

S580 GNSS Receiver

GNSS Receiver for
GIS & RTK Applications



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).

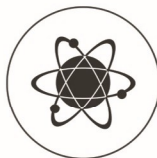
Compared to traditional GIS products, the S580 is a high-precision, intelligent data acquisition receiver, that can be worn or attached to the pole, offering greater freedom of movement and flexibility. The S580 can communicate with an external device such as a tablet, smartphone or PC via Bluetooth 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 |
| Channels | SBAS: L1 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 % |

POSITIONING¹

| | |
|-------------------------------|--------------------|
| 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

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|---------------------------------|
| Full constellation GNSS antenna |
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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

| | |
|-----------------------|--|
| 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

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| Power adapter, USB cable, Belt case, Pole mount |
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OPTIONAL ACCESSORIES

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| Carbon fiber pole, Telescopic pole, Soft case |
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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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