NAVIGATEWORX
NR500 STD

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

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

NR500 Std router has dual SIM backup, 2 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

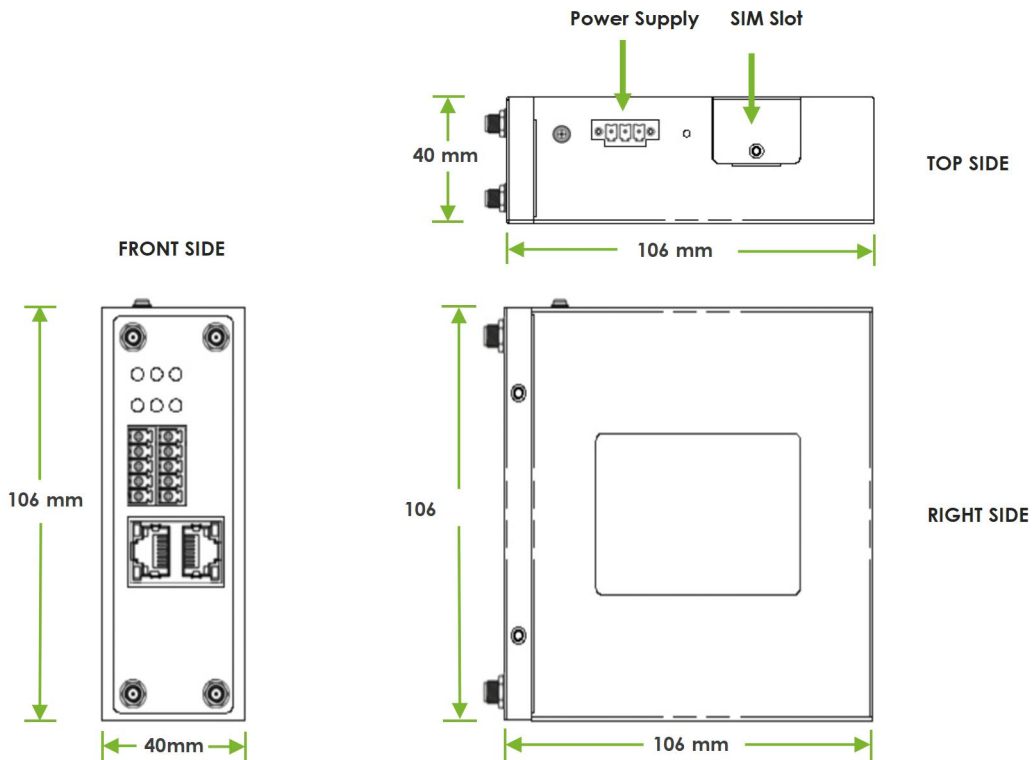**Easy to use and easy maintenance**
- User friendly web interface for user interaction
- Support Central Management Platform
- Reduce high costs for onsite maintenance

SPECIFICATIONS

CELLULAR

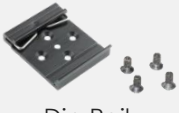|	
Frequency Bands	4G(LTE) AU&NZ: B1/B2/B3/B4/B5/B7/B28, B40 EMEA: B1/B3/B5/B7/B8/B20, B38/B40/B41 America: B2/B4/B12/B13 Japan: B1/B3/B8/B18/B19/B26, B41 China: B1/B3/B8, B34/B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B8/B19 TD-SCDMA: B34/B39 GSM/EDGE: B2/B3/B5/B8 **More Bands Demands please contact with us**
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 + 1 x LAN or 2 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

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 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 85 °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, Call Reboot
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	**VPN**: L2TP, PPTP, DMVPN **Network**: Dynamic Routing (RIPv1/v2, OSPF, BGP), Email Notification, Enforce Modem PPP, QoS **Management**: AT over IP, AT over COM, AT over Telnet, SNMPv1/v2/v3/, TR069, DMPC **Protocol Converter**: Modbus Master, Modbus Slave, Modbus ID Mapping, Modbus Gateway IEC101-104, DLMS to IEC104, Modbus to DNP3 **More Apps Demands please contact with us**

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	
E-mark	E57 10R-06.0135	

DIMENSIONS

Power Supply   SIM Slot

40 mm

106 mm

TOP SIDE

FRONT SIDE

106 mm

40mm

106

106 mm

RIGHT SIDE

NavigateWorx

ORDERING INFORMATION

MODEL	PART NUMBER	DESCRIPTION
NR500-S4G	A502433	4G LTE, Dual SIMs, 2 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC
	A502733	4G LTE, Dual SIMs, 2 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC, aGPS
	A512433	4G LTE, Dual SIMs, 2 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC, 2.4GHz Wi-Fi
	A512733	4G LTE, Dual SIMs, 2 x Eth, 1 x RS232 (3 PIN), 1 x RS485, 2 x DI, 2 x DO, 9 - 48VDC, 2.4GHz Wi-Fi, aGPS

OPTIONAL ACCESSORIES

	PART NUMBER	DESCRIPTION
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
Wi-Fi Rubber Antenna	F001004	Wi-Fi Rubber Antenna, 2.4G-2.483G, 5dbi, Φ 13×197mm, AC
Wi-Fi Magnet Antenna	F001005	Wi-Fi Magnet Antenna, 3 Meters, 2.4G - 2.483G, 7dbi, Φ 29×220mm, AC
LTE Rubber Antenna	F001006	4G / 3G / 2G Rubber Antenna, 698-960 / 1710-2170 / 2500-2700 MHz, 2dbi, Φ8×108mm, AC
LTE Magnet Antenna	F001007	4G / 3G / 2G Magnet Antenna, 3 Meters Long, 698-960 / 1710-2700 MHz, 3dbi, Φ 29×112mm, AC
GPS Antenna	F001015	GPS Active Magnetic Mount Antenna, 3 Meters Cable
Din-Rail	F004001	Din Rail Kit, 35 mm, Aluminum with Black Spray Surface, 50 * 40 * 8.5 mm, 3 * M3.5 Screw Holes

ABOUT NAVIGATEWORX

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