# SL900 GNSS Receiver

## Data Specifications

### GNSS

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|---|---|
| **Signal Tracking** | GPS (L1, L1C, L1C/A, L1P(Y), L2, L2C, L2P, L5) |
| | GLONASS (L1, L1 C/A, L1P, L2, L2C, L2C/A, L2P, L3 CDMA*) |
| | BeiDou (B1, B2, B1I, B2I, B3, B1C, B2a) |
| | Galileo (E1, E5A, E5B, E5 Alt-BOC, E6*) |
| | NavIC (IRNSS: L5*) |
| | QZSS (L1C/A, L1C, L1S, L2C, L5, L6*) |
| | SBAS (WAAS, EGNOS, MSAS, GAGAN) |
| | L-Band* |
| **No. of Channels** | 990+ |

### MEASUREMENT PERFORMANCE

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|---|---|
| **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: 4cm / V: 10cm* |
| **Code Differential** | DGPS/RTCM |
| **Initializing Time** | 2-10s |
| **Initializing Reliability** | 99.9% |
| **PPS**(worldwide correction service) | Convergence to full accuracy typically 15-20 min. |
| **IMU Tilt Survey Performance** | Additional horizontal pole-tilt uncertainty typically less than 8mm +0.4 mm/°tilt (2.5cm accuracy in the inclination of 30° under ideal circumstances) |

### COMMUNICATIONS

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|---|---|
| **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: 0.5W, 1 W, 2 W(Optional) |
| | Frequency Range: 403Mhz-473Mhz/865MHz~867MHz (optional) |
| | Working Range: Typically 3~5km, optimal 5~8km |

### I/O Interface

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

### SYSTEM

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| **Operation System** | Linux |
| **Start-up Time** | 3s |
| **Data Storage** | Circulating 16GB Internal Storage; Supports 32G SD card |

### DATA MANAGEMENT

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| | Output rate 1Hz-20Hz |
| | CMR, CMR+, CMRx RTCM2.X, RTCM3.0, RTCM3.1, |
| | RTCM3.2, NMEA, RINEX, VRS, FKP and MAC option. |

### GENERAL

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| **Environmental** | IP67 environmental protection |
| | Waterproof to 1m (3.28ft) depth, Temporary Submersion |
| | Shock resistant body to 2m (6.5ft) pole drop |
| | Humidity: 100%  non-condensing |
| | Temperature         -40°C to 65°C Operating |
| | -40°C to 85°C Storage |
| **Physical Properties** | Shock and vibration: MIL-STD-810 G, 514.6 |
| | Size: 170mm x 95mm |
| | Weight: 1.2kg including battery |
| | External power supply 12V: Nominal 11-24V DC, range supported. |
| | Exchangeable Li-Ion Battery: 5,000mAh |
| | Operation Time: 10 hours (RTK Rover) |
| **Supported controllers & software** | Controller: Satlab SHC30, Satlab SHC55, New Satlab SHC55, |
| | Satlab SLC and third party; Software: Satsurv latest or later. |

Note: Descriptions and Specifications are subject to change without notice.
1.There is no public GLONASS L3 CDMA or Galileo E6 ICD. The current capability in the receivers is based on publicly available information.
2.L-Band, IRNSS L5, QZSS L6 can be provided by firmware upgrade.
3.The accuracy of L-band depends on the equipment observation environment and timing.

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# SATLAB®
GEOSOLUTIONS

# SL900
## GNSS Receiver

ISO 9001 CERTIFIED  CE

Made by Sweden

*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.*

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| Swedish Quality | Tilt Compensator | Multi-Constellation Tracking | Bluetooth | Long Battery Life (> 8 hours) | Windows Compatibility | Android Compatibility | iOS Compatibility | NFC Module | Internet RTK Technology | PPK Mode |

## 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 990+ 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.

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|---|---|---|---|---|
| Multi-Constellation Tracking | NFC Technology | Data Collector | Long Operation Time | Professional Support Network |