

# SL900 GNSS Receiver

## Data Specifications

### GNSS

#### Signal Tracking

GPS: L1C/A, L2C, L2E,L5  
GLONASS: L1C/A, L1P,L2C/A,L2P,L3  
Galileo: E1, E5A, E5B,E5AltBOC,E6  
QZSS: L1C/A, L1C,L2C,L5,L6  
Compass: B1,B1C,B2,B3Navic  
IRNSS: L5  
SBAS: WAAS, EGNOS,GAGAN,MSAS,L1C/A,L5  
On module L-band B2B  
AIM+ unique anti-jamming and monitoring system against narrow and wideband interference  
IONO+ advanced scintillation mitigation  
APME+ a posteriori multipath estimator for code and phase multipath mitigation  
LOCK+ superior tracking robustness under heavy mechanical shocks or vibrations

#### Additional Technologies

#### No. of Channels

970

### MEASUREMENT PERFORMANCE

#### Real-time Kinematic

H: 6 mm + 0.5 ppm RMS / V: 10 mm + 1 ppm RMS

#### Network RTK

H: 8 mm + 0.5 ppm RMS / V: 15 mm + 0.5 ppm RMS

#### Post Processing Kinematic

H:8 mm + 1 ppm RMS / V:15 mm + 1 ppm RMS

#### High-precision Static

H: 2.5 mm + 0.1 ppm RMS / V: 3.5 mm + 0.4 ppm RMS

#### Static and Fast Static

H: 2.5 mm + 0.5 ppm RMS / V: 5 mm + 0.5 ppm RMS

#### DGPS Position Accuracy

H: 25 cm RMS / V: 50 cm RMS

#### SBAS Position Accuracy

H: 50 cm RMS / V: 85 cm RMS

#### L Band Accuracy

H: 20 cm RMS / V:30 cm RMS

#### Code Differential

DGPS/RTCM

#### Initializing Time

2 - 8 s

#### Initializing Reliability

99.9%

#### Time to first Fix

Cold start:< 45 s Hot start:< 30 s Signal re-acquisition:< 2 s

#### Tilt Survey Performance

Additional horizontal pole-tilt uncertainty typically less than 8mm +0.7 mm/°tilt (2.5cm accuracy in the inclination of 60°)

### INTERNAL RADIO

#### Frequency | Working Range

403MHz~473MHz | Typically 5km, optimally 8-10km

#### Transmitting Power

1- 4 W , Support HI-TARGET, TRIMTALK450S, TRIMMARK III, TRANSEOT, SATEL-3AS, etc..

### COMMUNICATIONS

#### Communication Ports

Internal 4 G Mobile Network  
TDD-LTE/FDD-LTE/WCDMA/GPRS/GSM/CDMA  
NTRIP,HTIP,FTP Enabled  
Bluetooth: V2.1 + EDR, NFC, Mini USB Wi-Fi: 2.4 G , 802.11 b/g/n

### SYSTEM

#### Operation System

Linux

#### Start-up Time

3 s

#### Data Storage

Circulating 8 GB Internal Storage;  
Supports 32 G SD card

### DATA MANAGEMENT

20 Hz Update (up to 100 Hz)  
CMR, CMR+, RTCM2.X, RTCM3.0, RTCM3.2  
GNS, Rinex,RTCM3.1,NMEA Output

### GENERAL

#### Environmental

IP67 environmental protection  
Waterproof to 1m (3.28ft) depth  
Temporary Submersion  
Shock resistant body to 2 m (6.5ft) pole drop  
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: 170 mm x 95 mm  
Weight: 1.2 kg including battery  
Battery: 5,000 mAh Lithium-Ion Battery  
Battery Life: 10 hours (RTK Rover)

Note

<sup>1</sup> Hardware ready



# SL900 GNSS Receiver



Made by Sweden



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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.

Adaptability and Stability

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.

  
Swedish Quality

  
Tilt Survey

  
Multi-Constellation Tracking

  
Bluetooth

  
Long Battery Life (> 8 hours)

  
Windows Compatibility

  
Android Compatibility

  
iOS Compatibility

  
NFC Module

  
Internet RTK Technology

  
PPK Mode

Applications

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

TECHNICAL SUPPORT

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



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 970 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

SL900 enables accuracy and reliability in the toughest conditions, allowing you to complete projects with high quality and efficiency. It includes:  
**AIM+** : the most advanced on-board interference mitigation technology on the market (narrow and wide band, chirpjammers) .  
**LOCK+**: for robust tracking during high vibrations and shocks.  
**APME+**: multipath mitigation to disentangle direct signal and those reflected from nearby structures.  
**IONO+**: provides advanced protection against ionospheric disturbances.



  
Multi-Constellation Tracking

  
NFC Technology

  
Data Collector

  
Long Battery Life

  
Professional Support Network