

SC200

MULTIFUNCTIONAL GNSS RECEIVER RECOMMENDED AS A REFERENCE STATION

The STONEX SC200 C.O.R.S. stations (Continuously Operating Reference Station) are GNSS multi-frequency receivers designed to be used either as stand-alone reference stations or as part of a GNSS stations' infrastructure.

STONEX SC200 is typically used as NTRIP server and is the ultimate equipment for all those jobs that are based on GNSS correction data acquisition, processing, distribution and management; moreover the SC200 supports also the recording of raw data with a maximum frequency of acquisition of 50Hz.

SC200 stations are sturdy and lightweight and can be powered either by DC battery or through AC for a GPS networks field use (ex. construction sites), managing many NTRIP rovers connected simultaneously; in addition, they are equipped with a 5000 mAh battery for 16 hours of uninterrupted use. The SC200 stations can be easily configured over an Internet user interface and are equipped with a large OLED display that makes configuration easy for any user since a software interface is not needed.

The 32 GB internal memory allows collecting and storing of a huge amounts of data. The available communication devices are: Wi-Fi, Bluetooth and 3G WCDMA modem.

The STONEX SC200 C.O.R.S. stations are compatible with the most GPS network software' s, therefore, can be used either for the start of a new infrastructure network or for an integration into existing networks.



POWERFUL AND RELIABLE

STONEX GNSS proven technology; high performance

EASY AND ADAPTIVE DATA MANAGEMENT

Easy to use web interface and optional output for radio/external modem; Internal power supply, USB, Wi-Fi and 3G Wireless connection

INTEGRABLE

Several software solutions according to the customer request

KEY FEATURES

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GNSS BOARD SPECIFICATIONS

GPS	Simultaneously L1 C/A, L2E, L2C, L5
GLONASS	Simultaneously L1 C/A, L1 P, L2 C/A (GLONASS M only), L2 P
SBAS	Simultaneously L1 C/A, L5
GIOVE-A ¹	Simultaneously or L1 BOC, E5A, E5B, E5AltBOC
GIOVE-B ¹	Simultaneously L1 CBOC, E5A, E5B, E5AltBOC
GALILEO ²	Compliant
COMPASS	B1 (QPSK), B1- MBOC (6,1, 1/11), B1-2 (QPSK), B2 (QPSK), B2-BOC (10,5)
GNSS carrier phase measurements with very low noise with <1 mm precision in 1 Hz bandwidth	
Channels	220
Initialization time ³	Typically, less than 10 seconds
Initialization reliability ³	Typically > 99.9%
PRECISION	
Static Horizontal accuracy	2mm + 0.3ppm RMS
Static Vertical accuracy	3mm + 0.5ppm RMS
ENVIRONMENTAL REQUIREMENTS	
Operational Temperature	-30°C to +65°C
Storage Temperature	-40°C to +75°C
Humidity	0% – 100%
Water and dust protection	IP65
INTERFACE	
4 LED Indicators	
256x64 OLED high brightness display	
OUTPUT	
1 USB OTG port	
1 LAN Ethernet port	
Network supported protocols: HTTP (web GUI), NMEA, GSOFF, CMR... on TCP/IP or UDP, NtripServer	
2 RS232 ports (one complete functions, one 3 poles)	
1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 & 50 Hz positioning outputs	
Up to 50 Hz raw measurement and positioning outputs	
Reference output: CMR, CMR+™, RTCM 2.x, RTCM 3.x, SCMRX	
Navigation output: ASCII: NMEA-0183 GSV, AVR, RMC, HDT, VGK, VHD, ROT, GGK, GGA, GSA, ZDA, VTG, GST, PJT, PJK e Binary: Trimble GSOFF	
1 pulse per second output	
Event Marker input support	
COMMUNICATION	
100 Mb Ethernet Interface	
802.11g WIFI	
Bluetooth Connection	
Wireless network WCDMA 3G	
ELECTRICAL DATA	
9 V- 18 V DC voltage Input	
Power: minimum 2.3 W (with Ethernet) - maximum <9 W	
Battery: 5000 mAh (16 hours estimated working time without external power)	
MEMORY	
32 GB memory	
512 MB System memory + 512 MB RAM	



Figures, specifications and descriptions subjected to modifications without notice

¹ GIOVE-A and GIOVE-B test satellites receivers' technology uses the not limited information available on the public domain for testing purposes signal evaluation.

² Complies with Galileo's directive 05 SB ICD, Issue 1, Rev 1 Sep 2010. The use of the Galileo's technology requires the purchase of a European Union business license.

³ It can be affected by weather conditions, interferences and satellites' geometry. Initialization's reliability is continuously monitored to ensure the highest quality.

STONEX® NTRIP CASTER



Entirely designed and developed by the Stonex R & D department, NTRIP Caster is the ideal software for GNSS NTRIP network management. It's perfect integration with the SC200 makes NTRIP Caster the essential tool for everyday's work. NTRIP Caster gives the user an intuitive and powerful interface. It is an excellent server program to manage CORS stations in an autonomous and independent way; to transmit a single-base correction to multiple rover users, to manage them simultaneously and at any time in a reliable and efficient way. NTRIP Caster offers the opportunity to the network administrator to monitor and limit users' access in real time. Combining with SC200 CORS the software allows users to download data through FTP server, to create a new network or to strengthen an existing one.

STONEX® CUBE



Developed within the Stonex R & D labs, Cube is a mobile software for GNSS surveying, which integrated with the SC200 becomes an essential tool for every professional worker. The Cube development occurred in a perfect coordination with the Stonex receivers, a synergy that allowed introducing several innovations. The workflow management is smooth and the possibility to store and retrieve removed jobs guarantees absolute data security. The receiver's and all its components' configuration is fast and simple, the data control is absolute as well as the management on the affecting receiver's parameters. Thanks to the very intuitive user interface, it is possible to easily fulfill the most complex tasks.

GEO++® GNSMART



GNSMART is based on procedures known as SMART-GNSS (Global Navigation Satellite System - State Monitoring And Representation Technique). It contains all the needed software components for monitoring and representing the GPS and GLONASS status. The monitoring is performed using SC200 stations, which positioned at a 50 km distance or more from each other, can provide complete coverage of the reference data allowing the real time position's determination with a centimeter accuracy. GNSS-SMART delivers the status monitoring of the whole system, including atmospheric regional effects, its representation and users' delivery for the purpose of determining the position with maximum precision, reliability and availability, both in real time than during the post-processing.

CARLSON® SURVCE



SurvCE is a complete real time field data collection system (RTK). The software features advanced mathematical calculation functionalities triggered through an easy graphical user interface.

Main features & functionality:

- Menu Tab-Based Structure. Visible commands in each menu;
- Excellent graphics mode for both the survey and the stakeout;
- LandXML, DTM, graphics, alignments, profiles and sections support, GIS functionality and attributes from GIS ESRI geodatabase client;
- Volumes, surfaces, distances, perimeters computation;
- Leveling: SurvCE can be used to perform trigonometric leveling or points' networks analysis.
- Job Settings: SurvCE has the ability to import / export files in DXF, ASCII, Coding format.
- Switching Instrument: SurvCE tracks autonomously each operated instrument. Just configure once the instrument and its' done.
- Useful construction sites jobs features like the ability to calculate lines' intersections with or without offset, angular bisections, cogo functions, line/arc reference functions.

COMPATIBLE ANTENNAS



1. Stonex G5 Choke Ring



2. NavXperience (3G + C)



3. Mini Choke Ring HX-CG7601A



4. GNSS Survey HX-CSX601A

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STONEX AUTHORIZED DEALER

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