

## S900<sup>+</sup> GNSS Receiver

Powerful Precision  
Performance

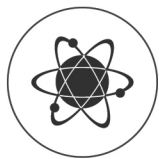


# S900+ Powerful Precision Performance

Stonex S900+ is equipped with a high-performance GNSS board with 1408 channels and can support multiple satellite constellations: GPS, GLONASS, BEIDOU, GALILEO, QZSS and IRNSS.

Through the 4G GSM modem, a fast Internet connection is guaranteed for receiving correction data and carry out precise and accurate surveys. In the incredibly compact design, Bluetooth and Wi-Fi modules allow for always reliable data flow to the controller, while the integrated UHF TX/RX radio makes the S900+ the perfect system for a GNSS Base + Rover.

The S900+ is also equipped with optional IMU technology. Quick initialization, tilt up to 60° and corrected coordinates of a point with a single click.



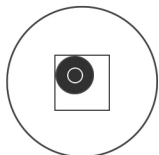
## MULTIPLE CONSTELLATIONS

Stonex S900+ with its 1408 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.



## 4G MODEM

S900+ has an internal 4G modem that operates with all world signals, a fast internet connection is guaranteed.



## IMU

IMU technology is available for this model, with quick initialization the operator can take advantage of all the precision and efficiency of this system.



## SMART BATTERIES

The dual slot for two smart hot swappable batteries gives you up to 12 hours of battery life. The power level can be checked and seen on the controller or directly on a led bar on the battery.



## RADIO (Optional)

An activation code can enable the integrated UHF on the S900+, with a range of up to 10 km under optimal conditions.







# S900<sup>+</sup> IMU Technology

S900<sup>+</sup> GNSS receivers have the IMU System that allows tilted measurement (TILT). Thanks to the IMU technology, the difficult and inaccessible points as the edges of the buildings, are no longer a problem.

## What are the performances of the S900<sup>+</sup> with IMU?

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



Stonex S900<sup>+</sup> with IMU system makes every measurement reliable, in both survey and stakeout jobs, and makes the acquisition of points extremely faster: up to 40% of the field work time can be saved!

## Why to choose S900<sup>+</sup> ?

If long-lasting in field is what is needed, this GNSS is the right choice. Not only are the batteries extremely capacious but they are also hot-swappable. The batteries available in this model are lithium batteries, and their total operating time can be up to 12 hours.



# S900+ 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                        | B2b PPP, HAS                         |
| Channels                   | 1408                                 |
| Position Rate              | Up to 20Hz                           |
| Signal Reacquisition       | < 1 s                                |
| RTK Signal Initialization  | 2 to 4 seconds                       |
| Hot Start                  | Typically < 15 s                     |
| Initialization Reliability | > 99.9 %                             |
| Internal Memory            | 8 GB                                 |
| OS                         | Linux                                |
| Micro SD Card              | Expansion slot up to 32 GB           |
| Tilt sensor                | IMU and E-bubble                     |

## POSITIONING<sup>1</sup>

|                                                          |                      |
|----------------------------------------------------------|----------------------|
| HIGH PRECISION STATIC SURVEYING                          |                      |
| Horizontal                                               | 2.5 mm + 0.1 ppm RMS |
| Vertical                                                 | 3.5 mm + 0.4 ppm RMS |
| REAL TIME KINEMATIC (< 30 Km) – NETWORK RTK <sup>2</sup> |                      |
| Fixed RTK Horizontal                                     | 5 mm + 0.5 ppm RMS   |
| Fixed RTK Vertical                                       | 10 mm + 0.5 ppm RMS  |
| PPP Accuracy                                             | < 20 cm RMS          |
| SBAS Accuracy <sup>3</sup>                               | < 60 cm RMS          |

## INTEGRATED GNSS ANTENNA

|                                                                                                         |
|---------------------------------------------------------------------------------------------------------|
| High accuracy multi-constellation antenna, zero phase center, with internal multipath suppressive board |
|---------------------------------------------------------------------------------------------------------|

## INTERNAL RADIO (optional)<sup>4</sup>

|                 |                                                  |
|-----------------|--------------------------------------------------|
| Type            | Tx – Rx 1W                                       |
| Frequency Range | 410 - 470 MHz                                    |
|                 | 902.4 – 928 MHz <sup>5</sup> (optional)          |
| Channel Spacing | 12.5 KHz / 25 KHz                                |
| Range           | 3-4 Km in urban environment                      |
|                 | Up to 10 Km with optimal conditions <sup>6</sup> |

## 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               |

## COMMUNICATION

|                    |                                                                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| I/O Connectors     | 7-pin Lemo and 5-pin Lemo interfaces. Multifunction cable with USB interface for PC connection                                                       |
| Bluetooth          | 2.1 + EDR, V5.0                                                                                                                                      |
| Wi-Fi              | 802.11 a/b/g/n/ac                                                                                                                                    |
| 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  | RTCM2.3, RTCM3.0, RTCM3.2 MSM, CMR, CMR+, DGPS                                                                                                       |
| Navigation outputs | NMEA 0183                                                                                                                                            |

## POWER SUPPLY

|              |                                                                                |
|--------------|--------------------------------------------------------------------------------|
| Battery      | 2 rechargeable and replaceable 7.2 V – 3.400 mAh Intelligent lithium batteries |
| Voltage      | 9 to 28 V DC external power input with over-voltage protection (5-pin Lemo)    |
| Working Time | Up to 12 hours (2 batteries hot swap)                                          |
| Charge Time  | Typically 4 hours                                                              |

## PHYSICAL SPECIFICATION

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| Dimensions            | Ø 157 mm x 76 mm                                                       |
| Weight                | 1.19 Kg (with one battery)<br>1.30 Kg (with two batteries)             |
| 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   IP68 <sup>5</sup>                                               |
| MIL-STD               | MIL-STD-810 F/H                                                        |
| Shock Resistance      | Designed to endure to a 2 m pole drop on hardwood floor with no damage |
| Vibration             | Vibration resistant                                                    |

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. Depends on SBAS system performance.
4. Optional, can be activated via activation code.
5. On request when ordering.
6. Varies with the operating environment and with electromagnetic pollution.



If you are looking for an italian instrument with a 3 years warranty, you can purchase the italian version of our S900+ GNSS Receiver.

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

STONEX AUTHORIZED DEALER



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