i80 RTK GNSS - The Ultimate Rover, Base, Static Receiver!

Small, Lightweight, Rugged with Legendary Tracking and Performance

- Future proof GNSS design: 220-channel All-in-View Tracking: GPS + GLONASS + Galileo + BeiDou + SBAS. Fully enabled GNSS engine provides best-in-class tracking and RTK performance: GPS: L1C/A, L1C, L2C, L2E, L5; GLONASS: L1 C/A,L1P, L2 C/A, L3 CDMA6; Galileo: E1, E5A, E5B, E5AltBOC; BeiDou: B1, B2; QZSS: L1 C/A, L1 SAIF, L2C, L5; SBAS: L1 C/A, L5; WAAS, EGNOS, MSAS
- Fully provisioned: Base and the Rover are fully optioned for all constellations and all operation modes (UHF, Network and DCI.) There are no 'after-sale' options
- Bright sunlight readable alpha-numeric panel with keyboard for quick setup of most modes of operation: Static Logging, Auto-Base, Auto-Rover, GSM and UHF channel selection
- Rugged, reliable, small (4.8" diameter x 5.1" high), lightweight (3.3 lbs. with 2 batteries,) cast magnesium chassis, double-sealed gaskets, mechanically protected connectors, vibration dampened internal boards. IP67, MIL-STD-810F
- Bluetooth: Android + Windows Mobile + Desktop. Cable free field operation
- Cellular: WCDMA & HSPA+/EDGE/GPSR/GSM; built in hotspot for leveraging cellular connection with PC's tablets and other devices
- USB: High-speed Thumb Drive interface for file transfer
- Serial: High-speed serial port
- Wi-Fi: 802.11 b/g/n; works as a Wi-Fi Hotspot; receiver fully configurable by Wi-Fi using standard web browsers
- UHF: Internal Satel 403-473 MHz; 0.1 to 1 watt; TrimTalk, Satel, EOTT
- Dual, Hot Swappable Batteries: 12-hour RTK Rover Runtime
- 32 GB High Speed Memory for logging static observation data. Direct submission to OPUS Static, RS and Projects with the included iGage X9x Download tool.
- Detailed iGage step-by-step 'User Manual'
- Eligible for iGage 10-24 same-as-cash financing

www.x9gps.com/i80

CHC

iGage

i80 GNSS RTK GNSS Specifications

Price (MSRP) [5]	Visit www.x9gps.com for current pricing
GNSS Engine	Trimble BD-930: fully enabled tracking: L2C, L5, GLONASS L3, Precise RTK
	 i80 GNSS  Dual-hot-swappable batteries  Recessed Ports  Recessed UHF Ant Port
Measurements	**220 Channels, 6 constellations, All-in-View Tracking Standard** **GPS**: L1C/A, L1C, L2C, L2E, L5 **GLONASS**: L1 C/A,L1P, L2 C/A, L3 CDMA[6] **Galileo**: E1, E5A, E5B, E5AltBOC **BeiDou**: B1, B2 **QZSS:** L1 C/A, L1 SAIF, L2C, L5 **SBAS**: L1 C/A, L5; WAAS, EGNOS, MSAS
RTK Performance[1]	Horz 8 mm + 1 ppm RMS Vert 15 mm + 1 ppm RMS
Post-Processing Static Performance[1]	Horz 2.5 mm + 0.5 ppm RMS Vert 3.5 mm + 0.5 ppm RMS
SBAS Performance	Horz 0.3 m RMS with WAAS in the United States 0.5 m RMS with QZSS, EGNOS, GAGAN
GNSS Antenna	IGS Robotic Absolute type mean calibration "CHCI80 NONE"
RTK Initialization[4]	< 10 seconds, 99.9% reliability
TTFF (time to first fix) [4]	Signal Reacquisition < 2 seconds (leaving full obstruction to clear sky) Warm Start < 30 seconds (ephemeris and last position known) Cold Start < 45 seconds (no ephemeris or known position)
Protocols	RTCM 2.3, RTCM 3.2, CMR, CMR+, sCMRx NMEA 0183: GGA, GSV, GSA, GST, RMC, GLL, VTG, ZDA, PJK, PJT, HDT, AVR, BPQ, GGK, VGK, VHD, ROT HCN and RINEX output for GNSS raw data
Network	GSM Cellular; Wi-Fi Client, Data Collector Internet: NTRIP and DIP connections.
Communication	Wi-Fi: 802.11 b/g/n WWAN: Integrated GSM/GPRS modem: 3.75G, HSPA, EDGE, GPRS, GSM SERIAL: One RS232 High Speed Serial ports (7-pin LEMO) USB: High Speed USB (7-pin LEMO), i80 mounts as a high-speed thumb drive when connected to computer Bluetooth®: Integrated multimode Class 2. iOS, Android, Windows Mobile and Windows Desktop compatible. UHF: Internal Satel Transmit / Receive UHF modem: 403-473 MHz; TrimTalk, EOTT, SATEL
Physical	Size: 4.8" diameter x 5.1" high; Weight: 2.2 lbs. empty, 3.3 lbs. with batteries Operating temperature: -40°F to 165°F; Storage temperature: -40°F to 185°F Humidity: 100% condensation Waterproof and dust proof: IP67 protected from temporary, immersion, floats; MIL-STD-810F Bottom case is single magnesium casting with a pressed stainless-steel 5/8" 11 TPI pole mount Shock: survives a 3-meter drop to concrete; connectors mechanically protected by the case against impact
LCD Display	128 x 64 Sunlight Readable with Function and Accept buttons
Electrical	Power consumption: 3.2 watts as a rover Lithium-Ion battery capacity: the i80 accepts two, hot-swappable 2 2.2 or 2.6 Ah, 7.4 V standard batteries Battery Life[2]: Up to 12-hours typical for a RTK rover, 1,000 charge cycles External Power: input accepts 12 to 36 VDC, protected against reversed external power
Internal Storage	32-GB Internal Flash: Over 400-days storage at 1 Hz, 16-years with 5-second epochs[3]
Data Collection Software	Carlson SurvCE, SurvPC; LandStar, MicroSurvey FieldGenius
Warranty	2-year iGage warranty; 2-year CHC factory warranty; accessories 1-year; batteries 90-days

[1] Precision and performance values assume a minimum of 9-satellites in multipath clear, EMI free, obstruction free environment with reasonable atmospheric conditions and satellite geometry. Network based solutions based on shortest actual baseline. Post-processed accuracy is dependent on baseline length and time-on-point, 24-hour observations may be required. Stable mounts and generally accepted survey practices are required for the highest order survey results.

[2] Battery life varies with temperature and battery age. An external power source is recommended for static occupations lasting longer than 4-hours and base operation longer than 2 hours. Elevated and extreme cold working or storage temperatures (> 85°F, <-20°F) hasten capacity loss.

[3] Assuming 14-tracked satellites.

[4] Initialization times assume reasonable baseline, constellation and number of SV's in a multipath and obstruction clear environment.

[5] Price includes 3-day Shipping to most USA address.

[6] There is no public GLONASS L3 CDMA ICD, receiver is not guaranteed to be fully compliant with this signal.

Prices, specifications and descriptions are subject to change without notice. Please call us for the latest information and a custom quotation.

An FCC license is required for UHF base operation.

Included Accessories:

iGage step-by-step User Manual
USB Download Cable, DB-9 Serial Cable
iGage Download Tool
Extension Pole for Base-on-Tripod
Tuned UHF Antennas
UHF Antenna Extension Cable
4-Batteries
Dual-Charger with Power Supply

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