SL700 GNSS Receiver

GNSS PARAMETERS

	Standard	Optional
Type	Standard	Optional
No. of Channels	555	440
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) GLONASS (L1, L2) BeiDou (B1, B2, B3) Galileo (E1, E5a, E5b) QZSS (L1, L2C, L5) SBAS (L1)

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
Initialization time	<10s
Initialization Reliability	99.9%

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
NFC	Yes	Yes

INTERNAL RADIO

Frequency	403MHz-473MHz	403MHz~473MHz
Power	0.1~1W	1W/2W/4W adjustable
Protocols	Support most of radio communication protocls.	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)	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℃~65℃
Storage Temperature	-40℃~85℃
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] Optional
[5] Designed for BeiDou Phase 2 and 3, B1 and B2 compatibility. B3 conditionally supported and subject to change.

SL700
GNSS Receiver

ISO 9001 CERTIFIED   CE

Made by Sweden

20J306

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.

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

Applications

- Mapping
- Landfill
- Sensor

- Land Survey
- Hydrographic
- UAV Base Station

- Topography and As-built
- Agriculture

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.

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.

WebUI	Tilt Survey	Electronic bubble	High-performance Built-in Radio	Professional Support Network

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