SL900 GNSS Receiver

Data Specifications

GNSS

Signal Tracking	GPS (L1C/A, L1C, L2P(Y), L2C, L5) GLONASS[1] (L1, L2, L3) BeiDou[2] (B1I, B2I, B3I, B1C, B2a, B2b*) Galileo[3] (E1, E5A, E5, AltBOC, E5B, E6) IRNSS (L5) QZSS (L1, L2, L5, L6*) SBAS WAAS, MSAS, GAGAN(L1C/A, L5) PPP(B2b-PPP) L-Band (Up to 5 Channels) TerraStar®
No. of Channels	1408

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
PPP	H: 20cm / V: 10cm
Code Differential	DGPS/RTCM
Initializing Time	2-10s
Initializing Reliability	99.9%
SmartLink (worldwide correction service) optional	Adaptive on-the-fly satellite selection Remote precise point positioning (3 cm 2D)1, Initial convergence to full accuracy typically 18 min, Re-convergence < 1 min
SmartLink fill (worldwide correction service) optional	Bridging of RTK outages up to 10 min (3 cm 2D)
Tilt Survey Performance	Additional horizontal pole-tilt uncertainty typically less than 10mm +0.7 mm/°tilt (2.5cm accuracy in the inclina -tion of 30° under ideal circumstances)

COMMUNICATIONS

Communication Ports 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	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) Internal Radio: Satel radio for Tx/Rx[4] Transmitting Power:1 W& 2 W Frequency Range:403Mhz-473Mhz Working Range: Typically 3~5km, optimal 5~8km

SYSTEM

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

DATA MANAGEMENT

Output rate 1hz, 2Hz, 5Hz. Anything
above are extra payable.
CMR, RTCM2.X, RTCM3.0, RTCM3.2
GNS, Rinex
Full NMEA output language with GPGGA/
GPGLL/GPGSA/GPGSV/GPRMC
TerraStar® and RTK Assist Service

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

Note

[1] Hardware ready for L3 and L5
[2] Designed for BeiDou phase 2 and 3, B1 and B2 compatibility. B3 conditionally supported and subject to change.
[3] E1bc support only. Hardware ready for E6bc
[4] Optional: Frequeny 865-867 MHZ, transmitting power 0.1w-1w adjustable
[5] Optional

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SATLAB® GEOSOLUTIONS

SL900
GNSS Receiver

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.

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**

TECHNICAL SUPPORT

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

Efficient and dependable

Powered by NovAtel OEM729 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).

SmartLink

It can reduce downtime in the field with continuous RTK coverage during correction outages from an RTK base station or VRS network.

Satellite correction service

The SL900 has TerraStar capabilities that use a global network of multi-GNSS reference stations and advanced algorithms to generate highly precise GNSS satellite orbit, clock, biases, and other system parameters. These data allow TerraStar to provide correction services with sub-metre or centimetre-level positioning accuracy to SL900 receivers. Get your corrections transmitted in real-time, with minimal latency via satellites and cellular networks worldwide.

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