

S580+ GNSS Receiver

GIS & RTK Applications



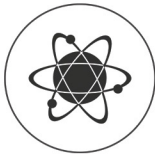
S580⁺

GIS & RTK Applications

The S580⁺ is a compact and lightweight GNSS receiver with exceptional performance and centimeter precision, thanks to the GNSS board with 1408 channels. The S580⁺ works with GPS, GLONASS, BeiDou, Galileo, and QZSS satellite systems and it is equipped with IMU technology that supports inclined measurements.

Compared to traditional GIS products, the S580⁺ is a high-precision, intelligent data acquisition receiver that can be worn or attached to a 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. The receiver can be configured via Cube-connector app to receive RTK differential corrections and connect seamlessly to survey or GIS third-party software.

The rubber protective cover increases device protection, is non-slip and non-damaging; the overall device protection reaches IP67 and withstands drops from 1.2 meters on hard surfaces.



MULTI-CONSTELLATION SYSTEM

GPS, GLONASS, BeiDou, Galileo, QZSS.



HIGH PRECISION

Achieve centimeter-accurate positioning with advanced technology, including support for IMU precision.



IMU TECHNOLOGY

IMU technology is available on S580⁺, it allows fast initialization and accurate measurements with an inclination up to 60°.



DATA TRANSMISSION

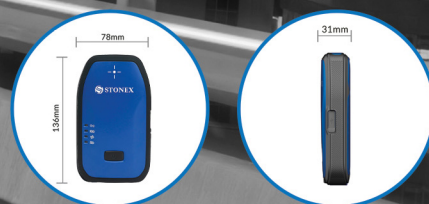
Wi-Fi, Bluetooth, and external radio.



RUGGED RTK

With IP67 certification S580⁺ will ensure operations in various kinds of extremely tough environments.





S580+ GNSS Receiver

IMU Technology

IMUs are sensors that utilize a combination of accelerometers, gyroscopes, and magnetometers to accurately track movement and orientation. These advanced sensors offer a valuable solution for surveying in difficult or inaccessible locations where traditional methods may not be practical. Furthermore, IMUs significantly enhance the accuracy of GNSS positioning by providing inertial measurements that can be used to correct for GNSS signal errors and provide more precise positioning, particularly in areas with limited satellite coverage. The S580+ model, for instance, can measure inclinations up to 60 degrees.



Portable device

The S580+ is a portable GIS device that is meticulously crafted to elevate the geospatial data collection experience. The ability to be worn provides unparalleled convenience and mobility for fieldwork.

Rover RTK with Radio

The S580+ RTK rover receiver can receive RTK corrections from a network via its external Stonex SR02 radio, which operates in the 410-470 MHz UHF frequencies. The radio receives corrections from a base station, then transmits them to the S580+ through Bluetooth.

S580+ TECHNICAL FEATURES

RECEIVER

| | |
|----------------------------|---------------------------------|
| Satellite signals tracked | GPS: L1 C/A, L2P, L2C, L5 |
| | GLONASS: L1, L2 |
| | BEIDOU: B1I, B2I, B3I, B1C, B2a |
| | GALILEO: E1, E5a, E5b |
| | QZSS: L1C, L2C, L5 |
| | SBAS: L1 C/A |
| Channels | 1408 |
| Position Rate | Up to 10 Hz |
| Signal Reacquisition | < 2 sec |
| RTK Initialization | Typically < 10 sec |
| Hot Start | Typically < 15 sec |
| Initialization Reliability | > 99.9 % |
| Tilt Sensor | IMU |

POSITIONING¹

| | |
|--------------------------|--------|
| RTK Network ² | 2 cm |
| RTK Radio | 2 cm |
| SBAS accuracy | <60 cm |

INTEGRATED GNSS ANTENNA

| |
|----------------------------------|
| Multi-constellation GNSS antenna |
|----------------------------------|

HARDWARE

| | |
|------------------|-------|
| Processor | T113 |
| Operating System | Linux |

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 ³ |

COMMUNICATION

| | |
|---------------------|----------------------------------|
| I/O Connectors | TYPE-C connector support USB 2.0 |
| Bluetooth | V2.1+EDR / V5.0 |
| Wi-Fi | 802.11 g |
| Real time protocols | RTCM 3.x |

POWER SUPPLY

| | |
|--------------|------------------------------|
| Battery | Rechargeable - 3.85V/6120mAh |
| Input | DC 5V-2A |
| Working Time | >10 hours |
| Charge Time | Typically 4 hours |

PHYSICAL SPECIFICATION

| | |
|-----------------------|--|
| Dimensions | 139 mm x 81 mm x 31 mm |
| Weight | 315 g |
| Operating Temperature | -30°C to 65°C (-22°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 bag |
|--|

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. Varies with the operating environment and with electromagnetic pollution.

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

MAPCOM

R2-186 New Azadi, Bahirka Road, Erbil, Iraq.

www.mapcom.org | +964 750 429 0707

STONEX AUTHORIZED DEALER

STONEX®

Viale dell'Industria 53 - 20037 Paderno Dugnano (MI) - Italy

Phone +39 02 78619201

www.stonex.it | info@stonex.it