


## Introduction

F-NR130 is a wireless router for the Internet of Things, which uses public 3G/4G/5G networks to provide users with wireless long-distance big data transmission functions. Provide 1xRS232,1xRS485,1xLAN and 1xWAN/LAN port to achieve transparent data transmission and routing function. The product has been widely used in the M2M industry in the IoT industry chain, such as smart grid, smart transportation, smart home, supply chain automation, industrial automation, and other fields.

### Industrial-grade Design

- High-performance industrial-grade wireless module
- High-performance industrial-grade 32-bit communication processor
- Using metal shell, protection grade IP30.
- Wide power input range 9~36V

### Stability & Reliability

- WDT Watchdog design
- Anti-dropping mechanism to ensure that the data terminal is always online
- Built-in 1.5KV electromagnetic isolation protection for Ethernet interface
- RS232/RS485 interface, power and data isolation with CSA, UL and IEC standards
- SIM/UIM card interface built-in 15KV ESD protection
- Built-in reverse phase protection and over voltage protection for power interface

### Standard & Convenience

- Standard RS232, RS485, and Ethernet port
- Provide standard wired WAN port (Support standard PPPOE protocol)
- Plug and Play
- Multiple working mode options
- Configuration and maintenance interface
- Support DIN rail and wall-mounting installation
- Support local and remote WEB mode or CLI mode

# 5G Industrial Router F-NR130




High Performance

- Multiple WAN connection methods, include Static IP/DHCP/PPPOE/DHCP-4G/5G
- Support 3G/4G/5G and wired WAN dual link backup
- Support VPN Client: PPTP/L2TP/IPSEC
- Support VPN Server: PPTP/L2TP/IPSEC
- Remote management SYSLOG/SNMP/TELNET/SSH/HTTPS
- Support local upgrade and remote upgrade
- Import and export configuration files
- Support NTP / Build-in RTC
- Support DDNS
- Support VLAN，MAC address clone and PPPoE server
- WIFI Support 802.11b/g/n/ac. Support AP/AP Client/Bridge mode
- WIFI Support WEP, WPA, WPA2 and other encryption methods
- Support Private APN SIM card
- Support APN/VPDN
- Support DHCP server and DHCP client, NAT, DMZ, QOS
- Support TCP/IP, UDP, FTP (Optional), HTTP and other network protocols
- Support SPI firewall, VPN pass through, ACL, URL filter
- Support IPV6/IPV4, 5G LAN
- Support lock frequency, lock resident
- Support EOIP, bridge mode, VxLAN, virtual IP, GRETAP, etc.
- Support traffic statistics, VLAN management, and VLAN division

## Product Specification

| Cellular Specification | | |
|---|---|---|
| **Product** | **F-NR130** | **F-NR130 RedCap** |
| **Items** | **Contents** | |
| **Module** | Industrial grade wireless module | |
| **Frequency** | **5G NR:**<br>n1/n2/n3/n5/n7/n8/n20/n28/n41/n66/n71/n77/n78/ n79<br>**LTE:**<br>B1/B2/B3/B4(66)/B5(18/19/26)/B7/B8/B12(17)/B13 /B14/B20/B25/B26/B28/B29/B30/B38/B39/B40/B4 1/B42/B43/ B46/ B48/B71 | **5G NR:**<br>N1/N3/N5/N8/N28/N41/N78/N79<br>**LTE-FDD:**<br>B1/B3/B5/B8<br>**LTE-TDD:**<br>B34/B38/B39/B40/B41 |
| | Remarks: Different modules support different network standards | |
| **Bandwidth** | 5G NR：DL 3.4 Gbps， UL 350 Mbps<br>LTE Cat20：DL 2.0 Gbps，UL 150 Mbps<br>HSPA+：DL 42 Mbps，UL 5.76 Mbps | Downlink: 226Mbps<br>Uplink: 120Mbps |
| **Power** | < 23dBm | |
| **Sensitivity** | <-97dBm | |

# 5G Industrial Router F-NR130



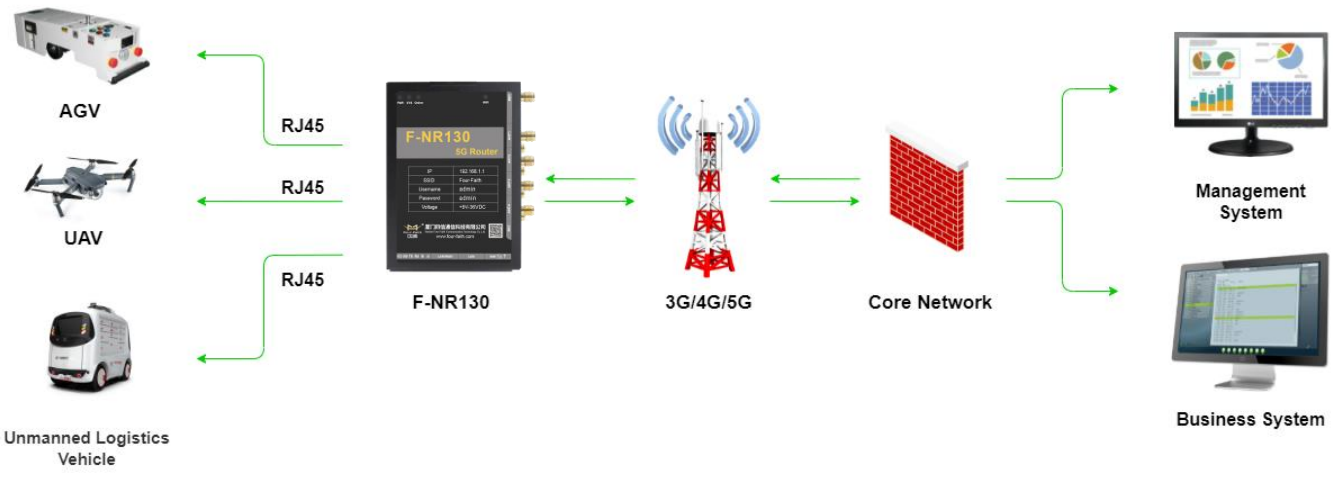

| WIFI Specification | | |
|---|---|---|
| Product | F-NR130 | F-NR130 RedCap |
| Items | Contents | |
| Frequency | IEEE802.11b/g/n, 2.4G, Support AP mode<br>IEEE802.11ac, 5.8G, Support AP mode | |
| Bandwidth | IEEE802.11b/g：54Mbps<br>IEEE802.11n：150Mbps<br>IEEE802.11ac：433Mbps | |
| Security | WEP, WPA, WPA2, WPS (Optional) | |
| Power | 26dBm (11b), 21dBm (11ac/MCS7/HT40), 20dBm (11ac/MCS9/HT80) | |
| Sensitive | < -72dBm @ 54Mbps | |
| **Hardware System** | | |
| Items | Contents | |
| CPU | Industrial-grade 32-bit communication processor | |
| FLASH | 32MB | |
| DDR3 | 512MB | |
| **Interfaces** | | |
| Items | Contents | |
| WAN | 1 x 10/100/1000M Ethernet (RJ45), Auto MDI/MDIX, Built-in 1.5KV electromagnetic isolation protection<br>Remarks: Can be used as LAN port | |
| LAN | 1*10/100/1000M Ethernet (RJ45), Auto MDI/MDIX, Built-in 1.5KV electromagnetic isolation protection | |
| Serial | 1 x RS232/RS485, Built-in 1.5KV electromagnetic isolation protection<br>Data bit：5, 6, 7, 8<br>Stop bit：1, 1.5 (Optional), 2<br>Check：NONE, EVEN, ODD, SPACE (Optional), Mark (Optional)<br>Baud rate：2400~115200bits/s | |
| Indicators | "WIFI", "Online", "PWR", "SYS" | |
| Antenna | **Cellular**：4 standard SMA female antenna interfaces, characteristic impedance 50 ohms<br>**WIFI**：1 standard SMA male antenna interfaces, characteristic impedance 50 ohms | **Cellular**：2 standard SMA female antenna interfaces, characteristic impedance 50 ohms<br>**WIFI**：1 standard SMA male antenna interfaces, characteristic impedance 50 ohms |
| SIM/UIM | Standard drawer type user card interface, support 1.8V/3V SIM/UIM card, built-in 15KV ESD protection<br>Support Micro-SIM*2 card and eSIM | |
| Power | Terminal power socket | |
| Reset button | Through this button, the parameter configuration can be restored to the factory | |

# 5G Industrial Router F-NR130




| Power Supply | | |
|---|---|---|
| Product | F-NR130 | F-NR130 RedCap |
| Items | Contents | |
| Standard | DC 12V/1.5A | |
| Range | DC 9 ~36V | |
| Consumption | <1.2A (12V) | |
| Physical Properties | | |
| Items | Contents | |
| Shell | Metal shell, protection grade IP30 | |
| Size | 106 x 76 x 23.5 mm<br>(Does not include antenna and mounting parts) | |
| Weight | 285g | |
| Others | | |
| Items | Contents | |
| Operating Temperature | -35~+75ºC（-31~+167℉） | |
| Storage Temperature | -40~+85ºC（-40~+185℉） | |
| Relative Humidity | 95% (No condensation) | |

## Topology



# 5G Industrial Router F-NR130




## Dimension (mm)




**Note: 5G Redcap version provide 2 antennas**

## Order Information

| Models | Description |
|---|---|
| **F-NR130** | Cellular (5G NR), Micro-SIM*2, 2.4G/5G WIFI |
| **F-NR130 5G RedCap** | Cellular (5G RedCap), Micro-SIM*2, 2.4G/5G WIFI |