

S10 GNSS



- ✓ RTK-Genauigkeit, fixed (Initialisierung <10s)
+/- 8mm horizontal, +/- 15mm vertikal
- ✓ TRIMBLE BD970 GNSS-Board 220 Kanäle L1/L2 mit
GPS, GLONASS, GALILEO, COMPASS, SBAS
- ✓ Elektronische Libelle mit Tilt-Kompensator, Akkus mit
Ladestandsanzeige, WEB-Interface
- ✓ Integriertes GPRS-Modem, optionales UHF-Funkmodul 403-473 MHz
- ✓ IP67, 2 Jahre Herstellergarantie

TECHNICAL FEATURES

RECEIVER

Channels	220
Satellite tracked	GPS: L1 C/A, L2C, L2E, L5 GLONASS: L1 C/A, L1P, L2 C/A, L2P, L3 SBAS: L1 C/A, L5 GALILEO: 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
Micro SD Card	Expansion slot up to 32 GB

POSITIONING¹

HIGH PRECISION STATIC SURVEYING (Long Time Observations)	
Horizontal	(2.5 mm + 1 ppm) RMS
Vertical	(5 mm + 1 ppm) RMS
CODE DIFFERENTIAL POSITIONING	
Horizontal	(0.25 m + 1 ppm) RMS
Vertical	(0.5 m + 1 ppm) RMS
SBAS POSITIONING (Typical)	
Horizontal	< 1 m 3D RMS ²
Vertical	< 5 m 3D RMS ²
REAL TIME KINEMATIC (< 30 Km) - NETWORK SURVEYING ³	
Fixed RTK Horizontal	(8 mm + 1 ppm) RMS
Fixed RTK Vertical	(15 mm + 1 ppm) RMS
INCLINED POSITIONING (2M POLE)	
10° inclination	20mm RMS
20° inclination	30mm RMS
30° inclination	50mm RMS

INTEGRATED GNSS ANTENNA

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

INTERNAL RADIO

Device	Pacific Crest XDL Micro
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 ⁴

WIRELESS MODULE

Device	Cinterion
Band	GSM/GPRS/EDGE: 850/900/1800/1900 MHz WCDMA/HSDPA: 850/1900/2100 MHz
Output power	GSM850, EGSM900: 33dBm (2W) GSM1800, PCS1900: 30dBm (1W) WCDMA: 24dBm

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 Hotspot function
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+, sCMRx, RTCM2.1, RTCM2.3, RTCM3.0, RTCM3.1, RTCM3.2
Navigation outputs	ASCII (NMEA-0183): GGA, AVR, RMC, HDT, VGK, VHD, ROT, GGK, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS

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

Dimensions	φ 140 mm x 145 mm
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 (-22°F to 122°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
Winter Grade Option	Operating at -40°C (-40°F)

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

Specifications are subject to change without notice.

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.



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