

S10A GNSS



- ✓ RTK-Genauigkeit, fixed (Initialisierung <10s)
+/- 8mm horizontal, +/- 15mm vertikal
- ✓ Hemisphäre GNSS-Board 394 Kanäle L1/L2 mit
GPS, GLONASS, GALILEO, COMPASS, SBAS
- ✓ High Performance mit Atlas[®] Dienst, L-Band Atlas[®] H10/H30/H100
- ✓ Elektronische Libelle mit Tilt-Kompensator, Akkus mit
Ladestandsanzeige, WEB-Interface
- ✓ Integriertes GPRS-Modem, optionales UHF-Funkmodul 410-470 MHz
- ✓ IP67, 2 Jahre Herstellergarantie

TECHNICAL FEATURES

RECEIVER

Satellite Tracked	GPS: L1CA, L1P, L1C, L2P, L2C, L5
	GLONASS: L1, L1P, L2, L2P
	BEIDOU: B1, B2, B3
	GALILEO: E1, E5A, E5B
	QZSS: L1CA, L1C, L2C, L5
	SBAS: L1CA, L5
L-Band	Atlas H10 / H30 / H100
Channels	394
Position Rate	Up to 20 Hz
Signal Reacquisition	< 1 sec
RTK Signal Initialization	Typically < 10 s
Hot Start	Typically < 15 s
Initialization Reliability	> 99.9 %
Internal Memory	8 GB
Micro SD Card	Expansion slot up to 32 GB

POSITIONING¹

HIGH PRECISION STATIC SURVEYING (Long Time Observations)	
Horizontal	2.5 mm + 0.1 ppm RMS
Vertical	3.5 mm + 0.4 ppm RMS
FAST STATIC	
Horizontal	3 mm + 0.5 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	0.50 m RMS ²
Vertical	0.85 m RMS ²
REAL TIME KINEMATIC (< 30 Km) – NETWORK SURVEYING ³	
Fixed RTK Horizontal	8 mm + 0.8 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

Frequency Range	410 - 470 MHz
Channel Spacing	12.5 KHz / 25 KHz
Emitting Power	0.5 / 1 / 2 W
Maximum Range	3-4 Km in urban environment Up to 10 Km with optimal conditions ⁴

INTERNAL MODEM

Band	GSM/GPRS/EDGE: 850/900/1800/1900 MHz WCDMA/HSDPA: 800/850/900/1900/2100 MHz
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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, RTCM2.3, RTCM3.0, RTCM3.1, RTCM3.2
Navigation outputs	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL

POWER SUPPLY

Battery	Rechargeable and replaceable 10.8 V - 3400 mAh 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)	7 hours (1 battery)
Working Time in GSM RTK (GPS+GLONASS)	6 hours ⁵ (1 battery)
Charge Time (2 batteries)	Typically 4 hours
Power Consumption	< 6 W

PHYSICAL SPECIFICATION

Dimensions	φ 140 mm x 145 mm
Weight	1.25 Kg (w/o battery) 1.45 Kg (with battery)
Operating Temperature	-40°C to 65°C (-40°F to 149°F)
Operating Temperature with UHF Radio	-30°C to 50°C (-22°F to 122°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
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

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. Depending on the connection mode (cable or BT).



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