NEXUS
Technology Engineering

Pioneering Agricultural Technology – Expertly Built In Britain

Nexus RTK Receiver Kit

Revolutionizing Positioning with Secure and Innovative Design

Rev 09/24

Key features

- The Nexus RTK Receiver offers cutting-edge navigation and positioning technology with a focus on security and efficiency.
- The receiver is securely housed within the vehicle's cab, protecting it from environmental elements and potential damage.
- A cost-effective antenna mounted on the roof minimizes exposure to wear and tear, ensuring affordability.
- The app-based interface simplifies configuration, allowing users to control functionality directly from their smartphone or tablet.
- Regular device updates via the app enhance functionality and security, ensuring up-to-date performance.
- Built-in 4G NTRIP modem and connectivity options, including GSM and WiFi, ensure reliable corrections in any scenario.
- Versatile connectivity supports external radios, offering robust and adaptable communication links for diverse applications.

The Nexus RTK Receiver offers a seamless navigation experience with robust security and innovative technology. Its receiver is safely housed within the vehicle's cab, with only a low-cost antenna on the roof, ensuring protection from environmental damage and an economical setup. Built for durability, it provides dependable performance in any condition.

With an intuitive app-based interface, users can easily configure and manage the receiver from their smartphone or tablet, reducing setup time. Offering connectivity through 4G NTRIP, GSM, WiFi, or external radios, the Nexus RTK Receiver guarantees reliable communication and flexibility for diverse environments.

info@nexus-te.co.uk
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GPS Sensor Specifications

Receiver Type:	Multi-band GNSS high precision receiver
Supported Channels:	L1CA GPS, E1-B/C Galileo, L1OF GLONASS L2C GPS, E5b Galileo, L2OF GLONASS WAAS, EGNOS, QZSS SBAS
GPS Sensitivity:	-142 dBm
SBAS Tracking:	3-channel, parallel tracking
Update Rate:	10 Hz
Horizontal Accuracy:	RMS(67%) 2DRMS (95%)
RTK:	10 mm+1 ppm 20 mm+2 ppm
SBAS (WAAS):	0.3 m 0.6 m
Autonomous:	1.2 m 2.5 m
Heading accuracy:	0.4°
Pitch/Roll Accuracy:	1°

Cold Start:	~25s typical (no almanac or RTC)
Hot Start:	~2s typical (almanac, RTC and position)
Convergence Time:	~10s

Maximum Speed:	1,850 kph (999kts)
Maximum Altitude:	18,288 m (60,000 ft)

Communications

Wireless:	GSM/WiFi
SIM Style:	Nano SIM
Serial Ports:	RS-232
Baud Rates:	9600 -921600
Data I/O Protocol:	NMEA 0183

Correction I/O

Protocol:	RTCM v3 (RTK)

Environmental

Operating Temperature:	-40°C to +70°C
Storage Temperature:	-40°C to +85°C
Humidity:	95% non-condensing
Enclosure (Antenna):	IP65
Enclosure (Receiver):	IP4X

Power

Input Voltage:	9-36V DC
Power Consumption:	<1.4W @ 12V DC
Current Consumption:	~110mA @12V DC
Reverse Polarity:	Protected
Antenna:	3.3V DC (Powered by Receiver)

Mechanical

Dimensions(Receiver)(mm): 150(h)x120(w)
Dimensions(Antenna)(mm): 200(h)x170(w)

Weight (Receiver):	694g
Weight (Antenna):	456g
Power/Data Connections:	M12 8-Pin A- Code D-sub 9 Female
Antenna Connector:	N-Type Female
Antenna Cable Length:	5m
Power/Data Cable Length:	5m
Antenna Mounting:	Magnetic VESA 75x75
Receiver Mounting:	2x 6mm(d)x6mm(w)

Nexus Technology & Engineering Ltd
Highfields, Northfield Road,
Messingham,
North Lincolnshire,
DN17 3SH

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