

5G Industrial Router

NR230



Introduction

The NR230 is a 5G NR IoT wireless communication router that leverages public 4G/5G/5G Redcap networks to provide users with wireless long-distance, large-data transmission capabilities. This product features a high-performance industrial-grade 32-bit communication processor and industrial-grade wireless module, with an embedded real-time operating system as its software support platform. It offers 1 RS232 port, 1 RS485 port, and 3 Gigabit Ethernet ports, enabling simultaneous connections to serial devices, Ethernet devices, and Wi-Fi devices. It supports transparent data transmission, Wi-Fi 6, and routing functionality.



Industrial-grade Design

- ▶ High-performance industrial-grade wireless module
- ▶ High-performance industrial-grade 32-bit communication processor
- ▶ Metal shell, protection grade IP66. Metal housing and system safety isolation
- ▶ Wide power input DC 9~36V
- ▶ Waterproof aviation connectors enable simple wiring



Stability & Reliability

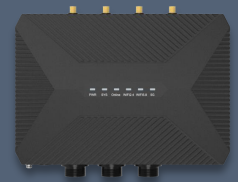
- ▶ WDT Watchdog design to ensure system stability
- ▶ Adopt a complete anti-drop mechanism to ensure that the data terminal is always online
- ▶ Built-in 1.5KV electromagnetic isolation protection for Ethernet interface
- ▶ RS232/RS485 interface power and data isolation, in line with CSA, UL and IEC standard
- ▶ 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
- ▶ Intelligent data terminal, can enter data transmission state after power on
- ▶ Convenient system configuration and maintenance interface (WEB/CLI)
- ▶ Supports wall-mounted and pole-mounted installation

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High Performance

- ▶ Support 5G LAN
- ▶ Input power failure alarm supported
- ▶ Device temperature anomaly alarm supported
- ▶ FRP intranet penetration supported
- ▶ POE+ power reception supported
- ▶ Network port status detection, rate reporting, and latency reporting supported
- ▶ 4G/5G and wired WAN dual-link intelligent failover supported
- ▶ SIM/UIM card interface with built-in 15KV ESD protection
- ▶ Supports VPN protocols: PPTP/L2TP/GRE/IPSEC/OPENVPN
- ▶ Remote management via SYSLOG, SNMP, TELNET, SSHD, HTTPS
- ▶ Supports SPI firewall, VPN passthrough, access control, URL filtering
- ▶ Wi-Fi encryption options: WEP, WPA, WPA2; MAC address filtering supported
- ▶ SIM/UIM card interface with 15KV ESD protection
- ▶ Frequency locking, cell locking, EOIP, bridge mode, VxLAN, virtual IP, GRETAP supported
- ▶ Multiple DHCP servers, DHCP-MAC binding, DDNS, firewall, NAT, DMZ host supported
- ▶ Supports VLAN, MAC address cloning, PPPoE server
- ▶ Multiple online/offline trigger modes: serial/network data triggers
- ▶ Integrated with IoT Cloud for simplified operation and maintenance

Product Specification

Cellular Specification		
Product	5G	5G Redcap
Items	Contents	
Standard and Frequency	5G NR: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75/n76/n77/n78 LTE: B1/B3/B5/B7/B8/B20/B28/B32/B38/B40/B41/B42/B43 Optional: 5G NR: n2/n5/n12/n14/n25/n30/n41/n48/n66/n70/n71/n77 LTE: B2/B4/B5/B12/B13/B29/B30/B66/B71/B41/B46(LAA)/B48 Optional: 5G NR: n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/ n38/n40/n41/n48/n66/n70/n71/n75/n76/ n77/n78/n79 LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B 26/B28/B29/B30/B32/B66/B71 LTE TDD: B34/B38/B39/B40/B41/B42/B43/ B46(LAA)B48	5G NR: n1/n3/n5/n8/n28/n41/n78/n79 LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41
	Note: Band support may vary based on the selected module region.	

Theoretical Bandwidth

5G NR: DL 3.4Gbps, UL 900Mbps
LTE Cat19: DL 1.6Gbps, UL 211Mbps
HSPA+: DL 42Mbps, UL 5.76Mbps

5G: DL 226 Mbps; UL 120 Mbps
LTE: DL 200 Mbps; UL 100 Mbps

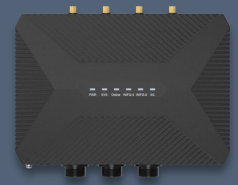


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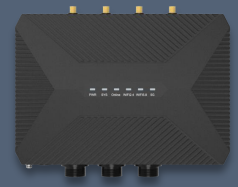
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Hardware System		
Product	5G	5G Redcap
Items	Contents	
CPU	CPU@880MHz, Dual Core	
Flash	128MB	
DDR3	512MB	
WIFI		
Items	Contents	
Wi-Fi Protocol	IEEE802.11 a/b/g/n/ac/ax (WIFI 6)	
Frequency Band	2.4GHz+5.8GHz	
Theoretical Max Bandwidth	2.4GHz 2x2MIMO 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 Yifan/Yeacomm CPE/Router devices	
Power Supply		
Items	Contents	
Power Standard	DC 12V/1.5A	
Range	DC 9~36V	
Operate Current	< 1.1A (12V)	
Interfaces		
Items	Contents	
Waterproof Ethernet Ports	<p>Port 1: 1 x 1G Ethernet interface (RJ45), supports auto MDI/MDIX, default LAN (configurable as WAN), and POE+ power reception.</p> <p>Ports 2/3: 2 x 1G Ethernet interfaces (RJ45), support auto MDI/MDIX, for LAN use only.</p>	
Aviation Connector	<p>SF13/P7 Aviation Female Connector: Includes serial port and power connections, compatible with SP13/P7 male connector for 1-to-3 power/serial cable.</p> <p>Serial Port: Terminal interface with 1 RS232 (optional RS485) and 1 RS485, equipped with 15KV ESD protection.</p> <p>Power: DC power connector with built-in reverse polarity protection</p>	
Indicators	PWR, SYS, Online, WiFi 2.4G, WiFi 5.8G, 5G (tri-color LED)	
SIM Card	2 x standard pluggable SIM card slots (compatible with eSIM)	
WIFI Antenna	2 standard SMA male antenna connectors with 50Ω impedance.	
Cellular Antenna	4 standard SMA female antenna connectors with 50Ω impedance	2 standard SMA female antenna connectors with 50Ω impedance
Reset	Restores configuration to factory settings	

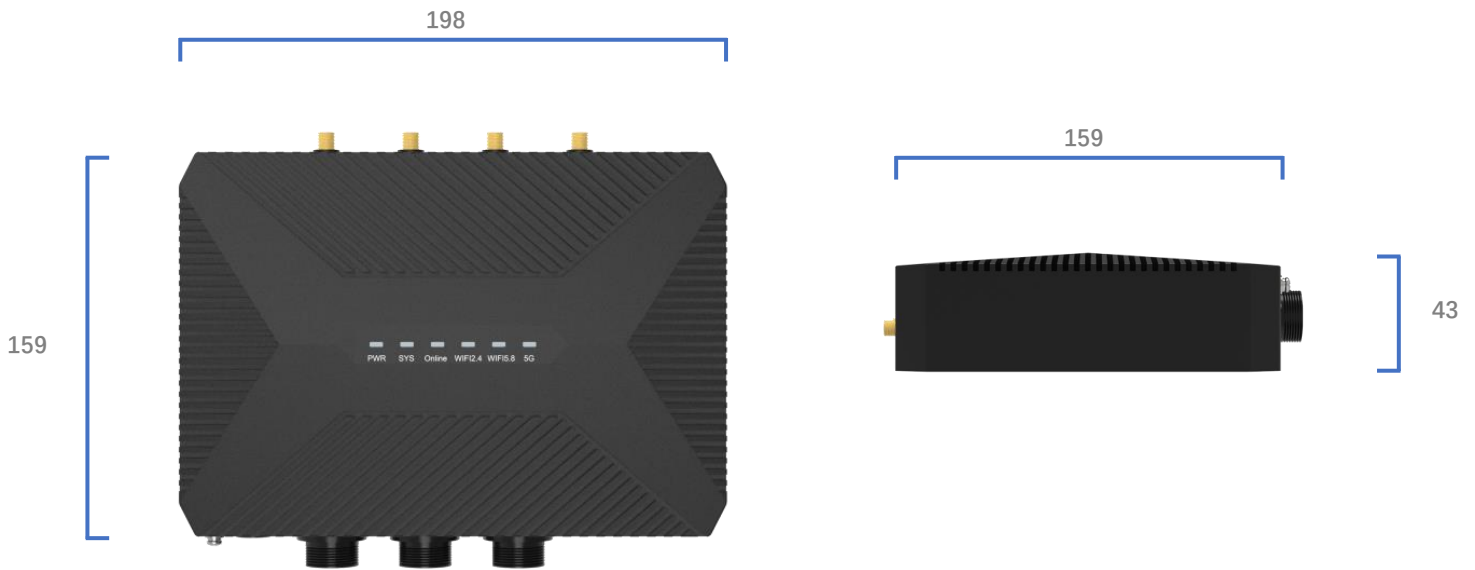


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Physical Characteristic		
Product	5G	5G Redcap
Items	Contents	
Casing	Metal casing IP66	
Dimension	198x159x43mm (Excludes antennas and accessories)	
Weight	1195g	
Operate Temperature	-35~+75°C	
Storage Temperature	-40~+85°C	
Humidity	100% (No condensation)	

Dimension (mm)



Order Information

Model	Description
NR230-NR	5G NR, 2.4G/5.8G WIFI, SIM*2(or eSIM)
NR230-RedCap	5G RedCap, 2.4G/5.8G WIFI, SIM*2(or eSIM)



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