SL900 GNSS Receiver

Data Specifications

GNSS

Signal Tracking[1]	GPS (L1C/A, L1C, L1PY, L2C, L2P, L5) BDS (B1I, B1C, B2a, B2I, B3*) GLONASS (L1CA, L2CA, L2P, L3 CDMA*) Galileo (E1, E5a, E5b, E5 AltBoc, E6*) SBAS (Egnos, WAAS, GAGAN, MSAS, SDCM (L1, L5)) QZSS (L1C/A, L1C, L2C, L5, L6) NavIC (L5)
Additonal Technologies	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
No. of Channels	1760

POSITION PERFORMANCE[2]

High-Precision Static **Static and Fast Static** **Post Processing Kinematic** (PPK / Stop & Go)	H: 2.5mm + 0.1 ppm RMS / V: 3.5mm + 0.4 ppm RMS H: 2.5mm + 0.5 ppm RMS / V: 5mm + 0.5 ppm RMS H: 8mm + 1 ppm RMS / V: 15mm + 1 ppm RMS Initialization time: Typically 10 min for base and 5 min for rover Initialization reliability: Typically>99.9%
Code Differential GNSS Positioning	H: ±0.25m+1ppm RMS / V: ±0.5m+1ppm RMS SBAS: 0.5m (H), 0.85m (V)
Real Time Kinematic (RTK)	H: 6mm+0.5ppm RMS / V: 10mm+1ppm RMS Initialization time: Typically <10s Initialization reliability: Typically > 99.9%
Time to first Fix	Cold start:< 45s I Hot start:< 30s I Signal re-acquisition:< 2s
Tilt Survey Performance[3]	Additional horizontal pole-tilt uncertainty typically less than 8mm+0.7mm/°tilt(0° ~ 60°)

COMMUNICATIONS

I/O Interface	Mini USB, TNC antenna port, DC power input(5-pin) SIM card slot, TF card slot
Network Communication	Full band support for cellular mobile network (LTE, WCDMA, GPRS, GSM) GSM 900MHz&1800MHz, WCDMA 2100MHz/900MHz, LTE Band 1,3,7,8,20
WiFi	Frequency 2.4GHz, Supports 802.11 b/g/n
Bluetooth	V2.1+EDR, 2.4GHz
NFC	Near Field Communication for device touch pairing
Internal UHF Radio[4]	Power: 1W/2W/5W Adjustable Frequence: 410MHz~470MHz I Channel: 116（16 scalable） Protocol: HI-TARGET, TRIMTALK450S, TRIMMARK III, SATEL-3AS, TRANSEOT, etc. Working Range: Typically 3~5km, optimal 8~15km

PHYSICAL

Dimensions (W x H)	170mm × 95mm
Weight	1.2kg including battery
Operation temperature	-40℃ to +65℃
Storage temperature	-40℃ to +85℃
Humidity	100% non-condensing
Water/dustproof	IP67 dustproof, protected from temporary immersion to depth of 1.0m (3.28ft)
Free fall	MIL-STD-810G, 516.6, designed to survive a 2m(6.56ft) natural fall onto concrete

ELECTRICAL

Battery[5]	Internal 7.4V / 5000mAh lithium-ion rechargeable and removable battery RTK rover(UHF/Cellular): up to 10 hours
External power	6V to 28V DC external power input(5-pin port)

CONTROL PANEL

Physical button	1
LED Lights	Satellite, Signal, Power

SYSTEM CONFIGURATION

Storage	8GB ROM internal storage
Output format	ASCII: NMEA-0183
Output rate	1Hz~20Hz
Static data format	GNS, Rinex
Real Time Kinematic (RTK)	CMR, CMR+, RTCM 2.X, RTCM3.0, RTCM3.2
Network Mode	VRS, FKP, MAC, Support NTRIP protocol

Note

[1]Hardware ready.
[2]The measurement accuracy, precision, reliability and initialization time depend on various factors, including tilt angle, number of satellites, geometric distribution, observation time, atmospheric conditions and multi-path validation, etc. The data are derived under normal conditions.
[3]Irregular operations such as rapid rotation and high-intensity vibration may affect the inertial navigation accuracy.
[4]Support TX/RX function, 5W radio is base version, without IMU module.
[5]The battery operating time is related to the operating environment, operating temperature and battery life.
Descriptions and Specifications are subject to change without notice

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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 · Windows Compatibility · Android 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 1760 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.

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