iG9 RTK GNSS with IMU Tilt Compensation

small, lightweight, rugged, reliable

GPS + GLONASS + Galileo + BeiDou + QZSS ·
Any-Mix-Fix ·
tracking fully enabled ·
336 tracking channels · 50Hz ·
tracks and utilizes Galileo BeiDou L2C L5 today ·
RTK UHF & Network reference station functionality

Bright sunlight readable OLED panel ·
keyboard for quick mode selection and full control

Dual Batteries ·
9-hour Operation · hot swappable

IMU tilt compensated shots ·
IMU + GPS track correction reduces fly-away points

Well connected:
  4G · built-in hotspot / internet sharing ·
  Wi-Fi · http · ftp ·
  Bluetooth · USB · Serial ·
  403-473 MHz TxRx 2-watt UHF modem

27 GB high speed static observation memory ·
iGage direct download and OPUS submittal ·
direct to RINEX logging

IP68 · water and dust proof ·
  cast magnesium case ·
  3.3 lbs. with batteries ·
  2-year iGage warranty ·

www.iGage.com   www.iG9.xyz

iG9 GNSS RTK GNSS Specifications

Price (MSRP) [5]	Please call iGage: +1-801-412-0011 or check: www.iG9.xyz for current prices
GNSS Engine	Trimble BD-990: fully enabled tracking: Trimble Maxwell 7, 50-Hz

GNSS Measurements	336+ Channels, 8 constellations, All-in-View Tracking Standard, 50-Hz Rate			
	GPS	L1C/A, L2C, L2E, L5	**GLONASS**	L1 C/A, L2 C/A, L3 CDMA [6]
	Galileo	E1, E5A, E5B, E5AltBOC, E6	**BeiDou**	B1, B2, B3
	QZSS	L1 C/A, L1 SAIF, L2C, L5, LEX	**IRNSS**	L5
	SBAS	L1 C/A, L5; WAAS, EGNOS, MSAS	**MSS**	Trimble RTX

RTK Performance[1]	Horz	8 mm + 1 ppm (RMS 1-sigma)	Vert	15 mm + 1 ppm (RMS 1-sigma)
Static PP Performance[1]	Horz	2.5 mm + ½ ppm (RMS 1-sigma)	Vert	5 mm + ½ ppm (RMS 1-sigma)
SBAS Performance	Horz	0.3 m RMS with WAAS in the United States 0.5 m RMS with QZSS, EGNOS, GAGAN		
GNSS Antenna	NGS Calibration			
RTK Initialization[4]	< 8 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)

RTK Tilt Compensation [7]	200 Hz, 0 to 60°, 10 mm + 0.7 mm / ° tilt; IMU based
Protocols	Input RTCM 2.1, 2.2, 2.3, 3.0, 3.1, 3.2, CMR, CMR+, sCMRx
	Output RTCM 2.3, RTCM 3, RTCM 3.2, CMR, CMR+, sCMRx
	NMEA 0183 GSV, AVR, RMC, HDT, VGK, VHD, ROT, GGK, GGA, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS HCN and RINEX output for GNSS raw data
Network	Integrated 4G modem LTE (FDD): B1,B2,B3,B4,B5,B7,B8,B20; DC-HSPA+/HSPA+/HSPA/UMTS: B1, B2, B5, B8; EDGE/GPRS/GSM 850/900/1800/1900MHz. Wi-Fi AP, Data Collector Internet: NTRIP and DIP connections
Communication	Wi-Fi: 802.11 b/g/n; fully configurable via Web Interface
	WWAN: Integrated GSM/GPRS modem: 3.75G, HSPA, EDGE, GPRS, GSM
	SERIAL: One RS232 High Speed Serial port (7-pin LEMO)
	USB: Standard High-Speed USB Type-C Connector, iG9 mounts as a thumb drive
	Bluetooth®: v4.1 Integrated multimode Class 2. iOS, Android, Windows Mobile and Windows compatible
	UHF: Internal 2-watt Transmit / Receive UHF modem: 403-473 MHz; TrimTalk, EOTT, SATEL
	Network: 6 TCP/UDP Clients, 4 TCP Server / NTRIP Caster
Physical	Size: 6.3" x 5.9" diameter x 4.3" high; Weight: 2.86 lbs., 3.34 lbs. with batteries
	Operating temperature: -45°F to 165°F; Storage temperature: -65°F to 185°F
	Humidity: 100% condensation; Vibration: Mil-Std-810G
	Waterproof and dust proof: IP67 water-resistant to 1m for 30-minutes without extra caps or covers
	Cast AZ91D magnesium alloy, stainless 5/8" 11 TPI pole mount, double-seal gaskets
	Shock: survives a 3-meter drop to concrete; connectors mechanical + dust cover protected
Display / Buttons	OLED 128x128 1.46" sunlight readable with Next, Enter buttons; SV, Correction, Data Recording, Power LEDs
Electrical	Power consumption: 3.2 watts as a rover; single-handed battery exchange
	Lithium-Ion battery capacity: qty 2 x 3,400 mAh 7.4 V standard batteries, 50.3 Wh, hot-swappable
	Battery Life[2]: UHF Rover 8h, GSM Rover 9h
	External Power: input accepts 9 to 28 VDC; heavy duty external power cable included with base kits
Storage	32-GB Internal Flash: over 300-days storage at 1 Hz, 10-years with 5-second epochs[3]
	Unlimited expansion with external flash drive
Data Collection Software	Carlson SurvCE / SurvPC V 6.06 and higher, MicroSurvey FieldGenius
Warranty	2-year iGage warranty; accessories 1-year; batteries 90-days

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[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 8-hours and base operation longer than 4 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 Ground shipping to most USA address when purchased from iGage.

[6] There is no public GLONASS L3 CDMA or Galileo E6 ICD, receiver is not guaranteed to be fully compliant with this signal. The hardware of this product is designed for BeiDou B3 compatibility (trial version) and its firmware will be enhanced to fully support such new signals as soon as the officially published signal interface control documentation (ICD) becomes available.

[7] An RTK Fix is required for Tilt initialization and use. Evaluate suitability for use.

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

FCC ID SY4-A01020. An FCC license is required for UHF base operation.

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