

# S10

## GNSS RECEIVER

### TECHNICAL FEATURES

RECEIVER	
Channels	220
Satellite Tracked	GPS: Simultaneous L1 C/A, L2C, L2E, L5 GLONASS: Simultaneous L1 C/A, L1P, L2 C/A, L2P, L3 SBAS: Simultaneous L1 C/A, L5 GALILEO Simultaneous E1, E5A, E5B (reserved) BeiDou 2 / COMPASS: B1, B2
Position Rate	Up to 50 Hz
Signal Reacquisition	< 1 sec
RTK Signal Initialization	Typically < 10 s
Hot Start	Typically < 15 s
Initialization Reliability	> 99.9 %
Internal Memory	4 GB (Over 45 days of raw static data storage with recording sample every 1 second)
Micro SD Card	Expansion slot with 4 GB internal memory (32 GB optional)
POSITIONING <sup>1</sup>	
HIGH PRECISION STATIC SURVEYING (Long Time Observations)	
Horizontal	2.5 mm + 0.3 ppm RMS
Vertical	5 mm + 0.5 ppm RMS
CODE DIFFERENTIAL POSITIONING	
Horizontal	0.25 m + 1 ppm RMS
Vertical	0.45 m + 1 ppm RMS
SBAS POSITIONING (Typical)	
Horizontal	0.5 m RMS <sup>2</sup>
Vertical	0.85 m RMS <sup>2</sup>
REAL TIME KINEMATIC (< 30km) – NETWORK SURVEYING <sup>3</sup>	
Fixed RTK Horizontal	8 mm + 0.8 ppm RMS
Fixed RTK Vertical	15 mm + 1 ppm RMS
INCLINED POSITIONING (2M POLE)	
10° inclination	20 mm RMS
20° inclination	30 mm RMS
30° inclination	50 mm RMS
COMMUNICATION	
Connectors I/O	7-pins Lemo and 5-pins Lemo interfaces. Multifunction cable with USB interface for PC connection
Bluetooth device	2,4 Ghz class II
Wi-Fi	IEEE 802.11 b/g/n
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	CMR, CMR+, sCMRx, RTCM2.1, RTCM2.3, RTCM3.0, RTCM3.1
Navigation outputs	ASCII (NMEA-0183) GSV, AVR, RMC, HDT, VGK, VHD, ROT, GSK, GSA, ZDA, VTG, GST, PIT, PJK, BPQ, GLL, GRS, GBS
INTEGRATED GNSS ANTENNA	
High accuracy four constellation micro-strip antenna with internal multipath suppression board	

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

INTERNAL RADIO	
Frequency Range	403 - 473 MHz
Channel Spacing	12.5 KHz / 25 KHz
Emitting Power	0.5/1/2 W
Maximum Range	3-4 Km in urban environment, 5-6 Km with optimal conditions <sup>4</sup>
Protocol	Transparent EOT/EOC/FST, SATEL South, TRIMTALK II/Iie, TRIMMARK 3, TRIMTALK 4505
WIRELESS MODULE	
Band	GSM/GPRS/EDGE: 850/900/1800/1900 MHz WCDMA/HSDPA: 850/1900/2100 MHz
Output Power	GSM850, EGSM900: 33 dBm(2W) GSM1800, PCS1900: 30 dBm(1W) WCDMA: 24 dBm
POWER SUPPLY	
Battery	Rechargeable and replaceable 11.1 V – 3400 mAh -37.74 Wh intelligent lithium battery
Voltage	9 to 22 V DC external power input with over-voltage protection (5 pins Lemo)
Working Time in Static Mode (GPS+GLONASS)	12 hours
Working Time in GSM RTK with Cable Connection (GPS+GLONASS)	6.5 hours
Working Time in Wireless Network RTK with Bluetooth Connection (GPS+GLONASS)	4 hours
Charge Time (2 batteries)	Typically 7 hours
Power Consumption	< 6 W
Remaining Time Battery Light Blinking	1 hour
PHYSICAL SPECIFICATION	
Weight	1.37 Kg (with internal battery, radio standard UHF antenna)
Operating Temperature	-30°C to 65°C (-22°F to 149°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Operating Temperature with UHF Radio	-30°C to 50°C
Waterproof/Dustproof	IP67. Protected from temporary immersion to depth of 1 meter and from 100% humidity
Shock Resistance	Designed to endure to a 2 m pole drop on concrete floor with no damage Designed to endure a 1 m free drop on hardwood floor with no damage
Vibration	Vibration resistant
Winter Grade Option	Operating at -40°C (-40°F)

<sup>1</sup>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.  
<sup>2</sup>Depends on SBAS system performance.  
<sup>3</sup>Network RTK precisions depends on the network performances and are referenced to the closest physical base station.  
<sup>4</sup>Varies with the operating environment and with electromagnetic pollution.

# STONEX

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## 9990€



**PRICE INCLUDES :**  
**S10 WITH BUNDLE**  
**S4H CONTROLLER WITH BUNDLE**  
**CARBON FIBER TELESCOPIC POLE 2.45M**

The New Generation  
 Smart and Open  
 GNSS Receiver

UNI EN ISO 9001:2008 OCTOBER 2014



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