STONEX

S10A^{up} GNSS Receiver

### High Performance with Atlas® Capability

cube suite

S10A^uP
High Performance with Atlas® Capability

Stonex S10A is the latest Stonex GNSS receiver characterized by a new feature that enhance the performances and potential of the field surveys.

Thanks to aRTK function and service of Atlas® correction, Stonex S10A is able to work in particularly difficult areas.
Atlas® delivers world wide centimetre level correction data through L-band communication satellites and internet.

S10A Receiver is equipped with all important connectivity capabilities, including Bluetooth and Wi-Fi modules, for a fast and stable connection to controller and PC. With radio and the internal GSM is possible to transmit and receive real-time corrections easily and fast.

You can measure the points quickly without the perfect verticality of the pole. The receiver can automatically record the positioning data when the electronic bubble detects the correct level, with no action required by the operator.
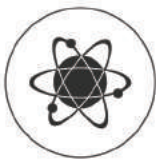
MULTI CONSTELLATION
Stonex S10A with its 600 channels, provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BEIDOU and GALILEO) are included, no additional cost.

WEB UI CONTROL
To initialize, manage, monitor the settings of the receiver and to download data using portable or PC, smartphone or tablet.

TILT CENTERING
It's possible to measure points with inclination up to 30°. The tilt compensator installed inside can automatically correct the coordinates of the points collected in accordance with the tilt angle and tilt direction of the range pole.
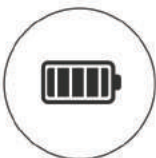
TWO INTELLIGENT BATTERIES
Stonex S10A is delivered with two high capacity smart batteries. The power level can be checked from the controller and directly from a simple led bar on the battery by the simple press of a button.

RUGGED DESIGN IP67 PROTECTION
IP67 certification, combined with a high shock resistance guarantee the maximum strength and the best water and dust tight even in harsh environments.

S10A^{uP}

atlas

aRTK & Atlas® Correction Service

S10A is new Stonex GNSS Receiver able to automatically select the best combination of GNSS signals with the possibility to receive Atlas® real time corrections when the connection signals are interrupted or not available. aRTK is an innovative feature available in Stonex S10A GNSS Receiver that greatly mitigates the impact of land-based communication instability.

• aRTK delivered via satellite for uninterrupted centimetre positioning in areas where local RTK communication links are unstable.
• aRTK provides an additional layer of communication redundancy to RTK users, ensuring that productivity is not impacted by intermittent data connectivity.

Thanks to aRTK the receiver is able to continue generating RTK positions in case the land based RTK correction source becomes unavailable for few minutes.
Atlas® is a subscription for S10A aimed to achieve 3 different levels of accuracy depending on subscription type that you need. Atlas® gives the precise positioning centimeters around the world, perfect when working in difficult areas.

Main features

• No RTK base station or RTK network required
• Correction data is continuously transmitted by satellite L-Band or Internet, delivering global coverage
• Bridging RTK outages for uninterrupted accurate positioning
• Autonomous remote position within centimeter accuracy
• Retain position accuracy during RTK data stream losses
• Keep position accuracy as long as needed

BASIC
50 cm 95% (30 cm RMS)

H30
30 cm 95% (15 cm RMS)

H10
8 cm 95% (4 cm RMS)
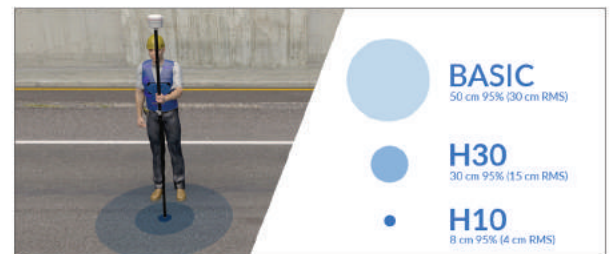
SureFix Robust RTK Positioning

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.

S10A^{uP} TECHNICAL FEATURES

RECEIVER

Satellite Tracked	GPS: L1 C/A, L1C, L1P, L2C, L2P, L5
	GLONASS: L1 C/A, L1P, L2C, L2P
	BEIDOU: B1, B2, B3
	GALILEO: E1, E5a, E5b
	QZSS: L1 C/A, L1C, L2C, L5
	SBAS: L1, L5
L-Band	Atlas H10 / H30 / Basic
Channels	600
Position Rate	5 Hz, optional up to 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	0.50 m RMS
Vertical	0.85 m RMS
REAL TIME KINEMATIC (< 30 Km) – NETWORK SURVEYING[3]	
Fixed RTK Horizontal	8 mm + 0.8 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: 850/900/1800/1900 MHz WCDMA/HSDPA: 800/850/900/1900/2100 MHz

COMMUNICATION

I/O Connectors	7-pins Lemo and 5-pins Lemo interfaces. Multifunction cable with USB interface for PC connection
Bluetooth	2.4 GHz class II
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 2.3, 3.0, 3.1, 3.2 CMR, CMR+
Navigation outputs	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL

POWER SUPPLY

Battery	Rechargeable and replaceable 10.8 V – 3400 mAh Intelligent lithium battery
Voltage	9 to 22 V DC external power input with over-voltage protection (5 pins Lemo)
Working Time	Up to 7 hours (1 battery)
Charge Time	Typically 4 hours

PHYSICAL SPECIFICATION

Dimensions	φ 140 mm x 145 mm
Weight	1.25 Kg (w/o battery) 1.45 Kg (with battery)
Operating Temperature	-40°C to 65°C (-40°F to 149°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Waterproof/Dustproof	IP67
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.

STONEX®
Part of **UniStrong**

Via Cimabue 39 - 20851 Lissone (MB) Italy
Phone +39 039 2783008 | Fax +39 039 2789576
www.stonex.it | info@stonex.it

STONEX AUTHORIZED DEALER