

5G+5G Industrial Router

FNR500



Introduction

The FNR500 is a dual SIM, dual-module 5G/4G IoT wireless communication router, utilizing public 3G/4G/5G networks for long-distance data transmission. It features a high-performance industrial-grade 32-bit processor and wireless module, operating on an embedded real-time OS. With four Gigabit Ethernet LAN ports, one Gigabit Ethernet WAN/LAN port, USB, and console ports, it connects both Ethernet and Wi-Fi devices for transparent data transfer. Supporting features like WIFI6, VxLAN, and dual-card dual-mode (5G network), it enables smart dual-link switching and routing.



Industrial-grade Design

- ▶ High-performance industrial-grade wireless module
- ▶ High-performance industrial-grade 32-bit communication processor
- ▶ Metal shell, protection grade IP30. Metal housing and system safety isolation
- ▶ Wide power input DC 9~36V



Stability & Reliability

- ▶ WDT Watchdog design to ensure system stability
- ▶ Adopt a complete anti-drop 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, in line 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, Ethernet and WIFI Interface
- ▶ Standard WAN port (support standard PPPOE), can directly connected to ADSL device
- ▶ Intelligent data terminal, can enter data transmission state after power on
- ▶ Easy to use, flexible, multiple working mode options
- ▶ Convenient system configuration and maintenance interface (WEB/CLI)
- ▶ Support wall-mounted installation

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High Performance

- ▶ Support 5G LAN
- ▶ Intelligent dual 5G switching
- ▶ Implements smart load balancing for efficient data traffic distribution
- ▶ Intelligent switching backup for 3G/4G/5G and wired WAN dual links
- ▶ Supports VPN, PPTP/L2TP/IPSEC/GRE/OPENVPN
- ▶ Enables remote management with SYSLOG, SNMP, TELNET, SSHD, HTTPS
- ▶ Includes SPI firewall, VPN passthrough, access control, and URL filtering
- ▶ Various encryption methods supported for WiFi, including WEP, WPA, WPA2, etc.
- ▶ SIM/UIM card interface with built-in 15KV ESD protection
- ▶ Supports frequency & cell locking, EOIP, bridge mode, VxLAN, virtual IP, etc.
- ▶ Multiple DHCP servers, DHCP binding by MAC address, DDNS, firewall, NAT, etc.
- ▶ VLAN support, MAC address cloning, and PPPoE server
- ▶ Offers various online/offline trigger modes, including SMS, phone ringing, etc.

Product Specification

Cellular Specification	
Model	FNR500
Items	Contents
Module	Industrial wireless module
Standard and Frequency	5G NR NSA: n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 5G NR SA: n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71 LTE-TDD: B34/B38/39/B40/B41/B42/B43/B48 WCDMA: B1/B2/B3/B4/B5/B6/B8/B19 Note: Band support may vary based on the selected module region.
Theoretical Bandwidth	5G SA Sub-6: DL 2.0 Gbps; UL 766 Mbps 5G NR ENDC: DL 2.2 Gbps; UL 458 Mbps LTE: DL 487 Mbps; UL 150 Mbps WCDMA: DL 42 Mbps; UL 11 Mbps

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Hardware System	
Model	FNR500
Items	Contents
CPU	CPU@880MHz, dual core
TF	8GB EMMC
DDR3	512MB
Flash	32MB
WIFI	WIFI 6 Chip
Cellular Module	Dual cellular module
Basic Function	
Items	Contents
VxLAN	Support
Dual-SIM Dual-Module	Support
VPN	PPTP/L2TP/IPSEC/GRE/OPENVPN
Load Balancing	Support
Power Supply	
Items	Contents
Power Standard	DC 12V/1.5A
Range	DC 9~36V
Operate Current	< 1.1A (12V)
WIFI	
Items	Contents
Wi-Fi Protocol	IEEE802.11 a/b/g/n/ac/ax (WIFI 6)
Frequency Band	2.4GHz+5GHz
Theoretical Max Bandwidth	2.4GHz 2x2MIMO 11ax (WIFI 6), 0.573 Gbps 5.8GHz 2x2MIMO 11ax (WIFI 6), 1.2 Gbps
Frequency Band	20MHz, 40MHz, 80MHz
Mesh Networking	Supports Mesh Networking with Four-Faith CPE/IDU devices
Interfaces	
Items	Contents
WAN	1 x 1G Ethernet (RJ45), Adaptive MDI/MDIX
LAN	4 x 1G Ethernet (RJ45), Adaptive MDI/MDIX
USB	1 x USB 2.0
Indicators	Signal, Online1, Online2, WIFI, SYS, PWR
SIM	2 x Nano SIM card interface, compatible with patch eSIM
Power	Three-core DC locomotive power socket or 2 PIN terminal power supply with built-in power inversion protection
Reset	Restoring the parameter configuration to the factory default value

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Physical Characteristic	
Model	FNR500
Items	Contents
Casing	Metal casing IP30
Dimension	176x124.5x45mm
Weight	800g
Operate Temperature	-35~+75°C
Storage Temperature	-40~+85°C
Humidity	95% (No condensation)

Dimension (mm)



Order Information

Model	Description
FNR500	5G+5G NR, 2.4G/5.8G WIFI, SIM*2(or eSIM)
FNR500-4G/5G	4G LTE+5G NR, 2.4G/5.8G WIFI, SIM*2(or eSIM)