

SL900 GNSS Receiver

Data Specifications

GNSS

Signal Tracking	GPS (L1C/A, L1C, L2P(Y), L2C, L5) GLONASS (L1, L2, L3*) BeiDou (B1I, B2I, B3I, B1C, B2a, B2b*) Galileo (E1, E5A, E5B, E6*) IRNSS (L5*) QZSS (L1, L2, L5, L6*) SBAS (L1, L2, L5) L-Band*
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No. of Channels	1408
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MEASUREMENT PERFORMANCE

Real-time Kinematic	H: 8mm + 1ppm RMS / V: 15mm + 1ppm RMS
Network RTK	H: 8mm + 0.5ppm RMS / V: 15mm + 0.5ppm RMS
Post Processing Kinematic	H: 8mm + 1ppm RMS / V: 15mm + 1ppm RMS
High-precision Static	H: 2.5mm + 0.1ppm RMS / V: 3.5mm + 0.4ppm RMS
Static and Fast Static	H: 2.5mm + 0.5ppm RMS / V: 5mm + 0.5ppm RMS
DGPS Position Accuracy	H: 25cm RMS / V: 50cm RMS
SBAS Position Accuracy	H: 50cm RMS / V: 85cm RMS
L-Band	H: 10cm / V: 20cm
Code Differential	DGPS/RTCM
Initializing Time	2-10s
Initializing Reliability	99.9%
Tilt Survey Performance	Additional horizontal pole-tilt uncertainty typically less than 10mm +0.7 mm/°tilt (2.5cm accuracy in the inclination of 30° under ideal circumstances)

COMMUNICATIONS

Network Communication	Internal 4G Mobile Network TDD-LTE/FDD-LTE/WCDMA/GPRS/GSM GSM 900 MHz & 1800 MHz WCDMA 2100 MHz/900 MHz, LTE Band 1,3,7,8,20
Internal UHF Radio	Satel radio for Tx/Rx Transmitting Power: 1 W & 2 W Frequency Range: 403MHz-473MHz Working Range: Typically 3~5km, optimal 5~8km

I/O Interface

	Bluetooth: V2.1 + EDR, NFC, E-Bubble Wi-Fi: 2.4G, 802.11b/g/n USB, TNC antenna port, SIM card slot, TF card slot, DC power input (5-pin)
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SYSTEM

Operation System	Linux
Start-up Time	3s
Data Storage	Circulating 8 GB Internal Storage; Supports 32 GB SD card

DATA MANAGEMENT

	Output rate 1Hz-20Hz CMR, RTCM2.X, RTCM3.0, RTCM3.2 GNS, Rinex NMEA 0183
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GENERAL

Environmental	IP67 environmental protection Waterproof to 1m (3.28ft) depth Temporary Submersion Shock resistant body to 2m (6.5ft) pole drop Temperature -40°C to 65°C Operating -40°C to 85°C Storage
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Physical Properties

	Size: 170mm x 95mm Weight: 1.2kg including battery Battery: 5,000mAh Lithium-Ion Battery Operation Time: 10 hours (RTK Rover)
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Note

- There is no public GLONASS L3 CDMA or Galileo E6 ICD. The current capability in the receivers is based on publicly available information.
 - L-Band, IRNSS L5, QZSS L6 can be provided by firmware upgrade.
 - Accuracies are dependent on GNSS satellite availability.
- Descriptions and Specifications are subject to change without notice.



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The SL900 is a high-precision GNSS receiver that performs even under the most demanding conditions. With its features, the SL900 is capable of delivering highly accurate data in real-time to any devices via a Bluetooth connection. Compact and lightweight, this GNSS receiver is one of the most flexible solutions that promises positioning reliability.



Tilt compensation solution

With surveyors in mind, Satlab designed a solution to increase efficiency in your workflow by cutting down time wasted from offsetting slanted measurements. With the tilt compensator, the SL900 can save up to 20 percent of time compared to conventional surveying practices. This solution allows you to focus on your surroundings conveniently while ensuring your safety and comfort.



Applications

- Monitoring
- Mapping
- Land Survey
- Topography and As-built
- Landfill
- Hydrographic
- Agriculture
- Sensor
- UAV Base Station

Efficient and dependable

Powered by advanced GNSS engine, this receiver offers precise positioning and advanced interference mitigation which performs even in the most remote or challenging environments. Using its 1408 channel tracking capabilities, it can track all current and upcoming signals, offering sub-metre to centimetre precise positioning with different modes (RTK, PPK, Static).

Advanced Technologies Inside

Equipped with the latest tilt compensation algorithm and built-in high-performance 9-axis Inertial Measurement Unit (IMU), the measurement for hard-to-reach points is simple but precise with the high-performance tilt survey. Quality results are guaranteed even if you lose the signal while under extreme circumstances with great anti-interference ability.

TECHNICAL SUPPORT
Satlab offers online resources and a professional support network available worldwide.

