

S55G Controller RTK GNSS



Receiver for GIS and
Survey applications

S55G

Controller GNSS RTK

The S55G is an RTK GNSS receiver controller featuring a three-frequency GNSS board with an impressive 1408 channels, supporting multiple satellite constellations: GPS, GLONASS, BEIDOU, GALILEO, QZSS, and IRNSS. It operates on the Android 12 system, providing a simple and intuitive interface.

The controller is equipped with a remarkable 5.5" TFT display that boasts a resolution of 1920 x 1080 pixels and a brightness of 500 nits, along with a compact QWERTY keyboard.

The S55G enables users to work in real-time with RTK corrections while simultaneously recording raw data for post-processing.

It also supports the use of an external antenna SA85, which can further enhance the precision of the collected data, allowing users to achieve high accuracy in their field work, approximately < 1 cm.



MULTI-CONSTELLATION SYSTEM

Stonex S55G has integrated a three-frequency GNSS board with 1408 channels and can support multiple satellite constellations: GPS, GLONASS, BEIDOU, GALILEO, QZSS, IRNSS.



ANDROID SYSTEM

The receiver is managed through the Android 12 operating system with a simple and intuitive interface.



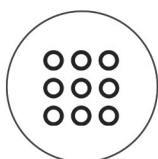
HIGH QUALITY DISPLAY

The high quality 5.5" TFT display has a 1920 x 1080 pixels resolution and a brightness of 500 Nits.



RTK AND POST-PROCESSING

S55G can work in real time with RTK corrections and simultaneously record the raw data for post processing.



KEYBOARD & LASER

The QWERTY keyboard features a full-sized layout in a handheld design. Additionally, the controller integrates a laser system.





S55G with laser point

LASER POINT

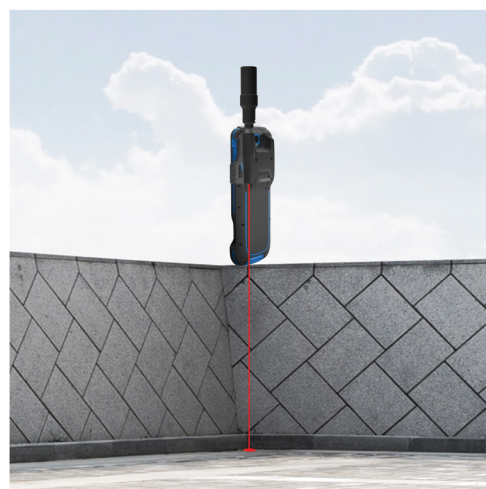
The integrated laser system of the S55G plays a crucial role in accurately identifying the ground point that is being surveyed or staked out. The laser is red and can be activated and deactivated directly in the acquisition window of the Cube-a software.

DECIMETRIC PRECISION

The S55G is capable of functioning without local RTK corrections by leveraging complimentary PPP correction services based on Galileo (HAS) or BeiDou (B2b), which guarantee decimetric accuracy.

COMPLETE OPERATIONAL CAPABILITY

The S55G is capable of functioning in real-time mode by utilizing RTK corrections sent from a network of GNSS Permanent Stations. Additionally, with the SR02 external radio, the S55G can operate in RTK mode by receiving corrections from a GNSS base receiver through UHF radio. Moreover, the S55G could record raw satellite data, facilitating post-processing in the office.



Cube-a is Stonex' solution for professional surveying and GIS, specifically designed for the Android platform. This software includes a variety of features that contribute to its popularity among surveyors, such as an easy-to-use interface, comprehensive support for touch gestures, and multilingual capabilities. Cube-a is a modular application that can be tailored to meet specific needs; users can activate modules for GNSS, Robotic and Classic Total Stations, GIS, and 3D Modeling to address any requirements.

The Cube-connector is an Android application designed to link Android devices with Stonex GNSS receivers. To establish a connection with the GNSS, the Android device must be paired with the receiver via Bluetooth. Once this Bluetooth connection is established, Cube-Connector will substitute the internal device's GNSS readings with those from the Stonex GNSS receiver. With the Stonex S55G, users can effortlessly utilize their GIS/survey software on the Android operating system through Cube-Connector. The application manages all settings and configurations using integrated precision GNSS, making accurate coordinates available for third-party applications.

S55G TECHNICAL FEATURES

RECEIVER

Satellite signals tracked	GPS: L1 C/A, L1C, L2P, L2C, L5
	GLONASS: L1, L2, L3
	BEIDOU: B1I, B2I, B3I, B1C, B2a, B2b
	GALILEO: E1, E5a, E5b, E6
	QZSS: L1, L2, L5
	IRNSS: L5
	SBAS
PPP	HAS, B2b
Channels	1408
Position Rate	5Hz
Signal Reacquisition	< 1 s
RTK Signal Initialization	Typically < 10 s
Hot Start	Typically < 15 s
Initialization Reliability	99.9 %

POSITIONING¹

Static Survey with external Antenna SA85	H: 5 mm + 1 ppm RMS V: 10 mm + 1 ppm RMS
RTK Network ² with external Antenna SA85	H: 5 mm + 1 ppm RMS V: 10 mm + 1 ppm RMS
RTK Network ² with standard Antenna	2 cm
PPP accuracy	< 20 cm
SBAS accuracy ³	< 60 cm

SYSTEM

CPU	Qualcomm SM6115 Octa-core 2.0GHz
Operating System	Android 12
RAM	4GB
Flash Memory	64GB
External Storage	Supported, Micro SD
Keyboard	QWERTY 43 keys, backlit

DISPLAY

Screen Size	5.5" TFT
Resolution	1920 x 1080 pixels
Brightness	500 nits
Touch Panel	Multi-touch, wet hands, gloves operable

CAMERA

Rear	13 MP
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EXTERNAL RADIO (optional)

Model	SR02
Type	Tx - Rx - Transceiver (2 watt)
Frequency Range	410 - 470 MHz
Channel Spacing	12.5 KHz / 25 KHz
Maximum Range ⁴	3-4 Km in urban environment Up to 10 Km with optimal conditions

INTERNAL MODEM

GSM	GSM: 850/900/1800/1900
	WCDMA: B1/B2/B4/B5/B8
	LTE-TDD: B34/B38/B39/B40/B41
	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B17/B20/B25/B26/B28
	Nano SIM card

SENSORS

Gyroscope	Yes
e-Compass	Yes
Proximity	Yes
Accelerometer	Yes
Ambient light sensor	Yes
Laser	Red point

COMMUNICATION

I/O Connectors	Type-C (Charging, USB3.0 OTG, Digital headphones)
Bluetooth	5.0
Wi-Fi	802.11a/b/g/n/ac, 2.4 GHz + 5 GHz
NFC	Yes

POWER SUPPLY

Battery	9000mAh
Working Time ⁵	Up to 8 hours in operating mode
Charge Time ⁵	≤ 4 hours

PHYSICAL SPECIFICATION

Dimensions	230 mm x 96 mm x 37 mm (without GNSS antenna)
Weight	500 g (with battery and GNSS antenna)
Operating Temperature	-20°C to 65°C (-4°F to 149°F)
Storage Temperature	-30°C to 70°C (-22°F to 158°F)
Waterproof/Dustproof	IP67
Shock Resistance	1.2 m drop resistant

STANDARD ACCESSORIES

Charger & 2 kinds of adapter, hand-strap, touch pen, screen sticker

OPTIONAL ACCESSORIES

Pole, Pole bracket, SA85 GNSS Antenna, External Antenna cable

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. Network RTK precision depends on the network performances and are referenced to the closest physical base station.
3. It depends on the SBAS system's performance.
4. Varies with the operating environment and with electromagnetic pollution.
5. Battery life and charging time depend on the user's scenario. Time may vary based on factors such as screen brightness, apps, software, power management, battery condition, etc.

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

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