# Specification>>>

| | |
|---|---|
| **Performance Specification** | |
| Satellite signals tracked simultaneously | GPS: L1C/A, L1C, L2P(Y), L2C, L5<br>GLONASS: L1, L2,L3<br>BEIDOU: B1I, B2I, B3I, B1C, B2a, B2b<br>GALILEO: E1, E5a, E5b,E6<br>QZSS: L1, L2, L5, L6<br>SBAS: L1, L5<br>IRNSS: L5 |
| Channels | 1408 tracking Channels |
| Cold start | <60 s |
| Hot start | <15 s |
| Positioning output rate | 1Hz - 20Hz |
| Signal Reacquisition | <1s |
| RTK Initialization time | <10s |
| Initialization Reliability | >99.99% |
| Time accuracy | 20 ns |
| **Positioning**[1] | |
| Code differential GNSS positioning | Horizontal: 0.25 m + 1 ppm RMS<br>Vertical: 0.50 m + 1 ppm RMS<br>SBAS differential positioning accuracy : typically <5m 3DRMS |
| Static GNSS surveying | Horizontal: 2.5 mm + 0.5 ppm RMS<br>Vertical: 5 mm + 0.5 ppm RMS |
| **Real Time Kinematic Surveying** | |
| Single Baseline < 30 KM | Horizontal: 8 mm + 1 ppm RMS<br>Vertical: 15 mm + 1ppm RMS |
| Network RTK[3] | Horizontal: 8 mm + 0.5 ppm RMS<br>Vertical: 15 mm + 0.5 ppm RMS |
| **HARDWARE** | |
| **PHYSYCAL** | |
| Material | Magnesium alloy |
| Dimensions | 131× 64mm |
| weight | 0.76kg |
| Operating temperature | -40°C to + 75°C |
| Storage temperature | -55°C to + 85°C |
| Protection IP | IP67 dust proof, protected from 30min immersion to depth of 1m |
| Shock | Survive 2 m drop onto the concrete |
| Vibration | MIL-STD-810G |
| Humidity | 100%, condensing |
| **ELECTRYCAL** | |
| Power | 9~24 V DC external power |
| USB Type-C fast charging | Support |
| Battery capacity | Internal 7000mAh lithium-ion battery |
| Battery Life | Rover Mode: 15 hours<br>Base Mode: 7 hours<br>Static Mode: 17 hours |
| **Communication & Data Storage** | |
| **I/O interface** | |
| LEMO port (5pin) | Supports power input, serial port control, and external radio communication |
| USB Type-C port | Charging |
| Sim card slot | Supports Nano-SIM |
| Antenna port | UHF antenna interface |
| **Radio modem** | |
| Transmit power | 1/2 w switchable,Work range can reach to 15km under AlphaTalk15 protocol |
| Frequency band | 410MHz-470MHz; supports to set the frequency |
| Protocols | AlphaTalk15, TrimTalk450s, SOUTH, Satel,PCC-EOT |
| **Cellular** | |
| Integrated full frequency multi band 4G modem, supports WCDMA/CDMA2000/TDD-LTE/FDD-LTE | |
| **WIFI** | |
| 802.11 b/g standard, access point & client mode, supports access to hotspot for correction transmission | |
| **Bluetooth** | |
| Fully integrated Bluetooth V5.2, range ≤ 50m | |
| **Data format** | |
| RTCM2x, RTCM3x, CMR & CMR+, sCMRx, Dat, RINEX, NMEA outputs | |
| **Storage** | |
| 8GB internal memory, supports cyclic storage; with ability to collect over one year raw observation based on 5 seconds interval | |
| **Others** | |
| **System integration** | |
| OS system | Intelligent LINUX operating system |
| Tilt Compensation | IMU up to 120° (Calibration free) |
| Supported controllers | All android devices with supported software |
| **Design** | |
| button | Power key |
| Indicator | Power indicator, data link indicator, satellite indicator, Bluetooth indicator |
| Voice | Intelligent voice prompts |
| WEBUI | Support WEBUI configuration |

# Product Introduction >>>

**L100 PRO** is a new generation of compact smart GNSS receivers designed for various surveying projects using latest GNSS features. This receiver equipped with modern required technologies such as Bluetooth module, IMU tilt sensor, 7000mAh lithium-ion internal battery, etc. **L100 PRO** is able to work in different work modes (Network RTK, Static & PPK) based on different required accuracy & conditions. **L100 PRO** is the most economic GNSS package you can purchase to fulfill your technical needs on field!

## Multi constellation

L100 PRO with its 1408 channels new generation full GNSS chipset & ability to support multiple satellite constellation including GPS, GLONASS, BEIDOU, GALILEO, QZSS, SBAS and IRNSS provides precise and accurate spatial data for all users around the world.

## WiFi and WebUI

L100 PRO serves as a WIFI hotspot, so users can easily access,manage the status, set the configuration or download static and PPK raw data through advanced WebUI using computer, smartphone or other electronic devices with WIFI support without any need to third party software or cable.

## IMU Tilt Sensor

L100 PRO is equipped with a fast initialization, calibration free & immune to magnetic interference Inertial Measurement Unit (IMU). All users can use this technology to collect or stakeout topo points up to 120°.

## Working mode

Every surveyor needs to operate and choose suitable working method based on project requirements and required accuracy. In order to work in such condition users will need a device to be able to work in different modes such as Static, Network RTK, UHF RTK, PPK & etc. L100 PRO is offering all you need in a package!

## IP67

Choosing a small, light but professional, reugged GNSS receiver has always been a concern among professional surveyors. L100 PRO with its high quality magnesium alloy body provides such advantages without decreasing quality or notable increase in price.

## Battery & Power

L100 PRO is delivered with an internal large capacity 7000mAh lithium-ion internal battery supporting USB type-C fast charging which allows users to work for more than 12 hours in daily field work.

## GSM & UHF radio

A fast internet connection is guaranteed with a built-in 4G module that accelerate receiving correction data using all telecommunication signals and bands. L100 PRO comes with an integrated 15 km-range Tx/Rx internal UHF radio that ranges from 410 MHz to 470 MHz with selectable frequency providing ability to connect and collect accurate real time data in Base/Rover mode.