MIR785-W

Gigabit Wall Mount 5G Industrial Wireless Router

- Support 1*1000M WAN port, 4*1000M LAN ports, 1 *RS232/RS485 port, 4*5G antenna connectors, 2*2.4GHz/5GHz antenna connectors, 2*SIM card slots, and 1*USB port
- Support backup between 5G/4G/3G cellular wireless networks and WAN wired networks, enabling wireless and wired terminal device connectivity
- Support AP and Client wireless modes, acting as a Wi-Fi hotspot or wireless client, facilitating wireless terminal device access
- Support Wi-Fi6 dual-band WLAN wireless local area network, featuring OFDMA+MU-MIMO technology
- Support serial terminal device connectivity, capable of converting protocols such as UDP, TCP, Modbus, HTTPD, WebSocket, MQTT, and offers virtual serial port support
- Feature industrial-grade DC power supply input of DC 9~36V, with reverse polarity protection
- Equipped with a high-strength metal enclosure, IP40 protection level, and fanless heat dissipation, work in harsh industrial environment ranging from -40°C to +75°C

Product Description

MIR785-W is a 5-port full Gigabit wall mount 5G industrial wireless router designed specifically for industrial communication network applications. It supports LAN, WAN, WLAN, 5G NR, and more, allowing for seamless switching between multiple networks and intelligent network backup. This router provides various interfaces, including 1 Gigabit WAN port, 4 Gigabit LAN ports, optional 1 RS232 or RS485 port, 4 5G antenna interfaces, 2 2.4GHz/5GHz antenna interfaces, and 1 USB port. It supports DC9~36V power input and can be wall-mounted to meet various networking requirements.

The product offers a wide range of network management features through web configuration, including PPPoE dial-up, DHCP server, 5G network settings, wireless configurations, IP/MAC binding, static routing, firewall settings, VPN support, serial port-to-network conversion, network diagnostics, SNMP, LLDP, and cloud services. User management with different levels of permissions is supported, along with local and remote log management, scheduled reboot, configuration backup and restore, firmware upgrades, and factory reset options. Additionally, it includes robust hardware with high-standard industrial protection, industrial-grade components, a durable high-strength metal enclosure, low power consumption, wide temperature tolerance, fanless heat dissipation, and support for operating temperatures ranging from -40°C to +75°C. It meets rigorous safety and EMC testing requirements, making it suitable for demanding industrial applications in fields such as industrial automation, integrated energy, smart cities, intelligent transportation, smart mining, and smart factories.

Features and Benefits

- Support OFDMA+MU-MIMO technology, providing multi-user concurrent connections in both frequency domain and physical space, improving high-density access for multiple users
- Support Wi-Fi 6 dual-band WLAN wireless local area network, with a theoretical maximum speed of 574Mbps on the 2.4GHz band and a theoretical maximum speed of 1201Mbps
- Support 5G/4G/3G cellular wireless networks, Wi-Fi wireless networks, and wired WAN network connections, with support for multiple network backups
- Support MIMO (Multiple-Input, Multiple-Output) technology to enhance data transmission rates, expand network capacity, increase wireless coverage, and reduce data loss
- WAN port support connection methods such as DHCP, static addressing, and PPPoE dial-up for external network access or as a LAN port for internal network connections
- LAN port support a DHCP server for centralized dynamic IP address management and configuration for users
- Support link checking, periodically verifying the status of the 5G network link and performing link recovery
- WLAN support AP (Access Point) mode and Client mode, allowing for wireless terminal access or wireless network access
- Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, and packet capture for network diagnostics and troubleshooting
- Firewall feature include SYN-flood defense, port mapping, IP/MAC/DNS address filtering, custom iptables rules, DMZ isolation, UPnP, IP/MAC rate limiting, and QoS to limit upload/download speeds
- Log various levels of kernel, application, and network information, with support for local download, scheduled storage, and remote monitoring
- Serial port supports multiple serial-to-Ethernet or Modbus RTU/ASCII conversion modes, including UDP, TCP Client/Server, UDP Multicast, Modbus RTU Master/Slave, Modbus ASCII Master/Slave, Realcom MCP/CCP/MW, Pair Connection Master/Slave, Httpd Client, WebSocket Client, and MQTT
- Support Peanut Shell (huashengke) intranet penetration for remote login and device management using dynamic domain names
- Offer dynamic DNS functionality for remote login and device management using specified domain names
- Support VPN client and server for creating dedicated networks. Client-side supports PPTP, L2TP, IPSec, OpenVPN, GRE, and more tunnel protocols, while the server supports PPTP, L2TP, and IPSec
- Provide NTP client and server functionality for clock synchronization or as a time source
- Support SNMPv1/v2c, enabling information querying, modification, and fault diagnosis through MIB for centralized management
- Support LLDP to obtain neighbor device information, monitor link status, and facilitate topology management and fault localization
- Offer remote management through the Maiwe cloud platform, enabling remote device management and on-site network status monitoring
- Adopt the openwrt open architecture, supporting customer secondary development
- Support M.2 interface 5G communication modules, allowing customers to replace them as needed

Specification

Software	
Network Management	Support traffic statistics, operational status, network status, local address, and other status information Support static addressing, DHCP, PPPoE for external network connections, and offers WAN/LAN modes Feature a DHCP server and IP/MAC binding support Support 5G networks, dual-SIM management, APN settings, and link checks Offers wireless AP mode and Client mode Support static routing Provide serial-to-network conversion, Peanut Shell (huashengke) intranet penetration, dynamic DNS, SNMP, LLDP, and cloud services. Support PPTP, L2TP, GRE, TUN, TAP protocol VPN clients Support PPTP, L2TP, and IPSec protocol VPN servers
Firewall	Supports SYN-flood defense, IP dynamic spoofing, MSS clamping, and inbound/outbound data control Supports WAN/LAN port TCP/UDP port mapping Supports IP/MAC/domain filtering, iptables, DMZ (Demilitarized Zone), UPnP, IP/MAC/QoS rate limiting
System Management	Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, and network packet capturing Support time zone settings, NTP (Network Time Protocol) client/server functionality, management port configuration, scheduled tasks, and remote/local logging Support user access control and SSH access Support online restart, scheduled restart, configuration backup/restore, firmware flashing, and factory reset
5G Cellular Network	
Network Format	5G NR SA/NSA, LTE-FDD, LTE-TDD, WCDMA
Working Frequency	5G NR SA: n1/41/77/78/79 5G NR NSA: n41/78/79 LTE-FDD: B1/2/3/5/7/8/20/28 LTE-TDD: B34/38/39/40/41 WCDMA: B1/2/5/8
MIMO	DL 4×4: n1/41/77/78/79 UL 2×2: n41/77/78/79 DL 2×2: LTE

Specification

Theoretical Transfer Rate	5G SA Sub-6: DL 2Gbps/ UL 1Gbps 5G NSA Sub-6: DL 2.2Gbps/ UL 575Mbps LTE: DL 600Mbps/ UL 150Mbps UMTS (DC-HSDPA/HSUPA): DL 42.2Mbps/ UL 11Mbps WCDMA: DL/UL 384 kbps
TX Power	5G NR n1/41: 23dBm±2dB 5G NR n77/78/79: 23dBm+2/-3dB LTE: 23dBm±2dB WCDMA: 24dBm+1/-3dB
RX Sensitivity	LTE-FDD: -96.3dBm(B1)/-94.3dBm(B2)/ -93.3dBm(B3)/ -94.3dBm(B5/7)/ -93.3dBm(B8/20)/ -94.8dBm(B28) LTE-TDD: -96.3dBm(B34/38/39/40)/ -94.3dBm(B41) WCDMA: -106.7dBm(B1)/-104.7dBm(B2/5)/ -103.7dBm(B8)
Wi-Fi 6	
Wi-Fi	Wi-Fi 6 (6th generation wireless network technology) 2.4GHz: 802.11b/g/n/ax 5GHz: 802.11a/n/ac/ax
Theoretical Transfer Rate	2.4GHz: 574Mbps 5GHz: 1201Mbps
Interface	
1G WAN Port	1 * 10/100/1000Base-T(X) RJ45 WAN port (supports LAN mode), supports full/half-duplex, auto MDI/MDI-X connection, and features 1.5kV isolation protection
1G LAN Port	4 * 10/100/1000Base-T(X) RJ45 LAN ports, support full/half-duplex, auto MDI/MDI-X connection, and feature 1.5kV isolation protection
Serial Port	1 * RS485 and 1 * RS232 serial ports, with a connection interface using 5.08mm pitch terminal blocks. Support baud rates from 300bps to 230400bps, with data bits ranging from 5 to 8 bits, stop bits of 1 or 2, and optional None, Odd, or Even parity

Specification

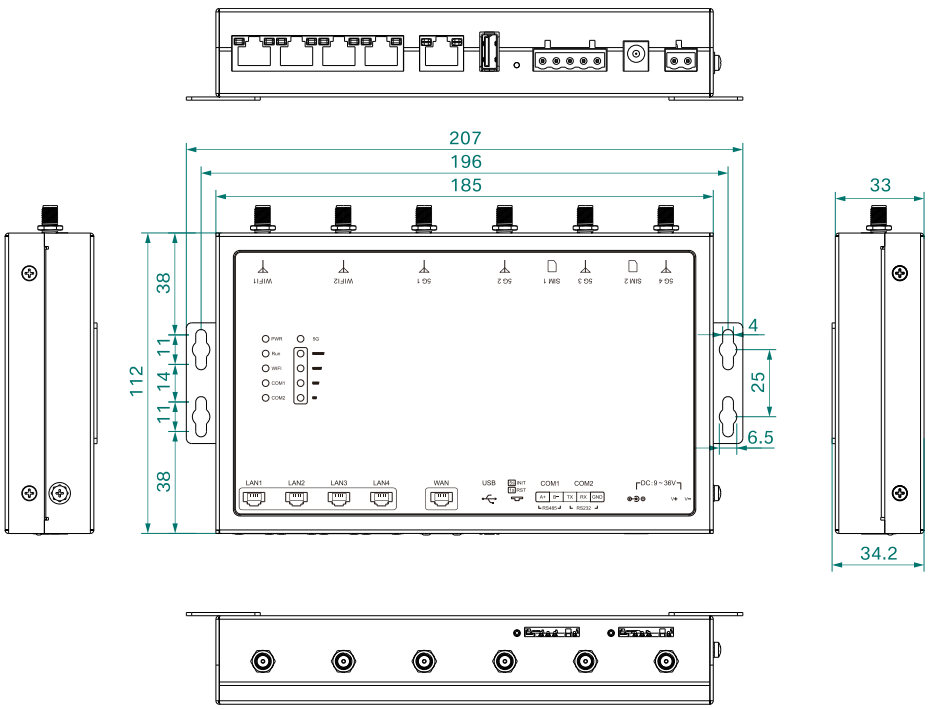
WIFI Antenna connector	2*2.4GHz/5GHz Wi-Fi antenna connectors, using SMA-K connectors with external threads and inner holes
5G Antenna Connector	4 * 5G cellular antenna interfaces, using SMA-K connectors with external threads and inner holes
SIM Card Slot	2 * SIM card slots (1.8V / 3V), supporting dual SIM cards in single standby mode
USB	1 * Type-A USB 2.0 port for expandable storage
Button	One-button restart or factory reset
Status LED	Power indicator, status indicator, serial port indicator, Wi-Fi indicator, 5G indicator, signal strength indicator, Ethernet port speed indicator, and connection/activity indicator
Power Supply	
Input Voltage	DC 9~36V with reverse polarity protection
Power Consumption	<11W when powered by DC12V (full load)
Connection	Terminal blocks with a 5.08mm pitch or a Φ2.5mm DC round head connector can be used for power input.
Physical Characteristics	
Dimensions	207*112*34.2 mm (mounting brackets included)
Installations	Wall mount
IP Code	IP40
Working Environment	
Operating Temp	-40℃~+75℃
Storage Temp	-40℃~+85℃
Relative Humidity	5%~95% (non-condensing)
Industry Standard	

Specification

EMC	IEC 61000-4-2 (ESD): Contact discharge ±6kV, air discharge ±15kV; IEC 61000-4-5 (Surge): Power supply: Common mode ±1kV, Differential mode ±2kV; RS485: Common mode ±4kV, Differential mode ±2kV; Ethernet port: Common mode ±6kV, Differential mode ±2kV; IEC 61000-4-4 (EFT): Power supply: ±4kV; Communication port: ±2kV.
Certifications	CE, FCC, RoHS

Dimensions

Unit: mm



Ordering Information

Standard Model	1G WAN Port	1G LAN Port	RS485	RS232	5G Antenna	2.4GHz/5GHz Antenna	Input Voltage
MIR785-W	1	4	1	1	4	2	DC9~36V

Contact Us

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