STONEX

S900A New GNSS Receiver

Powerful Precision
with Atlas® capability

suite cube

S900A *New*

Powerful precision with Atlas®

Stonex S900A is equipped with an high performance GNSS board with 800 channels and capable of supporting multiple satellite constellations: GPS, GLONASS, BEIDOU, GALILEO, QZSS and IRNSS, including L-Band correction.

A fast internet connection is guaranteed through the 4G GSM modem for receiving correction data and managing maps in the background. In the extraordinarily compact structure there is the integrated UHF radio and the Bluetooth and Wi-Fi modules that allow an always reliable data flow to the controller, making the S900A the perfect system for a GNSS + Rover Base.

Stonex S900A integrates an E-Bubble sensor that allows the measurement of difficult points with the pole not levelled. You can calculate the correct coordinate of a point by measuring from 3 different positions.

S900A is also equipped with the optional IMU technology. Fast initialization, up to 60° inclination and the correct coordinates of a point with a simple click.

MULTI CONSTELLATION

Stonex S900A with its 800 channels, provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BEIDOU, GALILEO, QZSS and IRNSS) are included, no additional cost.

4G MODEM

S900A has an internal 4G modem that operates with all world signals, a fast internet connection is guaranteed.

E-BUBBLE + IMU

S900A thanks to the E-Bubble can display directly on the software if the pole is vertical and the point will be recorded automatically when the pole is levelled. The IMU technology is also available as optional, only a fast initialization is requested.

INTELLIGENT BATTERIES

The dual slot for two Smart hot swappable batteries gives you up to 12.5 hours of battery life. The power level can be checked and seen on the controller or directly on a led bar on the battery.

UHF RADIO

S900A has integrated UHF radio. The needs of each country are supported.

STONEX SURVEYING SYSTEMS

S900A New

atlas

Atlas® correction service & aRTK

S900A is a Stonex GNSS Receiver capable to automatically select the best combination of GNSS signals with the possibility to receive Atlas® RTK L-band. ATLAS is an exclusive PPP technology that provides real-time, centimeter-level positions.

Atlas® is a subscription for S900A aimed to achieve 3 different levels of accuracy depending on precision type that you need.

Atlas® gives the precise centimeter-level positioning around the world, perfect when working in difficult areas.
aRTK is an innovative feature available in Stonex S900A GNSS Receiver that continue generating precise positions up to 20 minutes in case the receiver loses the land based RTK correction source.

BASIC
50 cm 95% (30 cm RMS)

H30
30 cm 95% (15 cm RMS)

H10
8 cm 95% (4 cm RMS)

SureFix Robust RTK Positioning

SureFix is the new processor that runs in combination with GNSS engine to provide high fidelity RTK quality information. The SureFix processor takes several inputs and determines the quality of the RTK solution in the form of "quality indicators". The indicators are then combined with RTK data and provide the user with high fidelity information about the quality of the RTK solution.

IMU Technology

S900A GNSS receivers have as optional feature the new IMU System that allows tilted measurement (TILT). Thanks to the new IMU technology, the edges of the buildings, the difficult and inaccessible points are no longer a problem.

What is an Inertial Measurement Unit (IMU)?

An Inertial Measurement Unit (IMU) is a self-contained system that measures linear and angular motion usually with a triad of gyroscopes and accelerometers.

What are the performances of the S900A with IMU?

- Fast initialization
- Up to 60° inclination
- 2 cm accuracy 30°
- 5 cm accuracy 60°
- Fast and precise survey
- No problem of electromagnetic disturbances

Stonex S900A with IMU system makes reliable every measurement, for both survey and stake-out jobs, and makes the acquisition of points extremely faster: up to 40% of the field work time can be saved!

S900A New TECHNICAL FEATURES

RECEIVER

Signal Tracking	GPS: L1 C/A, L1C, L1P, L2C, L2P, L5
	GLONASS: L1 C/A, L1P, L2 C/A, L2P, L3
	BEIDOU: B1, B2, B3, ACEBOC
	GALILEO: E1, E5a, E5b, ALTBOC, E6
	QZSS: L1 C/A, L1C, L2C, L5, LEX
	IRNSS: L5
	SBAS (EGNOS, WAAS, MSAS, GAGAN): L1, L5
L-Band	Atlas H10 / H30 / Basic (optional)[5]
Bridging of RTK outages	aRTK - Works up to 20 minutes
Channels	800
Position Rate	10 Hz (optional 20-50Hz)[5]
Signal Reacquisition	< 1 s
RTK Signal Initialization[4]	2 to 4 seconds
Hot Start	Typically < 15 s
Initialization Reliability	> 99.9 %
Internal Memory	8 GB
Micro SD Card	Expansion slot up to 32 GB
Tilt sensor	E-Bubble IMU (optional)[5]

POSITIONING[1]

STATIC GNSS SURVEYING	
High Precision Static Horizontal	2.5 mm + 0.1 ppm RMS
High Precision Static Vertical	3.5 mm + 0.4 ppm RMS
Static and Fast Static Horizontal	3 mm + 0.5 ppm RMS
Static and Fast Static Vertical	5 mm + 0.5 ppm RMS
CODE DIFFERENTIAL POSITIONING	
Accuracy	0.40 m RMS
SBAS POSITIONING[2]	
Accuracy	0.60 m RMS
REAL TIME KINEMATIC (< 30 Km) – NETWORK RTK[3]	
Fixed RTK Horizontal	5 mm + 0.5 ppm RMS
Fixed RTK Vertical	10 mm + 0.5 ppm RMS

INTEGRATED GNSS ANTENNA

High accuracy multi-constellation antenna, zero phase center, with internal multipath suppressive board

INTERNAL RADIO (optional)[5]

Type	Tx – Rx
Frequency Range	410 - 470 MHz 902.4 – 928 MHz[6]
Channel Spacing	12.5 KHz / 25 KHz
Range	3-4 Km in urban environment Up to 10 Km with optimal conditions[4]

INTERNAL MODEM

Band	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/ B13/B18/B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 UMTS: B1/B2/B4/B5/B6/B8/B19 GSM: B2/B3/B5/B8 Nano SIM card

COMMUNICATION

I/O Connectors	7-pins Lemo and 5-pins Lemo interfaces. Multifunction cable with USB interface for PC connection
Bluetooth	2.1 + EDR, V5.0
Wi-Fi	802.11 b/g/n
Web UI	To upgrade the software, manage the status and settings, data download, etc. via smartphone, tablet or other electronic device with Wi-Fi capability
Reference outputs	RTCM 2.3, 3.0, 3.2 CMR, CMR+, ROX
Navigation outputs	NMEA 0183

POWER SUPPLY

Battery	2 rechargeable and replaceable 7.2 V – 3.400 mAh Intelligent lithium batteries
Voltage	9 to 28 V DC external power input with over-voltage protection (5 pins Lemo)
Working Time	Up to 12.5 hours (2 batteries hot swap)
Charge Time	Typically 2 hours[7]

PHYSICAL SPECIFICATION

Dimensions	φ 157 mm x 76 mm
Weight	1.19 Kg (with one battery) 1.30 Kg (with two batteries)
Operating Temperature	-40°C to 65°C (-40°F to 149°F)
Storage Temperature	-40°C to 80°C (-40°F to 176°F)
Waterproof/Dustproof	IP67 | IP68[6]
MIL- STD	MIL-STD-810H
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

STANDARD MIL-STD 810H

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. Optional, it can be activated via activation code.
6. On request
7. Charging time depend on the user's scenario

MADE IN ITALY

If you are looking for a "Made in Italy" instrument with a 3 years warranty, you can purchase the italian version of our S900A GNSS Receiver.

STONEX AUTHORIZED DEALER

STONEX®
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UNI EN ISO 9001:2015 - S900A NEW - FEBRUARY 2020 - VER06 - REV-02