

# MIR655R-W

## 5-Port 100M DIN-Rail Industrial 4G Wireless Router



- 1×10/100Base WAN/LAN combo port, 4×10/100Base LAN ports, 1×RS485 port, 1/2× 4G antenna interface, 2×2.4GHz antenna interface, 1\* dual Nano SIM card slot
- Link backup and mutual backup of wired WAN and 4G cellular networks
- Support AP, Client and AP+Client wireless modes, works as Wi-Fi hotpot, wireless client or Ethernet bridge
- Support UDP, TCP, Modbus, HTTPD, WebSocket, MQTT protocols, support virtual com port
- DC 9~36V input, reverse polarity protection
- High strength aluminum alloy shell, IP40 protection
- Fanless design, case heat dissipation
- Work in -40°C ~ + 75°C harsh industrial environments



### Product Description

MIR655R-W is a 5-port 10/100Base fast Ethernet DIN-rail Mounted industrial 4G wireless router developed for industrial network applications, supporting LAN, WAN, WLAN, 4G LTE and other multi-network online, intelligent switching of multi-network backups, and networking of serial, wireless, and wired terminal devices. The industrial router provides 1×10/100Base-T(X) WAN/LAN combo port, 4×10/100Base-T(X) LAN port, 1×RS485 serial port, 1~2 4G antenna interface and 2×2.4GHz antenna interfaces. The DIN-rail mountable router, with 1 DC 9~36V power input, can meet the needs of a variety of network scenarios.

The industrial 4G router supports WEB management of a variety of functions, such as PPPoE dialing, DHCP server, 4G network, wireless settings, IP/MAC binding, static routing, firewalls, VPN, serial to Ethernet, network diagnostics, SNMP, LLDP, cloud services, etc.; Its system provides user permission management, supports local/remote log management, scheduled reboot, configuration backup and recovery, firmware upgrade, factory reset. The router adopts high-standard industrial protection design, selects industrial-grade components, and uses high-strength aluminum alloy

casing to make it solid and durable. It features low power consumption,  $-40\text{ }^{\circ}\text{C} \sim +70\text{ }^{\circ}\text{C}$  wide temperature durability, fanless metal case cooling. It has passed strict safety regulations and EMC tests to meet the requirements of severe industrial environment applications, so that it can be widely used in industries such as industrial automation, comprehensive energy, smart cities, intelligent transportation, smart mines, smart factories, and more.



## Features and Benefits

- Support 4G cellular wireless network, 2.4G Wi-Fi wireless network and WAN port wired network, support multi-network backup
- WAN port supports DHCP, static IP addresses, PPPoE dial-up, and works as LAN port
- LAN port supports DHCP server, user IP addresses can be dynamically managed and configured in a centralized way
- Support 4G LTE, backward compatible with 2G/3G services, support dual card single standby, APN
- Support link detection and recovery
- WLAN supports wireless AP mode, Client mode, AP+Client mode
- Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, packet capture
- Support defense against SYN-flood, port mapping, IP/MAC/DNS filter, iptables command custom rules, DMZ (Demilitarized Zone), UPnP, IP/MAC traffic throttling, QoS traffic throttling
- Logs contain information about the kernel messages, applications and network, support download, autosave, remote monitor
- Serial port supports UDP, UDP Multicast, Modbus RTU Master/Slave, Modbus ASCII Master/Slave, RealCOM\_MCP/CCP/MW, Pair Connection Master/Slave, Httpd Client, WebSocket Client, MQTT to enable conversion from serial to Ethernet or Modbus RTU/ASCII
- Support peanut shell intranet penetration and dynamic domain name resolution DDNS
- Support dynamic DNS, user can login and manage device remotely by specifying the domain name
- Support VPN client and server to build a private network. The client supports tunnel protocols such as PPTP, L2TP, IPSec, OpenVPN, GRE, and SSTP. The server supports protocols such as PPTP, L2TP, and IPSec
- Support SNMPv1/v2c, use MIB browser to view, modify, and troubleshoot
- Support LLDP, obtain the LLDP neighbor information, monitor link status, maintain topology and locate fault
- Support Maiwe cloud platform management to realize remote management of equipment and monitoring of on-site network status

## Specification

| Software            |   |
|---------------------|---|
| Management Function | <p>Support traffic statistics, running status, traffic statistics view</p> <p>Support static IP address, DHCP, PPPoE, WAN/LAN mode</p> <p>Support DHCP server, IP/MAC binding</p> <p>4G LTE, dual card management, APN, link detection</p> <p>Support wireless AP mode, Client mode, AP+Client mode</p> <p>Support static routing</p> <p>Support serial to Ethernet conversion, peanut shell intranet penetration, dynamic DNS, SNMP, LLDP, cloud service</p> <p>Support PPTP/L2TP/GRE/TUN/TAP protocol VPN client</p> <p>Support PPTP/L2TP/IPSec protocol VPN server</p> |
| Firewall            | <p>Support defense against SYN Flood attack, IP dynamic camouflage, MSS clamping, Inbound/outbound data control</p> <p>Support WAN/LAN port TCP/UDP port mapping</p> <p>Support IP/MAC/DNS filtering, iptables, DMZ, UPnP, IP/MAC/QoS speed limit</p>   |
| System Management   | <p>IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, packet capture</p> <p>Timezone, NTP client/server, port management, Crontab, remote/local logging</p> <p>User permission management, SSH access</p> <p>Online restart, scheduled restart, configuration backup/restore, firmware flashing, factory reset</p>   |
| 4G Cellular Network |   |

## Specification

| 4G Cellular Network       | MIR655R-W                          | MIR655R-W-AU                        | MIR655R-W-AFX         | MIR655R-W-EUX    |
|---------------------------|------------------------------------|-------------------------------------|-----------------------|------------------|
| Network Format            | LTE-FDD, LTE-TDD, WCDMA, GSM/ EDGE |                                     |                       |                  |
| Region                    | China/India                        | Latin America/Australia/New Zealand | North America         | Europe           |
| Working Frequency         |                                    |                                     |                       |                  |
| LTE-FDD                   | B1/3/5/8                           | B1/2/3/4/5/7/8/28/66                | B2/4/5/12/13/14/66/71 | B1/3/7/8/20/28A  |
| LTE-TDD                   | B34/38/39/40/41                    | B40                                 | —                     | B38/40/41        |
| WCDMA                     | B1/5/8                             | B1/2/4/5/8                          | B2/4/5                | B1/8             |
| GSM/EDGE                  | B3/8                               | B2/3/5/8                            | —                     | B3/8             |
| Theoretical transfer rate |                                    |                                     |                       |                  |
| LTE-FDD (Mbps)            | DL 150/ UL 50                      | DL 150/ UL 50                       | DL 150/ UL 50         | DL 150/ UL 50    |
| LTE-TDD (Mbps)            | DL 130/ UL 30                      | DL 130/ UL 30                       | —                     | DL 130/ UL 30    |
| HSPA+ (Mbps)              | DL 21/ UL 5.76                     | DL 21/ UL 5.76                      | DL 42/ UL 5.76        | DL 42/ UL 5.76   |
| WCDMA (kbps)              | DL/ UL 384                         | DL/ UL 384                          | DL/ UL 384            | DL/ UL 384       |
| EDGE (kbps)               | DL/ UL 236.8                       | DL/ UL 236.8                        | —                     | DL 296/ UL 236.8 |
| GPRS (kbps)               | DL/ UL 85.6                        | DL/ UL 85.6                         | —                     | DL 107/ UL 85.6  |
| TX power                  |                                    |                                     |                       |                  |
| LTE-FDD                   | 23dBm±2dB                          | 23dBm±2dB                           | 23dBm±2dB             | 23dBm±2dB        |
| LTE-TDD                   | 23dBm±2dB                          | 23dBm±2dB                           | —                     | 23dBm±2dB        |
| WCDMA                     | 24dBm+1/-3dB                       | 24dBm+1/-3dB                        | 24dBm+1/-3dB          | 24dBm+1/-3dB     |
| PCS1900 (8-PSK)           | —                                  | 26dBm±3dB                           | —                     | 26dBm±3dB        |
| DCS1800 (8-PSK)           | 26dBm±3dB                          | 26dBm±3dB                           | —                     | 26dBm±3dB        |
| GSM900(8-PSK)             | 27dBm±3dB                          | 27dBm±3dB                           | —                     | 27dBm±3dB        |
| GSM850(8-PSK)             | —                                  | 27dBm±3dB                           | —                     | 27dBm±3dB        |
| PCS1900                   | —                                  | 30dBm±2dB                           | —                     | 30dBm±2dB        |
| DCS1800                   | 30dBm±2dB                          | 30dBm±2dB                           | —                     | 30dBm±2dB        |
| EGSM900                   | 33dBm±2dB                          | 33dBm ±2dB                          | —                     | 33dBm±2dB        |
| GSM850                    | —                                  | 33dBm ±2dB                          | —                     | 33dBm±2dB        |

## Specification

| 4G Cellular Network   | MIR655R-W   | MIR655R-W-AU  | MIR655R-W-AFX   | MIR655R-W-EUX   |
|-----------------------|---|---|---|---|
| <b>RX Sensitivity</b> |   |   |   |   |
| LTE-FDD               | -98.1dBm@B1<br>-97.1dBm@B3<br>-98.9dBm@B5<br>-97.4dBm@B8  | -101dBm@B1<br>-100.2dBm@B2<br>-100.9dBm@B3<br>-101.1dBm@B4<br>-101.7dBm@B5<br>-99.9dBm@B7<br>-100.2dBm@B8<br>-102.4dBm@B28<br>-100dBm@B66 | -100.5dBm@B2 (10MHz)<br>-99.5dBm@B4 (10MHz)<br>-100.5dBm@B5 (10MHz)<br>-100.5dBm@B12 (10MHz)<br>-100.7dBm@B13 (10MHz)<br>-100.9dBm@B14 (10MHz)<br>-99.6dBm@B66 (10 MHz)<br>-100dBm@B71 (10 MHz) | -101.0dBm@B1(10MHz)<br>-99.5dBm@B3 (10MHz)<br>-99.5dBm@B7 (10MHz)<br>-100dBm@ B8 (10MHz)<br>-101.5dBm@B20 (10MHz)<br>-101dBm@B28A (10MHz) |
| LTE-TDD               | -96.6dBm@B34<br>-96.7dBm@B38<br>-97.6dBm@B39<br>-97.4dBm@B40<br>-95dBm@B41  | -101.3dBm@B40   | —   | -98.5dBm@ B38 (10MHz)<br>-99.1dBm@ B40 (10MHz)<br>-98.0dBm@B41 (10MHz)  |
| WCDMA                 | -109.4dBm@B1<br>-109.7dBm@B5<br>-110.2dBm@B8  | -109.2dBm@B1<br>-107.7dBm@B2<br>-109.2dBm@B4<br>-110.7dBm@B5<br>-110.2dBm@B8  | -110.4dBm@B2<br>-110.6dBm@B4<br>-110.7dBm@B5  | -111.0dBm@B1<br>-111.0dBm@B8  |
| PCS1900               | —   | -107dBm   | —   |   |
| DCS1800               | -107dBm   | -106.8dBm   | —   | -109.0 dBm  |
| EGSM900               | -109dBm   | -108.2dBm   | —   | -109.0 dBm  |
| GSM850                | —   | -109.3dBm   | —   |   |
| <b>Wi-Fi</b>          |   |   |   |   |
| Frequency             | 2.4GHz(2.412GHz~2.484GHz)   |   |   |   |
| TX Power              | 802.11b: 17dBm~19dBm@11Mbps<br>802.11g: 15dBm~18dBm@54Mbps<br>802.11n: 15dBm~18dBm@MCS7 HT20/ 40  |   |   |   |
| RX Sensitivity        | 802.11b: -91.5dBm~-87.5dBm@11Mbps(PER<8%)<br>802.11g: -78dBm~-74dBm@54Mbps(PER<10%)   |   |   |   |
| <b>Interface</b>      |   |   |   |   |
| WAN Port              | 1×10/100Base-T(X) auto-sensing RJ45 port (Support LAN), support both the full-duplex mode and half-duplex mode, auto-MDI/MDIX, 1.5kV isolation protection |   |   |   |

## Specification

|                                |   |
|--------------------------------|---|
| LAN Port                       | 4×10/100Base-T(X) auto-sensing RJ45 ports, support both the full-duplex mode and half-duplex mode, 1.5kV isolation protection                                     |
| Serial Port                    | 1×RS485 port, 5-pin 5.08mm pitch terminal blocks (occupy 3 pins), 300bps-230400bps baud rate  |
| Antenna Connector              | 1/2 SMA-K (external thread internal hole) antenna interfaces for connecting 4G cellular antennas, 2 SMA-K antenna interfaces for connecting 2.4GHz Wi-Fi antennas |
| SIM Slot                       | 1×dual Nano SIM slots, dual card single standby   |
| Button                         | One-click restart and factory reset   |
| Status LEDs                    | Power, running, Internet, serial port connection, 4G LTE, signal strength, copper port connection   |
| <b>Power Supply</b>            |   |
| Input Voltage                  | DC 9~36V  |
| Power Consumption              | <7W@DC24V(full load)  |
| Connection                     | 5-pin 5.08mm pitch terminal blocks, power occupies 2 pins   |
| Reverse Polarity Protection    | Support   |
| <b>Physical Characteristic</b> |   |
| Dimensions                     | 140×35×100 mm (DIN rail mounting clip excluded)   |
| Installations                  | Easy installation on 35mm DIN rails   |
| IP code                        | IP40  |
| Weight                         | 0.5kg (antenna excluded)  |
| <b>Working Environment</b>     |   |
| Operating Temp                 | -40℃~+70℃   |
| Storage Temp                   | -40℃~+85℃   |
| Relative Humidity              | 5%~95% (non-condensing)   |
| <b>Industrial Standard</b>     |   |

 Specification

|               |   |
|---------------|---|
| EMC           | IEC 61000-4-2(ESD): Level 4<br>IEC 61000-4-5(Surge): Level 3<br>IEC 61000-4-4(EFT): Level 4 |
| Certification | CE, FCC, RoHS   |

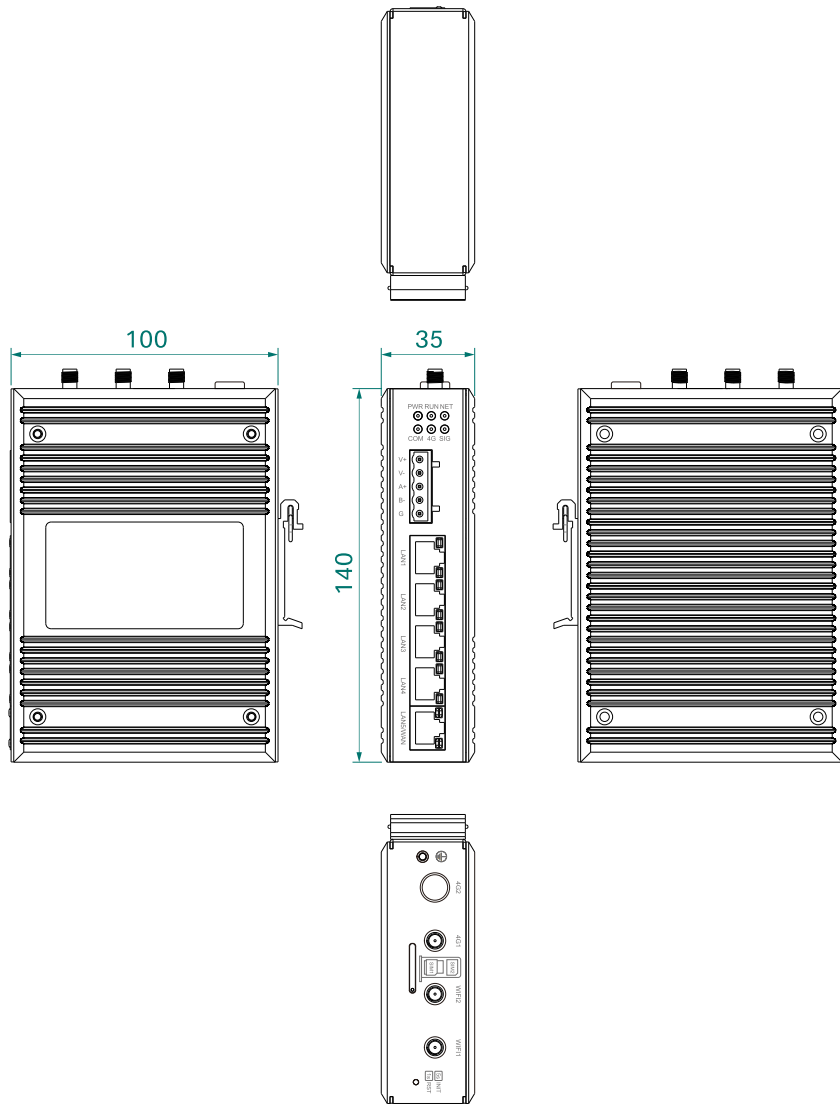




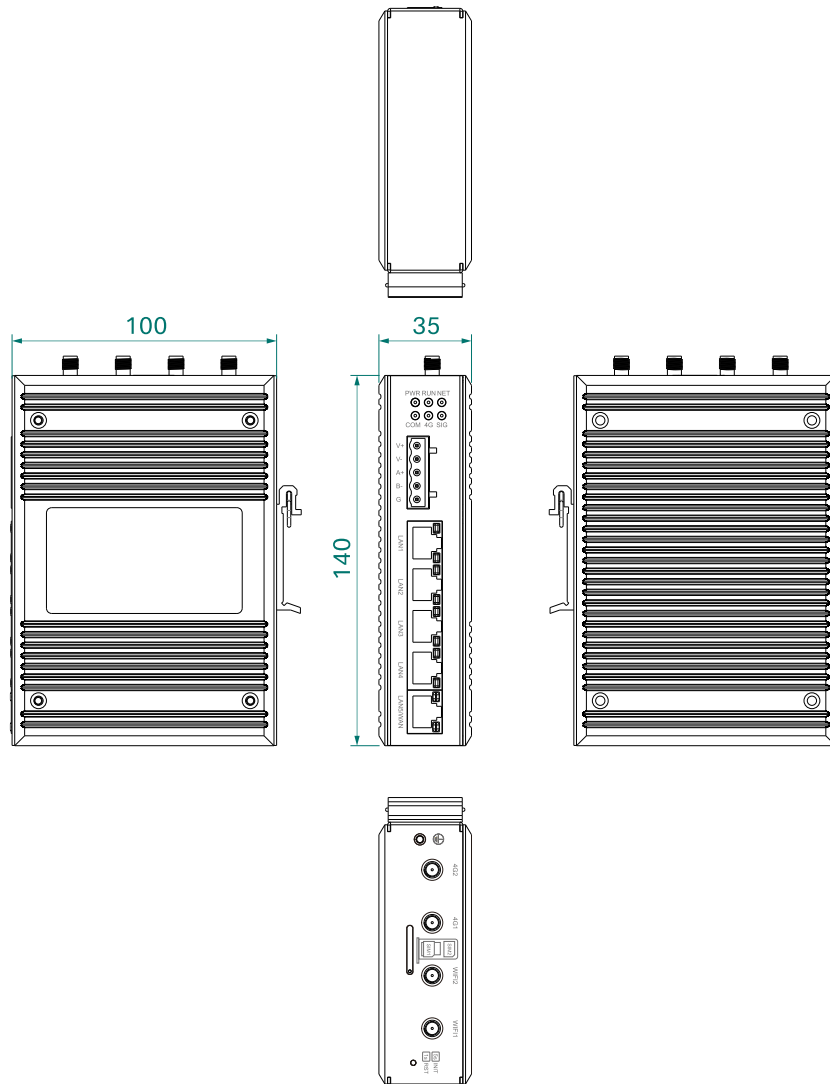
## Dimensions

Unit: mm

- MIR655R-W



- MIR655R-W-AU, MIR655R-W-AFX, MIR655R-W-EUX





## Ordering Information

| Standard Model | 10/100M WAN Port | 10/100M LAN Port | RS485 Port | 4G Antenna | 2.4GHz Antenna | Region         | Input Voltage |
|----------------|------------------|------------------|------------|------------|----------------|----------------|---------------|
| MIR655R-W      | 1                | 4                | 1          | 1          | 2              | China Mainland | DC 9~36V      |
| MIR655R-W-AU   | 1                | 4                | 1          | 2          | 2              | Australia      |               |
| MIR655R-W-AFX  | 1                | 4                | 1          | 2          | 2              | North America  |               |
| MIR655R-W-EUX  | 1                | 4                | 1          | 2          | 2              | Europe         |               |



## Contact Us

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