STONEX

S10 GNSS Receiver

The New Generation Smart & Open GNSS Receiver

suite cube

S10 The New Generation GNSS Receiver

Stonex S10, the most advanced integrated GNSS Receiver ever appeared on the geomatic scene, leads to a new generation of smart and open GPS, where the User has the ability to install customized applications directly on the receiver.

The advanced features of Stonesx S10, such as automatic leveling with electronic bubble, make surveying much faster and accurate.

The sophisticated internal structure design guarantees a compact housing: GNSS antenna, GPS board, power board, RX/TX radio, smart battery, 3.5G module, BT module and Wi-Fi module all take place in a well organized space, optimizing performances and power consumption.

Stonex S10 is based on CORTEX-A8 platform with on board LINUX smart system combined with an excellent networking system. With the provision of a special SDK package it is possible to develop and install special applications that run inside S10 ecosystem, enabling an unlimited range of advanced applications.

MULTI CONSTELLATION

Stonex S10 with its 220 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 S10 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.

STONEX SURVEYING SYSTEMS

S10

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The main structure of S10 is built with magnesium alloy material, making it strong, smart, light and eye-catching. The reason why Stonex has preferred magnesium among other materials is because its incredible advantages, including but not limiting to light weight, natural strength, shock absorption capability and excellent electromagnetic shielding performance.

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. In this way, it is not necessary to center it precisely.

When high precision is requested or when there is strong magnetic-field interference, users can choose to turn off the tilt centering and activate the electronic bubble installed inside. The receiver can automatically record the positioning data when the electronic bubble detects the correct level, with no action required by the operator.
Positioning data is saved on the controller, on receivers as well as on the cloud storage, which ensures 100% data safety with no worry to lose any valuable data tracked.

High speed mobile data connection capability ensures rapid transfer of differential data in different formats (CMR, CMR+, RTCM2.x, RTCM3.x) with reliable Internet connection and very low latency.

Easy measures, easy configuration, fast survey

It's very easy to measure corners or edges of walls. Internal sensors can correct the coordinates of the points collected according to the tilt angle and tilt direction. Connect your mobile phone to the receiver Wi-Fi to change settings and monitor the receiver status using a standard web browser. The electronic bubble combined with the field software allows users to collect and store thousands of points automatically.

TECHNICAL FEATURES

RECEIVER

Satellite Tracked	GPS: L1 C/A, L2E, L2C, L5
	GLONASS: L1 C/A, L1P, L2 C/A, L2P
	BEIDOU: B1, B2
	GALILEO: E1, E5 AltBOC, E5a, E5b
	QZSS: L1 C/A, L1C, L2C, L5
	SBAS: L1, L5
Channels	220
Position Rate	20 Hz
Signal Reacquisition	< 1 sec
RTK Signal Initialization	Typically < 10 sec
Hot Start	Typically < 15 sec
Initialization Reliability	> 99.9 %
Internal Memory	4 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 2.1, 2.3, 3.0, 3.1, 3.2 CMR, CMR+, RTCA
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.

IP67 CE FC RoHS 2002/95/EC

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STONEX AUTHORIZED DEALER

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