

S980A GNSS Receiver

GNSS Receiver with
5 Watt radio and Atlas®



S980A

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Stonex S980A of connecting an external antenna make GNSS receiver tracks all the present constellations and satellite signals GPS, GLONASS, BEIDOU, GALILEO, QZSS and IRNSS. Through the 4G GSM modem a fast internet connection is guaranteed and the Bluetooth and Wi-Fi modules allow always reliable data flow to the controller. These features combined with the integrated 2-5 watt radio make S980A the perfect base station receiver.

The color touch display and the possibility of connecting an external antenna makes S980A an extremely effective receiver for every type of job.

S980A is also equipped with an E-Bubble and the optional IMU technology: fast initialization, up to 60° inclination.

S980A has a 1PPS port which can be used in applications that require precise synchronization time to ensure that multiple instruments work together or that use the same parameters for system integration based on precise time.



MULTI CONSTELLATION

Stonex S980A with its 800 channels, provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BEIDOU, GALILEO, QZSS and IRNSS) are included, no additional cost.



2-5W RADIO

S980A has integrated 2-5W UHF radio with 410-470MHz frequency. Our receiver is equipped with an external radio antenna to work better.



E-BUBBLE + IMU

Thanks to the E-Bubble on S980A, the verticality of the pole can be displayed directly into the software and the point will be recorded automatically when the pole is levelled. As an optional it is also available the IMU technology is also available as optional, only a fast initialization is request and it can be transformed from an RTK receiver to a CORS.



COLOR TOUCH DISPLAY

S980A comes with a convenient color touch display for easy management of the most important functions.



EXTERNAL GNSS ANTENNA

S980A, through the appropriate connector, can be connected to an external GNSS antenna and is transformed from an RTK receiver to CORS.





EXTERNAL RADIO ANTENNA

BLUETOOTH | WI-FI | 4G | GNSS ANTENNA

RADIO 5W

BATTERY 13.600mAh | TYPE-C

COLOR TOUCH DISPLAY

EXTERNAL GNSS ANTENNA | 1PPS PORT



IMU technology

Stonex S980A integrates E-Bubble sensor that allows the measurement of difficult points with the pole not levelled. It is possible to measure points with an inclination of the pole over 30° even in harsh environments and in the presence of magnetic fields. S980A GNSS receivers have as optional feature the new IMU System that allows tilted measurement (TILT).

What are the performances of the S980A with IMU?

- Fast initialization
- Up to 60° inclination
- 2 cm accuracy 30°
- 5 cm accuracy 60°
- Fast and precise survey
- No problem of electromagnetic disturbances

Stonex S980A with IMU system makes reliable every measurement, both survey and the stake out jobs, and makes extremely faster the acquisition of points: up to 40% of the field work time can be saved!

SureFix Robust RTK Positioning

SureFix is the new processor that runs in combination with GNSS engine to provide high fidelity RTK quality information. The SureFix processor takes several inputs and determines the quality of the RTK solution in the form of "quality indicators". The indicators are then combined with RTK data and provide the user with high fidelity information about the quality of the RTK solution.

Atlas® correction service & aRTK

S980A is a Stonex GNSS Receiver capable to automatically select the best combination of GNSS signals with the possibility to receive Atlas® RTK L-band. ATLAS is an exclusive PPP technology that provides real-time, centimeter level positions. Atlas® is a subscription for S980A aimed to achieve 3 different levels of accuracy depending on precision type that you need:

- BASIC, 50 cm 95% (30 cm RMS)
- H30, 30 cm 95% (15 cm RMS)
- H10, 8 cm 95% (4 cm RMS)

S980A TECHNICAL FEATURES

RECEIVER

Satellite signals tracked	GPS: L1 C/A, L1C, L1P, L2C, L2P, L5
	GLONASS: L1 C/A, L1P, L2 C/A, L2P, L3
	BEIDOU: B1, B2, B3, ACEBOC
	GALILEO: E1, E5a, E5b, ALTBOC, E6
	QZSS: L1 C/A, L1C, L2C, L5, L6
	IRNSS: L5
	SBAS: L1, L5
L-Band	Atlas H10 / H30 / Basic (optional) ⁵
Bridging of RTK outages	aRTK - Works up to 20 minutes
Channels	800
Position Rate	10 Hz (optional 20-50Hz) ⁵
Signal Reacquisition	< 1 s
RTK Signal Initialization	Typically < 10 s
Hot Start	Typically < 15 s
Initialization Reliability	> 99.9 %
Internal Memory	32 GB
Tilt sensor	E-Bubble IMU (optional) ⁵

POSITIONING¹

STATIC GNSS SURVEYING	
High Precision Static Horizontal	2.5 mm + 0.1 ppm RMS
High Precision Static Vertical	3.5 mm + 0.4 ppm RMS
Static and Fast Static Horizontal	3 mm + 0.5 ppm RMS
Static and Fast Static Vertical	5 mm + 0.5 ppm RMS
CODE DIFFERENTIAL POSITIONING	
Accuracy	0.40 m RMS
SBAS POSITIONING ²	
Accuracy	0.60 m RMS
REAL TIME KINEMATIC (< 30 Km) – NETWORK RTK ³	
Fixed RTK Horizontal	5 mm + 1 ppm RMS
Fixed RTK Vertical	10 mm + 1 ppm RMS
RTK Signal Initialization	2 to 8 seconds

INTEGRATED GNSS ANTENNA

High accuracy four constellation antenna, zero phase center, with internal multipath suppressive

INTERNAL RADIO 2-5 WATT

Type	Tx - Rx
Frequency Range	410 - 470 MHz
Channel Spacing	12.5 KHz / 25 KHz
Range	5 Km in urban environment Up to 15 Km with optimal conditions ⁴

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

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. Depends on SBAS system performance.
3. Network RTK precision depends on the network performances and are referenced to the closest physical base station.
4. Varies with the operating environment and with electromagnetic pollution.
5. Optional, it can be activated via activation code.

INTERNAL MODEM

Band	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/ B13/B18/B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 UMTS: B1/B2/B4/B5/B6/B8/B19 GSM: B2/B3/B5/B8 Nano SIM card
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COMMUNICATION

I/O Connectors	5 pins Lemo, connect the external power supply and external radio Type-C, for receiver power supply and data transfer 1PPS port GNSS port for external antenna
Bluetooth	2.1 + EDR, V4.1
Wi-Fi	802.11 b/g/n
Web UI	To upgrade the software, manage the status and settings, data download, etc. via Smartphone, tablet or other electronic device with Wi-Fi capability
Reference outputs	RTCM 3.0, 3.2 CMR, CMR+, DGPS
Navigation outputs	NMEA 0183

POWER SUPPLY

Battery	Internal rechargeable 7.2 V – 13.600 mAh
Voltage	9 to 28 V DC external power input with over-voltage protection (5 pins Lemo)
Working Time	Up to 10 hours
Charge Time	Typically 4 hours

PHYSICAL SPECIFICATION

Dimensions	φ 151 mm x 92 mm
Weight	1.48 Kg
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 to a 2 m pole drop on concrete floor with no damage
Vibration	Vibration resistant



STONEX AUTHORIZED DEALER

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