

## S800 GNSS Receiver

Second  
Generation RTK



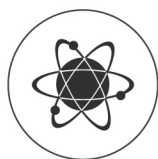
# S800 Second Generation RTK

Equipped with an advanced 555 channels GNSS board and capable of supporting multiple satellite constellations, including GPS, GLONASS, BEIDOU and GALILEO, Stonex S800 GNSS receiver is an ideal solution for any surveying field work.

The advanced receiver design gives S800 excellent signal tracking ability and interference resistant capacity.

The independent R&D LINUX+CORTEX intelligent platform provides users high performance computing and infinitely expanding. The unique internal antenna combines GNSS, Bluetooth and Wi-Fi integrated modules to optimize space and increase performance.

Advantages of portability and speed of operation make S800 GNSS receiver particularly suitable for fieldwork in areas of complex terrain. The Stonex S800 has built-in internal Bluetooth capability that allows the users to choose their data collector model and software.



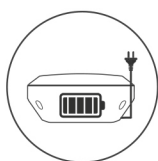
## MULTI CONSTELLATION

Stonex S800 with its 555 channels, provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BEIDOU and GALILEO) are included, no additional cost.



## WEB UI CONTROL

To initialize, manage, monitor the settings of the receiver and to download data using portable or PC, smartphone or tablet with Wi-Fi capability.



## 6800mAh BATTERY CAPACITY

Stonex S800 is delivered with 6800mAh large capacity lithium battery that gives you up to 10 hours working.



## INTERNAL UHF RADIO MODEM

All S800 series models have integrated UHF modem radio. It is possible to order the S800 with the enabled radio or order the receiver without the active radio, and activate it at later time.



## RUGGED RTK

With IP67 Certification Stonex S800 will ensure operations in various kinds of extremely tough environments.







# S800

## Highest industrial standard

STONEX S800 is a rugged, compact, lightweight GNSS receiver. It is designed to endure to a 2m pole drop on concrete floor without damage thanks to the strong external magnesium alloy framework. The global aluminum alloy capsule design provides 5 individual space for antenna, radio, board card, main board and battery.

The total dimension of the receiver is 146mm x 146mm x 76mm. The internal battery of 6800mAh guarantees the continuous working up to 10 hours. Its UHF internal radio has several transmission protocols that allow the S800 to communicate with any other type of receiver in a simple and efficient way.



Strong design

Unique antenna: GNSS, Bluetooth and Wi-Fi

Fully compatible internal Radio

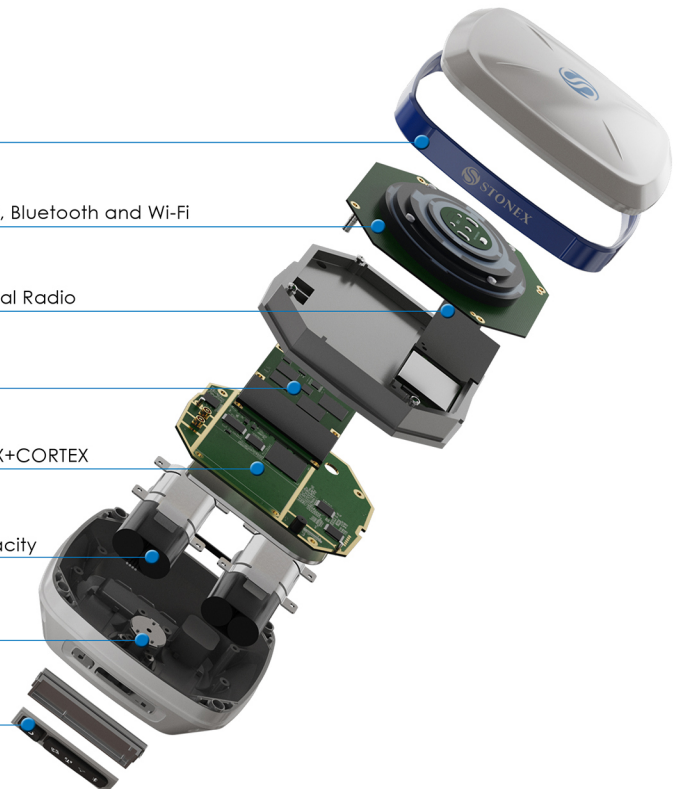
555 Channels

Independent R&D LINUX+CORTX

6800mAh battery capacity

Pressure balance

Function key



# TECHNICAL FEATURES

## RECEIVER

Satellite Tracked	GPS: L1 C/A, L1C, L2C, L2P, L5
	GLONASS: L1 C/A, L2C, L2P, L3, L5
	BEIDOU: B1, B2, B3
	GALILEO: E1, E5 AltBOC, E5a, E5b, E6
	QZSS: L1 C/A, L1C, L2C, L5, L6
	SBAS: L1, L5
	IRNSS: L5
Channels	555
Position Rate	5 Hz, optional up to 50 Hz
Signal Reacquisition	< 1 sec
RTK Signal Initialization	Typically < 10 sec
Hot Start	Typically < 15 sec
Initialization Reliability	> 99.9 %
Internal Memory	8 GB

## POSITIONING<sup>1</sup>

HIGH PRECISION STATIC SURVEYING	
Horizontal	2.5 mm + 1 ppm RMS
Vertical	5.0 mm + 1 ppm RMS
CODE DIFFERENTIAL POSITIONING	
Horizontal	<0.5 m RMS
Vertical	<1.0 m RMS
SBAS POSITIONING	
Horizontal	<0.6 m RMS <sup>2</sup>
Vertical	<1.2 m RMS <sup>2</sup>
REAL TIME KINEMATIC (< 30 Km) - NETWORK SURVEYING <sup>3</sup>	
Fixed RTK Horizontal	8 mm + 1 ppm RMS
Fixed RTK Vertical	15 mm + 1 ppm RMS

## INTEGRATED GNSS ANTENNA

High accuracy four constellation micro-strip antenna, zero phase center, with internal multipath suppressive board

## INTERNAL RADIO

Type	Tx - Rx
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 <sup>4</sup>

## COMMUNICATION

I/O Connectors	7-pins Lemo and 5-pins Lemo interfaces. Multifunction cable with USB interface for PC connection
Bluetooth	V2.0 Class2/V4.1LE
Wi-Fi	802.11 b/g
Web UI	To upgrade the software, manage the status and settings, data download, etc. via smart phone, tablet or other internet enabled electronic device
Reference outputs	RTCM 2.1, 2.3, 3.0, 3.1, 3.2 CMR, CMR+, RTCA
Navigation outputs	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL

## POWER SUPPLY

Battery	Rechargeable 7.2 V – 6800 mAh Rechargeable 7.2 V – 5200 mAh <sup>5</sup>
Voltage	9 to 18 V DC external power input with over-voltage protection (5 pins Lemo)
Working Time	10 hours 8 hours <sup>5</sup>
Charge Time	Typically 4 hours

## PHYSICAL SPECIFICATION

Dimensions	146 mm x 146 mm x 76 mm
Weight	1.2 Kg
Operating Temperature	-30°C to 65°C (-22°F to 149°F) -40°C to 65°C (-40°F to 149°F) <sup>5</sup>
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



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

- 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.
- Depends on SBAS system performance.
- Network RTK precision depends on the network performances and are referenced to the closest physical base station.
- Varies with the operating environment and with electromagnetic pollution.
- S800 Polar Version.

