STONEX

S9II GNSS Receiver

Powerful Precision
Performance

suite cube

S9II

Powerful Precision Performance

S9II is the result of the continuous evolution of the Stonex GNSS integrated receivers. Featuring a new, high accuracy multi constellation antenna, a powerful UHF transmitter and the GSM 4G modem, for a fully integrated communications choice, combined with a light and modern design.

Stonex S9II integrated GNSS receiver tracks all the present constellations and satellite signals GPS, GLONASS, BEIDOU, GALILEO and QZSS and through the upgradable firmware offers the opportunity to be day by day updated with the latest available features.

On S9II it is possible to insert 2 smart hot swappable batteries at the same time, ensuring a maximum of 12 hours of operation without stopping.

The power level can be checked and seen on the controller or directly on a led bar on the battery.

MULTI CONSTELLATION

Stonex S9II with its 555 channels, provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BEIDOU and GALILEO) are included, no additional cost.

WEB UI CONTROL

To initialize, manage, monitor the settings of the receiver and to download data using laptop or PC, smartphone or tablet with Wi-Fi capability.

ELECTRONIC BUBBLE

On S9II through E-Bubble it can be displayed directly on software if the pole is vertical and the point will be recorded automatically when the pole is levelled. This makes the acquisition of points extremely fast.

INTELLIGENT BATTERIES

The dual slot for two Smart hot swappable batteries gives you up to 12 hours using the integrated UHF radiomodem. The power level can be checked and seen on the controller or directly on a led bar on the battery.

RUGGED RTK

With IP67 Certification Stonex S9II will ensure operations in various kinds of extremely tough environments.

STONEX SURVEYING SYSTEMS

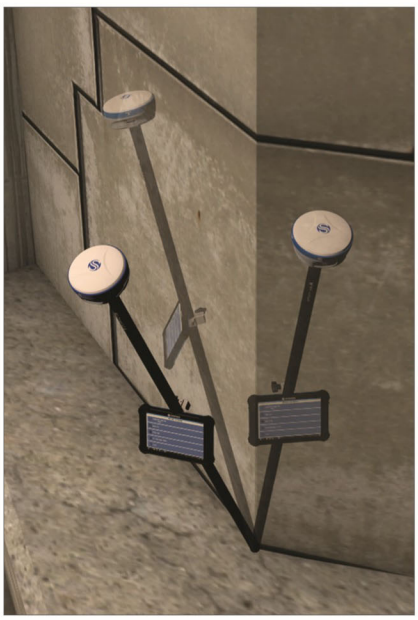
S911

E-Bubble functionality

Stonex S911 integrates E-Bubble sensor that allows the measurement of difficult points with the pole not levelled. It is possible to measure points with an inclination of the pole up to 30° even in harsh environments and in the presence of magnetic fields.

In addition, you can view the instrument bubble directly within the survey software without worrying about checking the bubble of the pole.

Thanks to measurement routine integrated into the field software, the management of tilt function is simple and intuitive. Stonex S911 with E-Bubble system makes reliable every measurement, both during the survey and the stake out works, and makes extremely faster the acquisition of points: up to 40% of the field work time can be saved!



Reliable & Fast

IP67 certification, combined with a high shock resistance, makes S900 survive even to a 2 m drop on hard surfaces. Maximum strength and best water and dust proof even in harsh environment are guaranteed. The new Ceramic zero phase shift multi system antenna support is essential for high accuracy measurements even in urban canyons and under vegetation.

The high speed bands LTE/WCDMA/HSPDPA mobile data connection capability ensures rapid transfer of differential data in several formats (RTCM 2.3/3.0/3.3, CMR, CMR+, RTCA) with reliable Internet connection and very low latency.

In the amazingly compact structure the Bluetooth and Wi-Fi modules allow always reliable data flow to the controller, and the integrated TX/RX UHF radiomodem with selectable frequencies, make S900 the perfect system for a GNSS Base + Rover. The extremely short initialization time, lets the user save time every day, every minute, every point.

When the GNSS signal is lost, the advanced Stonex technology used in S900 dramatically minimize the reinitialization time, while positioning accuracy, checked from the field software, gives the smoothest field workflow.

S9II TECHNICAL FEATURES

RECEIVER

Satellite Tracked	GPS: L1 C/A, L1C, L2C, L2P, L5 GLONASS: L1 C/A, L2C, L2P, L3, L5 BEIDOU: B1, B2, B3 GALILEO: E1, E5a, E5b, E5 AltBOC, E6 QZSS: L1 C/A, L1C, L2C, L5, L6 IRNSS: L5 SBAS: L1, L5
Channels	555
Position Rate	5 Hz, optional 20 Hz
Signal Reacquisition	< 1 sec
RTK Signal Initialization	Typically < 10 sec
Hot Start	Typically < 15 sec
Initialization Reliability	> 99.9 %
Internal Memory	8 GB
Micro SD Card	Expansion slot up to 32 GB

POSITIONING[1]

HIGH PRECISION STATIC SURVEYING	
Horizontal	2.5 mm + 0.1 ppm RMS
Vertical	3.5 mm + 0.4 ppm RMS
CODE DIFFERENTIAL POSITIONING	
Horizontal	0.25 m RMS
Vertical	0.45 m RMS
SBAS POSITIONING[2]	
Horizontal	0.30 m RMS
Vertical	0.60 m RMS
REAL TIME KINEMATIC (< 30 Km) – NETWORK SURVEYING[3]	
Fixed RTK Horizontal	8 mm + 1 ppm RMS
Fixed RTK Vertical	15 mm + 1 ppm RMS

INTEGRATED GNSS ANTENNA

High accuracy four constellation micro-strip antenna, zero phase center, with internal multipath suppressive board

INTERNAL RADIO

Type	Tx - Rx
Frequency Range	410 - 470 MHz
Channel Spacing	12.5 KHz / 25 KHz
Maximum Range	3-4 Km in urban environment Up to 10 Km with optimal conditions[4]

INTERNAL MODEM

Band	GSM/GPRS/EDGE LTE/UMTS/WCDMA

COMMUNICATION

I/O Connectors	7-pins Lemo and 5-pins Lemo interfaces. Multifunction cable with USB interface for PC connection
Bluetooth	2.1 + EDR, V4.0
Wi-Fi	802.11 b/g/n
Web UI	To upgrade the software, manage the status and settings, data download, etc. via smart phone, tablet or other internet enabled electronic device
Reference outputs	RTCM 2.1, 2.3, 3.0, 3.1, 3.2, 3.3 CMR, CMR+, RTCA
Navigation outputs	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL

POWER SUPPLY

Battery	2 rechargeable and replaceable 7.2 V – 3400 mAh Intelligent lithium batteries
Voltage	9 to 28 V DC external power input with over-voltage protection (5 pins Lemo)
Working Time	Up to 12 hours (2 batteries hot swap)
Charge Time	Typically 4 hours

PHYSICAL SPECIFICATION

Dimensions	φ 157 mm x 76 mm
Weight	1.19 Kg (with one battery) 1.30 Kg (with two batteries)
Operating Temperature	-30°C to 65°C (-22°F to 149°F)
Storage Temperature	-40°C to 80°C (-40°F to 176°F)
Waterproof/Dustproof	IP67 / IP68[5]
MIL- STD	MIL-STD-810F
Shock Resistance	Designed to endure to a 2 m pole drop on concrete floor with no damage
Vibration	Vibration resistant

Illustrations, descriptions and technical specifications are not binding and may change

1. Accuracy and reliability are generally subject to satellite geometry (DOPs), multipath, atmospheric conditions and obstructions. In static mode they are subject even to occupation times: the longer is the Baseline, the longer must be the occupation time.
2. Depends on SBAS system performance.
3. Network RTK precision depends on the network performances and are referenced to the closest physical base station.
4. Varies with the operating environment and with electromagnetic pollution.
5. Special version.