



Wireless Industrial 5G RedCap Router

MIIF241



About

The MIIF241 is an industrial-grade gateway integrating dual-band IEEE 802.11n & ac Wi-Fi (2.4GHz & 5GHz), 5G RedCap connectivity, and high-precision GNSS (L1), providing stable and versatile networking for industrial applications.

It features dual Micro SIM slots and optional eSIM support for cellular failover, enhancing reliable connectivity reliability in industrial environments. Flexible industrial I/O—including software-configurable RS-232/RS-485, DI/DO, Modbus TCP-to-RTU, and MQTT—enables seamless integration with sensors, controllers, and cloud-based IIoT systems.

Its rugged metal enclosure supports operation from -30°C to $+70^{\circ}\text{C}$ with flexible installation options, including wall-mount, DIN-rail, and desktop.

With strong performance and industrial durability, the MIIF241 is a cost-effective, scalable gateway for modern IIoT deployments.

Features

- Dual Micro SIM slots and optional eSIM capability for reliable cellular connectivity and automatic failover.
- Supports dual-band Wi-Fi (2.4GHz & 5GHz, IEEE 802.11n & ac).
- High-precision GNSS (L1) for accurate industrial IoT positioning.
- Flexible industrial I/O: RS-232/RS-485 (SW configurable) and DI/DO.
- Linux-based OpenWrt OS with VPN, firewall, and SNMP support.

Specifications

General

Cellular Interface

- 5G RedCap
- GNSS: L1

Band

- 5G NR SA: n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 30/ 38/ 40/ 41/ 48/ 66/ 70/ 71/ 77/ 78/ 79
- LTE-FDD: B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 30/ 66/ 70/ 71
- LTE-TDD: B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48

Hardware Interface

- 1 x 10/100/1000 Base-T WAN port
- 1 x 10/100/1000 Base-T LAN port
- 2 x Micro SIM slots
- 1 x Reset Button
- 1 x RS-485/ RS-232 (D+/D-/GND, Non-Isolated, SW configurable)
- 1 x DI (Isolated), 1 x DO (Isolated)
- Terminal Block Power Input: 9~60 VDC

Wireless Interface

- 2T2R IEEE 802.11n 2.4GHz & 802.11ac 5GHz
- Wireless MAC filtering
- Wireless client isolation

Antenna

- 2 x SMA connectors for detachable 5G antenna
- 2 x SMA connectors for detachable WiFi antenna
- 1 x SMA connector for detachable GNSS antenna

Physical Characteristics

Enclosure : Metal case

Dimensions (W x H x D) : 140.0mm*121.3mm*32.5mm

Weight : 500g

Installation : Wall mounting, DIN-rail mounting, Desktop

LED Display :

- 1 x Power status
- 1x Wi-Fi
- 1 x 5G
- 1 x Failover

Power Supply

Power Input : AC 100 ~ 240 V

DC Output : 12V/1.5A(MAX)

Software

Software Version

- Linux Open Wrt version: 21.02 Ledo
- Kernel version: 5.4.284

Network Protocols

- IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client
- Static IP, SNTP, DNS Proxy, Modbus TCP to Modbus RTU,
- MQTT, VLAN

VPN

- OpenVPN, IPSec (3DES, AES128, AES196, AES256, MD5, SHA-1, SHA256), L2TP, PPTP, WireGuard

Firewall

- NAT, Virtual Server, Port Trigger, DMZ
- MAC and URL filter, Stateful packet inspection, DOS attack

Alarm

- SMS, VPN/WAN disconnect, SNMP trap

Others

- DDNS, QoS, SMS Action, Diagnostics

Management

- Web GUI with HTTPS/HTTP, Dual Image, Syslog, SNMP, SSH v2

Environment

Operating Temperature: -30 ~ +70°C

Storage Temperature: -40 ~ +85°C

Ambient Relative Humidity: 10 ~ 95% (Non-condensing)

Humidity: 0 ~ 95% (Non-condensing)

Enclosure Drawing

