MIR685-W

Wall Mount 5G Industrial Wireless Router

- Support 1* 10/100M WAN Port, 4*10/100M LAN ports, 1*RS232/485 serial port, 4*5G antenna connectors, 2*2.4GHz antenna interfaces, 2*SIM card slots, and 1*USB port
- Support 5G/4G/3G cellular wireless network as backup for WAN wired network, enabling wireless and wired terminal devices to connect
- Support wireless modes such as AP, Client, or AP+Client, serving as a Wi-Fi hotspot, wireless client, or bridge, allowing wireless terminal devices to connect
- Support networking of serial port terminal devices, capable of converting protocols such as UDP, TCP, Modbus, HTTPD, WebSocket, MQTT, and Support virtual serial ports
- Support industrial-grade DC power supply input of DC9~36V, with reverse polarity protection
- High-strength metal casing, IP40 protection level, fanless heat dissipation design, ensuring reliable operation in harsh industrial environments ranging from -20°C~ +70°C

Product Description

MIR685-W is a 5-port 100M wall mount 5G industrial wireless router designed specifically for industrial communication network applications. It supports multiple network modes, including LAN, WAN, WLAN, and 5G NR. It intelligently switches between multiple networks for backup, enabling the networking of serial port, wireless, and wired terminal devices.

This product series provides various interfaces, including 1*10/100M WAN port, 4*10/100M LAN ports, 1*RS232/485 serial port, 4*5G antenna interfaces, 2*2.4GHz antenna connectors, and 1 USB port. It support a DC power input of 9~36V and can be wall-mounted to meet the requirements of various network environments.

The product supports a wide range of network management features through web configuration, including PPPoE dial-up, DHCP server, 5G network settings, wireless configuration, IP/MAC binding, static routing, firewall, VPN, serial port to network conversion, network diagnostics, SNMP, LLDP, cloud services, and more. It also offers user management with different levels of permissions, local/remote log management, scheduled restart, configuration backup and restore, firmware upgrades, and factory reset options. It supports one-button restart or factory reset via physical buttons.

The hardware is designed with high-standard industrial protection in mind, featuring industrial-grade components and a rugged high-strength metal casing. It is durable and operates with low power consumption. The wide temperature design and fanless heat dissipation support operation in temperature ranges from -20°C to +70°C. The product has undergone strict safety and EMC testing to meet the demanding requirements of industrial environments.This product can be widely used in various fields, including industrial automation, integrated energy, smart cities, intelligent transportation, smart mining, and smart factories.

Features and Benefits

- Support 5G/4G/3G cellular wireless networks, Wi-Fi wireless networks, and wired WAN network, with support for multi-network backup
- Support MIMO (Multiple-Input, Multiple-Output) to enhance data transmission speed, expand network capacity and wireless coverage, and reduce data packet loss
- WAN port supports DHCP protocol, static addressing, PPPoE dial-up, and other methods to connect to external networks or act as a LAN port for internal network connections
- LAN port supports a DHCP server for dynamic management and configuration of user IP addresses
- 5G network support 5G NR NSA and SA dual-mode networking, is compatible with 4G/3G, and supports 5G/4G dual-card standby, APN configuratio
- Support link monitoring to periodically check the status of 5G network links and initiate link recovery
- WLAN support AP, Client, or AP+Client modes, enabling wireless terminal access, wireless network access, or bridging.
- Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, packet capture for network diagnostics or troubleshooting.
- Firewall features include SYN-flood defense, port mapping, IP/MAC/DNS address filtering, custom iptables rules, DMZ isolation, UPnP, IP/MAC rate limiting, and QoS rate limiting for upload/download
- Captures a range of information at various levels, including kernel, application, and network data, and support functionalities such as local downloading, scheduled storage, and remote monitoring
- Serial port supports various serial 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, MQTT, etc., enabling serial-to-Ethernet or Modbus RTU/ASCII protocol conversion
- Support Peanut Shell local network penetration, enabling remote login and device management using dynamic domain names provided by Peanut Shell
- Support dynamic DNS functionality, allowing remote login and device management via specified domain names
- Support VPN client and server configurations, with client support for PPTP, L2TP, IPSec, OpenVPN, GRE, SSTP tunnel protocols, and server support for PPTP, L2TP, and IPSec protocols
- Support RTC (Real-Time Clock) hardware clock and NTP (Network Time Protocol) network automatic time synchronization
- Support SNMPv1/v2c for information querying, modification, and fault diagnosis through MIB, facilitating centralized management
- Support LLDP (Link Layer Discovery Protocol) to obtain information about LLDP neighbor devices, monitor link statuses, and facilitate topology management and fault localization
- Support remote management through the Maiweyun (Maiwe Cloud) platform, enabling remote device management and on-site network status monitoring

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 Support WAN/LAN modes Includes DHCP server functionality and IP/MAC binding Support 5G networks, dual-SIM card management, APN (Access Point Name) configuration, and link checking Support wireless modes including AP mode, Client mode, and AP+Client mode. Enables static routing Provide features such as serial-to-network conversion, Peanut Shell local network penetration, dynamic DNS, SNMP, LLDP, and cloud services Support VPN client for PPTP, L2TP, GRE, TUN, TAP, and SSTP protocols. Also Support VPN server for PPTP, L2TP, and IPSec protocols
Firewall	Support SYN-flood defense, IP dynamic masquerading, MSS (Maximum Segment Size) clamping, and inbound/outbound data control. Support WAN/LAN port TCP/UDP port mapping. Support IP/MAC/domain name filtering, iptables, DMZ (Demilitarized Zone), UPnP (Universal Plug and Play), and IP/MAC/QoS rate limiting.
System Management	Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, and packet capture for network packet analysis. Support time zone settings, NTP (Network Time Protocol) client/server, Crontab (scheduler for automated tasks), and remote/local logging. Provides user permission management and SSH access for secure remote management. Offers options for 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

Specification

MIMO	DL 4 × 4: n1/41/77/78/79 UL 2 × 2: n41/77/78/79 DL 2 × 2: LTE
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)
Interface	
10/100M WAN Port	1*10/100Base-T(X) auto-sensing RJ45 WAN Port (Support LAN Mode), Full/Half Duplex,auto MDI/MDI-X
10/100M LAN Port	4*10/100Base-T(X) auto-sensing RJ45 LAN Ports, Full/Half Duplex, auto MDI/MDI-X
Serial Port	Serial Port: 1*RS232/485 Connection: 5.08mm pitch terminal blocks Baud Rate: 300bps - 230400bps Data Bits: 5-bit, 6-bit, 7-bit, 8-bit Stop Bits: 1-bit, 2-bit Parity: None, Odd, Even
Wi-FiAntenna Connector	2*2.4G Wi-Fi antenna connectors, utilizing SMA-K (external thread, internal hole), compatible with 802.11b/g/n
SIM Card Slot	2 *SIM card slots (1.8V / 3V), dual SIM card dual standby, supporting 5G/4G/3G

Specification

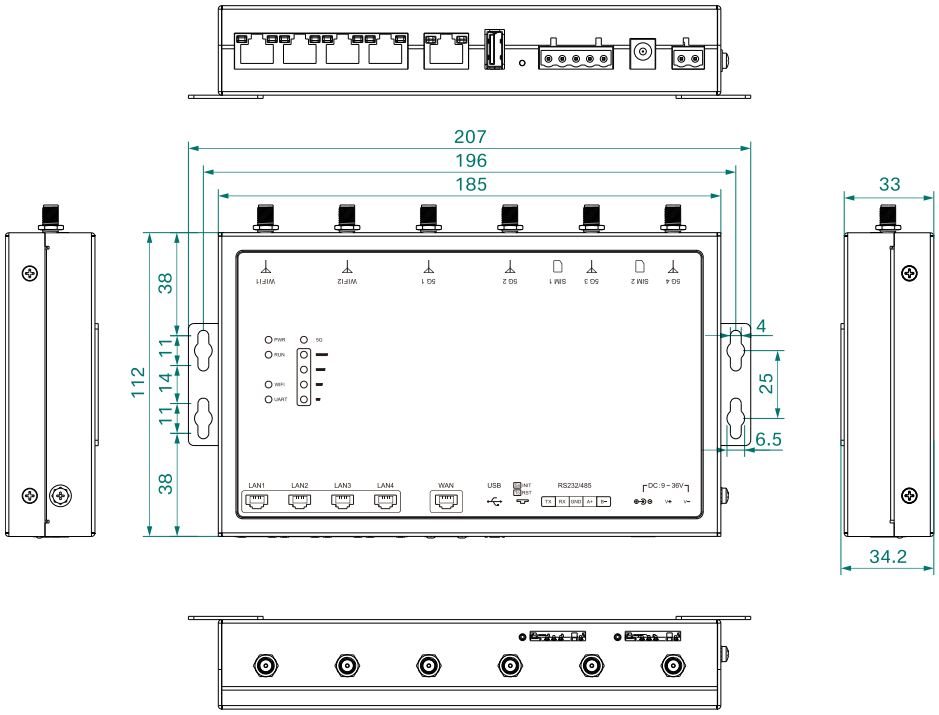
USB	1 Type-A USB 2.0 port for expandable storage
Button	One-button restart or factory reset
Status LED	Power indicator, status indicator, serial port indicator, Wi-Fi indicator, 5G indicator, signal strength indicator, Ethernet port speed and connection/activity indicator
Power Supply	
Input Voltage	DC 9~36V, reverse polarity protection
Power Consumption(full load)	4W @ DC12V (average)
Connection	2*5.08mm pitch terminal blocks or Φ2.5mm DC round head
Physical Characteristics	
Dimensions	207*112*34.2 mm (including mounting brackets)
Installations	Wall mount
IP Code	IP40
Working Environment	
Operating Temp	-20℃~+70℃
Storage Temp	-40℃~+85℃
Relative Humidity	5%~95% (non-condensing)
Industry Standard	
EMC	IEC 61000-4-2 (ESD - Electrostatic Discharge): Contact Discharge: ±6kV Air Discharge: ±15kV IEC 61000-4-5 (Surge): Power Supply: Common mode ±4kV, Differential mode ±2kV RS485: Common mode ±4kV, Differential mode ±2kV Network Port: Common mode ±6kV, Differential mode ±2kV

Specification

Certifications	CE, FCC, RoHS

Dimensions

Unit: mm



Ordering Information

Standard Model	10/100M WAN	10/100M LAN	RS232/ 485	5G Antenna	2.4GHz Antenna	Input Voltage
MIR685-W	1	4	1	4	2	DC9~36V

Contact Us

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