

# NAVIGATEWORX NR500 PRO

Industrial Cellular VPN Router, Dual SIM Failover,  
Multiple Industrial Interfaces



Navigateworx NR500 Pro industrial cellular VPN router enables wireless data connectivity over public and private LTE cellular networks at 4G speeds.

NR500 Pro router has dual SIM backup, 4 Ethernet ports, RS232 and RS485 interfaces are provided to support Serial to IP communication. GPS is optional based on LTE module capability. Supports 9 to 48 VDC wide range power inputs, designed with reverse-voltage protection mechanism. It is an advanced choice for wireless M2M applications with reliable features for data transmission.

## TYPICAL APPLICATION



### Secure and reliable internet access

- Wireless Mobile Broadband 2G / 3G / 4G Connection
- Connection manager ensure seamless communication
- Support Multiple VPN tunnels for data encryption

### Designed for industrial usage

- Power Input Range 9 to 48 VDC
- Industrial design for harsh environment
- Metal casing and din-rail installation

### Easy to use and easy maintenance

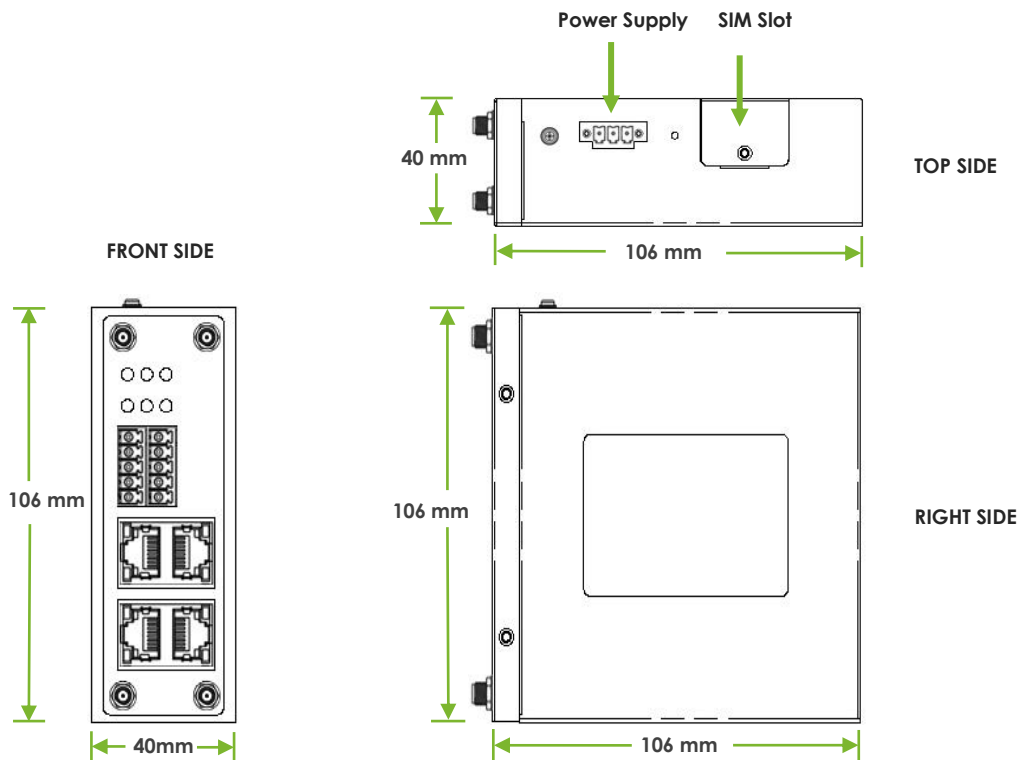
- User friendly web interface for user interaction
- Support Central Management Platform
- Reduce high costs for onsite maintenance

# SPECIFICATIONS





| CELLULAR                    |  |
|-----------------------------|--|
| Frequency Bands             | 4G(LTE)<br>AU&NZ: B1/B2/B3/B4/B5/B7/B28, B40<br>EMEA: B1/B3/B5/B7/B8/B20, B38/B40/B41<br>America: B2/B4/B12/B13<br>Japan: B1/B3/B8/B18/B19/B26, B41<br>China: B1/B3/B8, B34/B38/B39/B40/B41<br>WCDMA: B1/B2/B4/B5/B8/B19<br>TD-SCDMA: B34/B39<br>GSM/EDGE: B2/B3/B5/B8<br><b>More Bands Demands please contact with us</b> |
| SIM                         | 2 x SIM slots, 1.8V / 3V   |
| SIM Failover                | Auto-switch cases: data limited, no network, network denied, data connection fail  |
| Antennas                    | 2 (MAIN + AUX), SMA female   |
| ETHERNET                    |  |
| Number of Ports             | 1 x WAN + 3 x LAN or 4 x LAN, Auto 10/100 Mbps   |
| Magnet Isolation Protection | 1.5 KV   |
| Wi-Fi (Optional)            |  |
| Wireless Mode               | IEEE 802.11b/g/n, Access Point (AP), Client  |
| Wireless Speed              | 2*2 MIMO, 300 Mbps   |
| Wireless Security           | WPA, WPA2, WEP, CCMP, TKIP   |
| Frequency Bands             | 2.412 - 2.484 GHz (2.4 GHz ISM band)   |
| Antennas                    | 2 x RP-SMA for Wi-Fi antenna connectors (One antenna reserve for GPS)  |
| GNSS/GPS (Optional)         |  |
| Features                    | Gen8C Lite of Qualcomm (GPS, GLONASS, BeiDou, Galileo, QZSS)   |
| Protocol                    | NMEA-0183  |
| Antennas                    | 1 x SMA female with 50 ohms impedance  |
| SERIAL                      |  |
| Number of Ports             | 1 x RS-232 (3 PIN) + 1 x RS-485  |
| Connector                   | Terminal block   |
| ESD Protection              | ± 15 KV  |
| Baud Rate                   | 300bps to 115200bps  |
| DIGITAL INPUT & OUTPUT      |  |
| Type                        | 2 x DI + 2 x DO  |
| Connector                   | Terminal block   |
| Isolation                   | 3KVDC or 2KVrms  |
| Absolute maximum VDC        | 36VDC  |
| Absolute maximum ADC        | 100 mA   |
| POWER                       |  |
| Connector                   | 3-pin 3.5 mm female socket with lock   |
| Input Voltage Range         | 9 to 48 VDC  |
| Power Consumption           | Idle: 100 mA@12 V<br>Data link: 400 mA (peak) @12 V  |
| HARDWARE                    |  |
| Watchdog                    | Built-in watchdog  |
| LEDs                        | SYS, NET, USR, RSSI x 3  |
| Reset Button                | Reset/restore to factory default button  |
| Ingress Protection          | IP30   |
| Housing & Weight            | Metal, 300 g   |
| Dimensions                  | 106mm x 106mm x 40mm   |
| Installations               | DIN-rail mounting  |
| Operating Temperature       | -40 °C to 75 °C  |
| Operating Humidity          | 5% to 95% non-condensing   |

| NETWORK                 |  |         |
|-------------------------|--|---------|
| Routing                 | Static routing   |         |
| Network Protocols       | TCP, UDP, IPv4, ICMP, NTP, DNS, HTTP, HTTPS, ARP, PPP, PPPoE, DHCP, IP Passthrough, VRRP   |         |
| Connection Manager      | Ping Detection, Timer Reboot, ICMP for link detection  |         |
| Firewall                | Flexible access control of TCP, UDP, ICMP packets, MAC address filter  |         |
| DDNS                    | Supported some service providers, others can be configured manually  |         |
| SMS                     | SMS Configuration, SMS Gateway, SMS Notification   |         |
| VPN                     |  |         |
| OpenVPN                 | OpenVPN server/client mode, client mode supports up to 5 x OpenVPN tunnels   |         |
| GRE                     | Layer2 and Layer3, supports up to 5 x GRE VPN tunnels  |         |
| IPsec                   | IKEv1, IKEv2, supports up to 5 x IPsec VPN tunnels   |         |
| MONITORING & MANAGEMENT |  |         |
| Web GUI                 | HTTP/HTTPS, Firmware Upgrade   |         |
| Command Line Interface  | SSHv2 and TELNET   |         |
| Management platform     | Central Management Platform  |         |
| APP CENTER              |  |         |
| Apps                    | <b>VPN:</b> L2TP, PPTP, DMVPN<br><b>Network:</b> Dynamic Routing (RIPv1/v2, OSPF, BGP), Email Notification<br><b>Management:</b> AT over IP, AT over COM, AT over Telnet, SNMPv1/v2/v3/, TR069<br><b>Protocol Converter:</b> Modbus Master, Modbus Slave, Modbus ID Mapping, Modbus Gateway<br>IEC101-104, DLMS to IEC104, Modbus to DNP3<br><b>More Apps Demands please contact with us</b> |         |
| APPROVAL                |  |         |
| EMI                     | EN 55032:2012 Class B  |         |
| EMS                     | IEC 61000-4-2 ESD  | Level 4 |
|                         | IEC 61000-4-3 RS   | Level 3 |
|                         | IEC 61000-4-4 EFT  | Level 3 |
|                         | IEC 61000-4-5 Surge  | Level 3 |
|                         | IEC 61000-4-6 CS   | Level 3 |
| Vibration               | EN50155  |         |

## DIMENSIONS



# ORDERING INFORMATION

| MODEL   | PART NUMBER | DESCRIPTION   |
|---|-------------|---|
| <br>NR500-P4G              | A504433     | 4G LTE, Dual SIMs, 4 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC                     |
|   | A504733     | 4G LTE, Dual SIMs, 4 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC, aGPS               |
|   | A514433     | 4G LTE, Dual SIMs, 4 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC, 2.4GHz Wi-Fi       |
|   | A514733     | 4G LTE, Dual SIMs, 4 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC, 2.4GHz Wi-Fi, aGPS |
| <br>NR500-P3G              | A504333     | 3G, Dual SIMs, 4 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC                         |
|   | A514333     | 3G, Dual SIMs, 4 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC, 2.4GHz Wi-Fi           |
| OPTIONAL ACCESSORIES  |             |   |
| <br>Power Supply           | F001009     | Power Supply Adapter, EU Plug, Input 100 to 240VAC, Output 12V DC 1.5A                                  |
|   | F001011     | Power Supply Adapter, AU Plug, Input 100 to 240VAC, Output 12V DC 1.5A                                  |
|   | F001012     | Power Supply Adapter, US Plug, Input 100 to 240VAC, Output 12V DC 1.5A                                  |
|   | F001013     | Power Supply Adapter, UK Plug, Input 100 to 240VAC, Output 12V DC 1.5A                                  |
| <br>Wi-Fi Rubber Antenna  | F001004     | Wi-Fi Rubber Antenna, 2.4G-2.483G, 5dbi, Φ 13×197mm, AC   |
| <br>Wi-Fi Magnet Antenna | F001005     | Wi-Fi Magnet Antenna, 3 Meters, 2.4G - 2.483G, 7dbi, Φ 29×220mm, AC                                     |
| <br>LTE Rubber Antenna   | F001006     | 4G / 3G / 2G Rubber Antenna, 698-960 / 1710-2170 / 2500-2700 MHz, 2dbi, Φ8×108mm, AC                    |
| <br>LTE Magnet Antenna   | F001007     | 4G / 3G / 2G Magnet Antenna, 3 Meters Long, 698-960 / 1710-2700 MHz, 3dbi, Φ 29×112mm, AC               |
| <br>GPS Antenna          | F001015     | GPS Active Magnetic Mount Antenna, 3 Meters Cable   |
| <br>Din-Rail             | F004001     | Din Rail Kit, 35 mm, Aluminium with Black Spray Surface, 50 * 40 * 8.5 mm, 3 * M3.5 Screw Holes         |

## ABOUT NAVIGATEWORX

**ADDRESS:** 4th Floor, C Building, Jingsheng Creative Industry Center,  
No. 2801, Huangpu East Road, Huangpu District,  
Guangzhou City, China

**PHONE:** +86-20-86669763  
**EMAIL:** sales@navigateworx.com  
**WEB:** www.navigateworx.com