

SL700 GNSS Receiver



GNSS PARAMETERS

| Type | Standard | Optional |
|-----------------|---|---|
| No. of Channels | 555 | 800 ¹ |
| Signal Tracking | GPS (L1C/A, L1C, L2C, L2P, L5) GLONASS ¹ (L1C/A, L2C, L2P, L3, L5) BeiDou ² (B1, B2, B3) Galileo ³ (E1, E5 AltBOC, E5a, E5b, E6) IRNSS (L5) QZSS (L1C/A, L1C, L2C, L5, L6) SBAS (L1, L5) L-Band (Up to 5 Channels) TerraStar® | GPS (L1, L2, L5, L2C) GLONASS (L1, L2, L3) BeiDou (B1, B2, B3, B1C, B2a) Galileo (E1, E5, AltBOC, E5a, E5b, E6) QZSS (L1, L2, L5, L6) SBAS (L1, L5) IRNSS(L5) |

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 |
| 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 | H: 0.25m + 1ppm RMS / V: 0.5m + 1ppm RMS |
| Initialization time | <10s |
| Initialization 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) |
| Hi-Fix ⁴ | H: RTK ⁵ +10mm/minute RMS / V: RTK ⁵ + 20mm RMS |

COMMUNICATIONS

| | | |
|-------------------------|--|--|
| Network | Internal 3G mobile network, including UTMS/WCDMA/GPRS/GSM modes. | Internal 4G mobile network, including TDD-LTE/FDD-LTE/WCDMA/EDGE/GPRS/GSM modes. |
| Bluetooth | V2.1 + EDR | V4.0/2.1+EDR |
| Wi-Fi | 2.4GHz , 802.11b/g/n | 2.4GHz , 802.11b/g/n |
| NFC | Yes | Yes |
| E-bubble | / | Yes |
| Tilt Survey Performance | 5cm accuracy in the inclination of 30° | |
| I/O Interface | USB, TNC antenna port, SIM card slot, DC power input (5-pin) | |

INTERNAL RADIO

| | | |
|--------------------|--|---|
| Frequency | 403MHz-473MHz | 403MHz-473MHz |
| Power | 0.1-1W | 1W/2W/4W adjustable |
| Protocols | Support most of radio communication protocols. | HI-TARGET, TRIMTALK450S, TRIMMARK III, TRANSEOT, SATEL-3AS, etc.. |
| Transmitting Speed | 19200 bps/9600 bps | 19200 bps/9600 bps |
| Working Range | Typically 3-5km, optimally 5-8km | Typically 5km, optimally 8-10km |

INTERNAL RADIO(OPTIONAL)

| | | |
|--------------------|---|---|
| Frequency | / | 865MHz-867MHz |
| Power | / | 10, 20, 50, 100, 200, 500, 1000 mW adjustable |
| Protocols | / | SATEL 3AS |
| Transmitting Speed | / | 9600 - 115200 bps |
| Working Range | / | Distances ranging from tens or hundreds of metres up to around 80 kilometres. |

DATA MANAGEMENT

| | | |
|----------------------------------|--------------------------------|----------|
| Positioning Output Frequency | 5Hz (Up to 100Hz) (optional) | 1Hz-20Hz |
| TerraStar and RTK Assist service | Optional | / |
| Output Format | ASCII: NMEA-0183, binary data | |
| Message Type | CMR, RTCM2.X, RTCM3.0, RTCM3.2 | |
| Static Data Format | GNS, Rinex | |

SYSTEM

| | |
|------------------|----------------------|
| Operation System | Linux |
| Data Storage | 8GB internal storage |

ENVIRONMENT

| | |
|-----------------------|--|
| Water/dustproof | IP67 environmental protection Waterproof to 1m (3.28ft) depth Temporary Submersion |
| Free Fall | Shock resistant body to 2m (6.5ft) pole drop |
| Operation Temperature | -40 C ~65 C |
| Storage Temperature | -40 C ~85 C |
| Humidity | 95%, condensing |

PHYSICAL PROPERTIES

| | |
|-----------------------|---|
| Internal Battery | 5000mAh lithium-ion rechargeable and remove battery |
| Internal Battery Life | RTK rover (UHF/Cellular) ≥10 hours |
| External Power | 6-28V DC |
| Power Consumption | 4.2W |
| Weight | ≤1.2kg (without battery) |
| Note | |

¹ Hardware ready for L3 and L5

² E1bc and E6bc support only

³ Hardware ready for L5

⁴ Accuracies are dependent on GNSS satellite availability. Hi-Fix positioning ends after 5 minutes of radio downtime. Hi-Fix is not available in all regions, check with your local sales representative for more information.

⁵ RTK refers to the last reported precision before the correction source was lost and Hi-Fix started.

SL700 GNSS Receiver



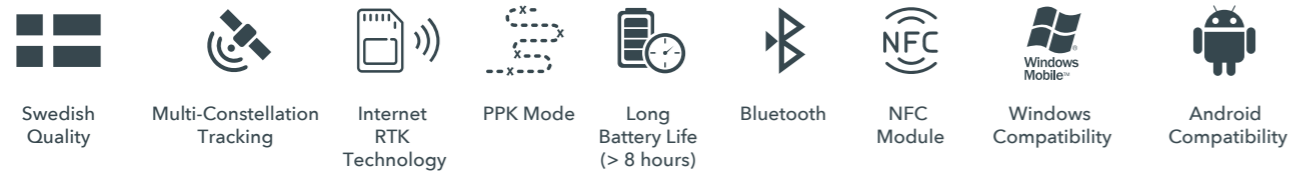
Headquarters:
Datavägen 21B
SE-436 32 Askim, Sweden
info@satlab.com.se

Regional Offices:
Warsaw, Poland
Jičín, Czech Republic
Ankara, Turkey
Scottsdale, USA
Singapore
Hong Kong, China
Dubai, UAE

www.satlab.com.se

Made by Sweden

Satlab SL700 is an easy-to-use device that is designed to be compact and rugged for your everyday surveying usage. Made to withstand the harshest weather conditions, the SL700 performs with great mobility and flexibility. This innovative receiver delivers the most accurate results in the most efficient way for your fieldwork.



Applications

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



Efficient and dependable

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

Satellite correction service

The SL700 built-in NovAtel OEM729 GNSS engine supports 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-meter or centimeter-level positioning accuracy to SL700 receivers. Get your corrections transmitted in real-time, with minimal latency via satellites and cellular networks worldwide.

Hi-Fix Technology (optional)

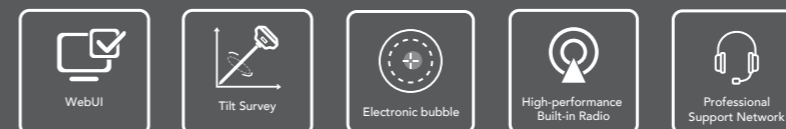
It can reduce downtime in the field with continuous RTK coverage during correction outages from an RTK base station or VRS network.

Innovation technology

Beneficial from the innovative measuring algorithm, SL700 offers stable and reliable positioning accuracy in the challenging environment by shaking the device in tilt survey mode.

High-performance UHF radio

SL700 supports the optional internal radio module to meet users' needs for radio transmission frequency in the special area.



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