission and other applications in coal mine systems. Wi-Fi coverage system design provides a convenient and fast networking solution for user equipment.



Features and Benefits

- Support firewall, NAT, DMZ host, access control black and white list
- Support NTP network automatic time adjustment
- Support peanut shell intranet penetration and dynamic domain name resolution DDNS
- Support VPN virtual private network
- Support SNMP protocol and SNMP Trap reporting
- Support LLDP protocol
- AP mode support quick discovery of ACs on Layer 2 and Layer 3 networks, and automatic registration and online functions
- AP mode support AC controller wireless radio frequency parameter configuration and entire network management functions
- AP mode support automatic synchronization of configuration parameters when online, and periodically reports device and wireless terminal information
- AP mode support AC controller wireless black and white list configuration function
- AP mode support fast roaming function under AC controller to realize roaming switching function of wireless terminal equipment
- AP mode support multiple upgrade methods such as single upgrade, batch upgrade, online and online automatic upgrade under the AC controller
- Support wired rescue network. When the AP mode or bridge mode device network is abnormal, you can log in to <https://6.6.6.6> to access the device through the wired network.
- Support SOS rescue SSID. The SOS-XXXX rescue SSID is automatically released when the AP mode

device network is abnormal (the associated password is Admin-985#). After association, use <https://8.8.8.8> to access the device.

- Support wired Mesh networking
- Support seamless roaming, and the roaming switching time is increased to about 30ms
- Support 5GHz preferred function

Specifications

| Software | |
|-----------------------------|---|
| Network Management Function | <p>Support five working modes: routing, AP, relay, bridge and client</p> <p>Support static address, DHCP, PPPoE external network connection</p> <p>Wi-Fi signal Support WPA/WPA2, WPA3 and other encryption methods</p> <p>Support virtual SSID and SSID hiding</p> <p>Support user isolation and adjustable transmit power, Support country code setting</p> <p>Support Wi-Fi short protection interval, packet fragmentation threshold and RTS threshold</p> <p>Support Wi-Fi SON networking and wired Mesh networking</p> <p>Support 5G optimization and seamless roaming function</p> <p>Support static routing</p> <p>Support peanut shell intranet penetration, dynamic DNS, SNMP, LLDP</p> <p>Support PPTP/L2TP/GRE/TUN/TAP protocol VPN client</p> <p>Support PPTP/L2TP/IPSec protocol VPN server</p> |
| Firewall | <p>Support SYN-flood defense, IP dynamic camouflage, MSS clamping, inbound/outbound data control</p> <p>Support WAN/LAN port TCP/UDP port mapping</p> <p>Support IP/MAC/domain name filtering, iptables, DMZ, UPnP, IP/MAC/QoS rate limiting</p> |
| System Management | <p>Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, and capture network packets</p> <p>Support time zone, NTP client/server, management port, Crontab, remote/local log</p> <p>Support user rights management, SSH access</p> <p>Support online restart, scheduled restart, configuration backup/restore, firmware flash, and factory settings restore</p> |
| Wi-Fi | |
| Working frequency | <p>2.4GHz 802.11b/g/n/ax</p> <p>5GHz 802.11a/n/ac/ax</p> |



Specifications

| | |
|--------------------------------|--|
| Modulation | DBPSK、DQPSK、CCK、OFDM、16-QAM、64-QAM、256-QAM、1024-QAM |
| Channel Bandwidth | 20MHz/40MHz/80MHz/160MHz |
| Maximum Transmit power | <p>2.4GHz:</p> <ul style="list-style-type: none"> +19dBm@HE40 -43dB Dynamic EVM +26dBm@HT20/40 MCS7 -30dB Dynamic EVM +28dBm@HT20/MCS0 <p>5GHz:</p> <ul style="list-style-type: none"> +18dBm@HE80/MCS11 -43dB Dynamic EVM +23dBm@VHT80/MCS9 -35dB Dynamic EVM +24dBm@HT20/40 MCS7 -30dB Dynamic EVM +26dBm@HT20/MCS0 |
| Receive Sensitivity | <p>2.4GHz:</p> <ul style="list-style-type: none"> -68.5dBm (HT40/MCS7/2SS) -63.0dBm (HE40/MCS11/2SS) <p>5GHz:</p> <ul style="list-style-type: none"> -64.5dBm (VHT80/MCS9/2SS) -59.0dBm (VHT80/MCS11/2SS) -58.0dBm (HE80/MCS11/2SS) |
| PHY rate Theoretical Bandwidth | <p>802.11ac mode:</p> <p>866.7Mbps (5GHz) and 400 Mbps (2.4GHz)</p> <p>802.11ax mode:</p> <p>1201 Mbps (5GHz) and 573.5 Mbps (2.4GHz)</p> <p>2.4GHz PHY rate: 574Mbps, TCP rate: 400Mbps</p> <p>5GHz PHY rate: 2402Mbps, TCP rate: 840Mbps</p> |
| Interface | |
| Gigabit WAN | 1*1000Base-X SFP WAN port |
| Gigabit LAN | 1*10/100/1000Base-T(X) auto-sensing RJ45 LAN port, support full/half duplex,auto MDI/MDI |
| Antenna Interface | 2-way 1st generation IPEX board-end antenna base, support 2.4GHz/5GHz dual-band antenna |
| Button | Restart or restore factory settings with one click |
| Indicator light | Power indicator , operation indicator, alarm indicator, 2.4G indicator, 5G indicator, Bridge indicator, LAN and WAN indicator, support external introduction of indicator signals |
| Power Supply | |



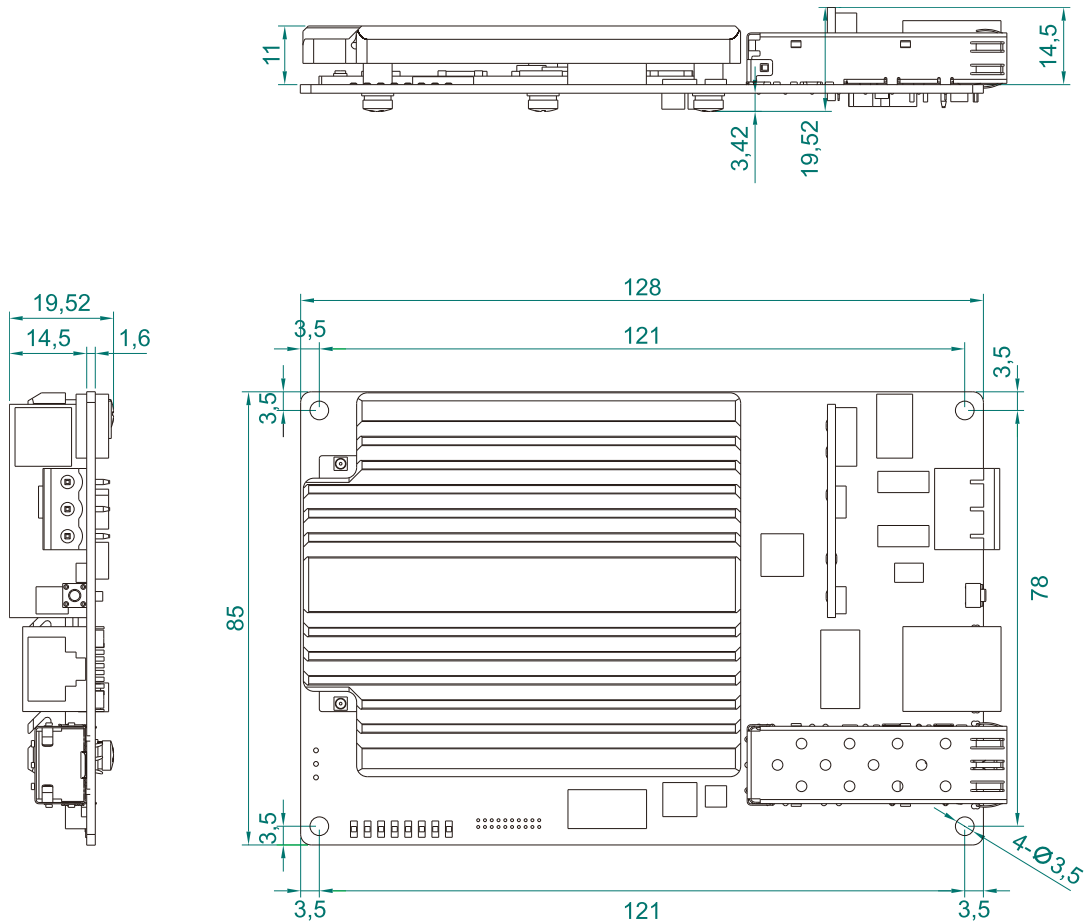
Specifications

| | |
|---------------------------------|--|
| Power Input | DC 12~24V (DC12~48V input can be customized) |
| Working Current | Average 550mA@DC12V, peak value 1500mA@DC12V |
| Connection | 5.08mm pitch 3PIN terminal block |
| Power Protection | Anti-surge, ESD protection, anti-reverse connection, level 2 thyristor protection |
| Physical Characteristics | |
| Dimension | 128×85×19.52(mm) |
| Installation Method | Bare board embedded |
| Weight | About 0.16kg |
| 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, network port: common mode ± 1kV, differential mode ± 0.5kV) IEC 61000-4-4 (EFT): Level 2 (power supply: ± 1kV; port: ± 0.5kV) |
| Certification | CE, FCC, RoHS |



Installation Dimensions

Unit:mm





Ordering Information

| Standard Model | 1000M SFP WAN Port | 1000M RJ45 LAN Port | 2.4GHz/5GHz Antenna Interface | Input Voltage |
|----------------|--------------------|---------------------|-------------------------------|---------------|
| MIAP7102G-Exi | 1 | 1 | 2 | DC 12~24V |

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