STONEX

S580 GNSS Receiver

GNSS Receiver for
GIS & RTK Applications

cube suite

S580

From GIS to Topography

S580 is a compact and lightweight GNSS receiver, with outstanding performance and centimeter accuracy. S580 tracks dual frequency signals and works with all satellite systems (GPS, GLONASS, BeiDou, Galileo and QZSS).

Compared to traditional GIS products, the S580 is a high-precision, intelligent data acquisition receiver, that can be worn or attached to the pole, offering greater freedom of movement and flexibility. The S580 can communicate with an external device such as a tablet, smartphone or PC via Bluetooth and Wi-Fi. Using the internal web interface, or through the Cube-connector APP, the receiver can be configured and prepared to receive RTK differential corrections and ready to be connected to any survey or GIS software.

The rubber protection cover, increase device protection, non-slip and no damage, the whole device protection class reaches IP67, and resists 1.2m drops on hard surfaces.

ANDROID SYSTEM
Android system on board.
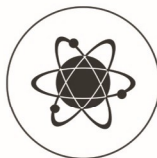
FULL CONSTELLATION SYSTEM
GPS, Glonass, BeiDou, Galileo, QZSS.

HIGH PRECISION
High precision positioning, centimetric accuracy.

WEB UI
Web interface for controlling and managing settings.

DATA TRANSMISSION
Wi-fi, Bluetooth and external radio.

RTK AND POST-PROCESSING
S580 can work in real time with RTK corrections and simultaneously record the raw data for post-processing.

S580 GNSS Receiver
Base/Rover RTK with Radio

The S580 was designed as an RTK rover receiver to receive differential corrections from the Network. However, thanks to the external Stonex SR02 radio, the receiver can also receive RTK corrections, from a base that transmits them via UHF radio modem, in the 410-470 MHz frequencies. The SR02 external radio receives corrections from the base station and transmits them to the S580 via Bluetooth.

This feature allows the S580 receiver to receive (and transmit) RTK corrections and with this capability, the receiver can be used as base and/or as rover. This configuration is an excellent and complete low-cost solution.

S580 TECHNICAL FEATURES

RECEIVER

Satellite signals tracked	GPS: L1C/A, L2C
	GLONASS: L1OF, L2OF
	BEIDOU: B1, B2
	GALILEO: E1, E5b
	QZSS: L1C/A, L2C
	SBAS: L1
Channels	184
Position Rate	Up to 10 Hz
Signal Reacquisition	< 2 sec
RTK Initialization	Typically > 10 sec
Hot Start	Typically < 15 sec
Initialization Reliability	> 99.9 %

POSITIONING[1]

STATIC POST PROCESSING	
Horizontal	< 2 cm + 1 ppm RMS
Vertical	< 3 cm + 1 ppm RMS
CODE DIFFERENTIAL POSITIONING	
Horizontal	< 0.5 m RMS
Vertical	< 1.0 m RMS
REAL TIME KINEMATIC	
Fixed RTK Horizontal	< 2 cm + 1 ppm RMS
Fixed RTK Vertical	< 3 cm + 1 ppm RMS

INTEGRATED GNSS ANTENNA

Full constellation GNSS antenna

HARDWARE

Processor	SC20
RAM	512 MB
Flash Memory	8GB
Operating System	Android

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	3-4 Km in urban environment Up to 10 Km with optimal conditions[2]

COMMUNICATION

I/O Connectors	TYPE-C connector support USB 2.0
Bluetooth	2.1+EDR / 3.0 / 4.1 LE
Wi-Fi	802.11 b/g/n
Real time protocols	RTCM 3.x

POWER SUPPLY

Battery	Rechargeable 3.8 V - 6.120 mAh
Working Time	> 10 hours
Charge Time	Typically 4 hours

PHYSICAL SPECIFICATION

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Dimensions	136 mm x 78 mm x 31 mm
Weight	313g
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
Shock Resistance	Designed to endure a 1.2 m drop on concrete floor with no damage

STANDARD ACCESSORIES

Power adapter, USB cable, Belt case, Pole mount

OPTIONAL ACCESSORIES

Carbon fiber pole, Telescopic pole, Soft case

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. Varies with the operating environment and with electromagnetic pollution.

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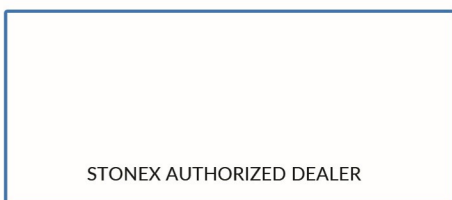
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