

S980+ GNSS Receiver BE



GNSS Receiver
Dual Antenna
for Machine Control
Solutions

S980+ BE TECHNICAL FEATURES

RECEIVER DUAL ANTENNA

Satellite signals tracked	GPS: L1 C/A, L2P, L2C, L5 GLONASS: L1 C/A, L2P, L2C, L3 BEIDOU: B1, B2, B3, ACEBOC GALILEO: E1, E5a, E5b, E6, ALTBOC QZSS: L1, L2, L5
PPP	B2b PPP, HAS
Channels	1408
Position Rate	Up to 20 Hz
Signal Reacquisition	< 1 s
RTK Signal Initialization	Typically < 10 s
Hot Start	Typically < 15 s
Initialization Reliability	> 99.9 %
Internal Memory	8 GB
OS	Linux
Display	1.45" TFT LCD, 240 x 320 pixels
Tilt Sensor	IMU

POSITIONING¹

STATIC GNSS SURVEYING

High Precision Static Horizontal	2.5 mm + 0.1 ppm RMS
High Precision Static Vertical	3.5 mm + 0.4 ppm RMS
Static and Fast Static Horizontal	3 mm + 0.5 ppm RMS
Static and Fast Static Vertical	5 mm + 0.5 ppm RMS

CODE DIFFERENTIAL POSITIONING

Accuracy	0.40 m RMS
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SBAS POSITIONING²

Accuracy	0.60 m RMS
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REAL TIME KINEMATIC (< 30 Km) – NETWORK RTK³

Fixed RTK Horizontal	8 mm + 1 ppm RMS
Fixed RTK Vertical	15 mm + 1 ppm RMS
Speed accuracy	<0.03m/s RMS
Heading accuracy	1 m baseline: 0.2°

INTEGRATED GNSS ANTENNA

High accuracy multi-constellation antenna, zero phase center, with internal multipath suppression

INTERNAL RADIO 2-5 WATT

Type	Tx - Rx
Frequency Range	410 - 470 MHz
Channel Spacing	12.5 KHz / 25 KHz
Range	5 Km in urban environment Up to 15 Km with optimal conditions ⁴

INTERNAL MODEM

Band	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/ B13/B18/B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 UMTS: B1/B2/B4/B5/B6/B8/B19 GSM: B2/B3/B5/B8 Nano SIM card
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COMMUNICATION

I/O Connectors	Lemo connects the external power supply and external radio Type-C, for receiver power supply and data transfer GNSS port for second antenna
Bluetooth	2.1 + EDR, V5.0
Wi-Fi	802.11 b/g/n
Web UI	To upgrade the software, manage the status and settings, data download, etc. via Smartphone, tablet or other electronic device with Wi-Fi capability
Reference Outputs	RTCM2.3, RTCM3.0, RTCM3.2 MSM, CMR, CMR+, DGPS
Navigation Outputs	NMEA 0183
Heading	Supported with second antenna

POWER SUPPLY

Battery	Internal rechargeable 7.2 V - 13600 mAh
Voltage	9 to 28 V DC external power input with over-voltage protection (5-pin Lemo)
Working Time	Up to 15 hours
Charge Time	Typically 4 hours

PHYSICAL SPECIFICATION

Dimensions	Ø 151 mm x 92 mm
Weight	1.5 Kg
Operating Temperature	-40°C to 65°C (-40°F to 149°F)
Storage Temperature	-40°C to 80°C (-40°F to 176°F)
Waterproof/Dustproof	IP67
Shock Resistance	Designed to endure to a 2 m pole drop on hardwood floor with no damage
Vibration	Vibration resistant

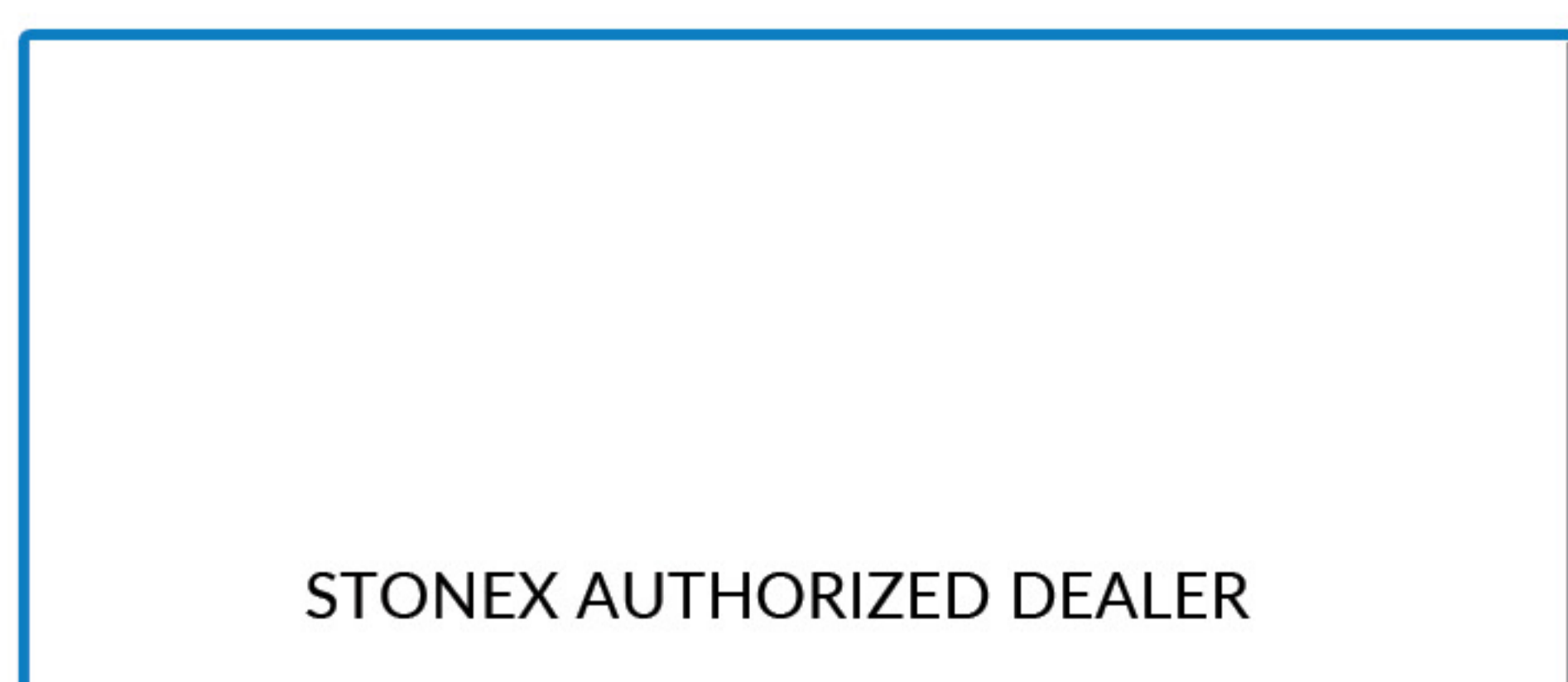
1. Accuracy and reliability are generally subject to satellite geometry (DOPs), multipath, atmospheric conditions, and obstructions. In static mode, they are subject even to occupation times: the longer the baseline, the longer the occupation time must be.

2. It depends on the SBAS system's performance.

3. Network RTK precision depends on the network's performance and is referenced to the closest physical base station.

4. Varies with the operating environment and with electromagnetic pollution

Illustrations, descriptions and technical specifications are not binding and may change



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