

RTk5

GNSS Solution

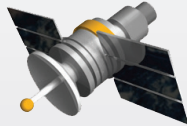
Powered By
GAMA
RTK

Carlson
BREAK NEW GROUND

The Carlson RTk5 adds an advanced GNSS solution featuring Carlson's RTK engine, Gama, to the RT5 ruggedized Windows data collector. Designed for surveying, stake-out, construction layout and GIS mapping, the RTk5 is bundled with Carlson SurvPC – the Windows-based data collection program.

POWERFUL GNSS CAPABILITIES

- Advanced multi-frequency, multi-constellation (GPS + GLONASS + Galileo + BeiDou + QZSS) RTK GNSS performance
- Carlson's Gama RTK engine provides the highest level of certainty



PERFORMANCE

- Powerful Windows 10 for office-to-field use
- Plenty of memory - 8 GB RAM & 256 GB flash storage

EXPANDABLE BATTERY



- All-day battery runs 10+ hours for minimal downtime
- Optional 15+ hour battery
- 5-minute hot swap

A SUPERIOR FIELD SOLUTION

- Balanced & ergonomic; 25+% lighter than typical GNSS setups - 6 lbs (2.7 kg) with tablet, cradle, pole, and antenna
- Gather live, centimeter-level positions directly into an Esri database with zero post processing
- Operate handheld without a pole (only 2.6 lbs/1.18 kg) using a direct-connect helix antenna for fast GIS work with cm-level accuracy
- Long Range Bluetooth®, Dual-band Wi-Fi®, USB 3.0 connectivity, 4G LTE (GSM)

FIELD-TESTED RUGGED

- Operates in extreme temperatures from 14F to 122F (-10° C to 50° C)
- Dustproof & water resistant (IP65 rating)
- Designed to MIL-STD-810G for ultra-ruggedness
- 3-year warranty

HIGH-VISIBILITY DISPLAY

- Large, 8-inch display for easy viewing
- 800 nits (cd2/M) brightness provides extraordinary visibility
- Capacitive touch screen with digital pen support



BREAK NEW GROUND

GNSS

- Multi-Frequency
- Multi-Constellation (GPS + GLONASS + Galileo + BeiDou + QZSS)
- RTK^{1,2}
- Horizontal accuracy: 0.008 m + 1 ppm
- Vertical accuracy: 0.011 m + 1 ppm
- Update rate up to 5 Hz
- Convergence time: < 10 sec
- Initialization times:
 - Cold starts 24 s
 - Reacquisition 2 s

PHYSICAL KEYS

- LED backlight adjustment keys
- Windows/home key
- Power button
- 2 trigger buttons
- 4 programmable buttons

PORTS

- USB 3.0 x 1
- 3.5 mm audio jack
- USB Type-C power input jack
- Built-in speaker

BATTERY

- Removable Li-Ion battery, 5400mAh
- Operates 10+ hours on one charge
- Hot-swappable, easily changeable in field
- Optimized for strong performance in cold temperatures
- Excellent lifecycle performance
- Optional 8000mAh battery for 15+ hours of operation

PHYSICAL

- Size: 6.1 x 9.4 x 1.3 in (155 x 238 x 33 mm)
- Tablet Weight: 2.58 lbs (1.17 kg)
- Complete setup on pole: 6 lbs (2.72 kg)
- Durable, shock-resistant design
- Easy-to-grip, impact-absorbing, overmolded bumpers
- Lightweight and ergonomic design

WIRELESS CONNECTIVITY

- Long Range Bluetooth® (tested to 1,500'/450 m)
- Wi-Fi 802.11 a/b/g/n/ac, 2.4 GHz and 5 GHz
- 4G LTE (GSM)

CAMERA

- 8 MP rear mounted

OTHER FEATURES

- TPM (Trusted Platform Module) v2.0

CERTIFICATIONS AND STANDARDS

- IEC 62368-1
- FCC Class B
- CE Marking (applicable EMC, R&TTE, and LVD directives)
- RoHS Compliant
- Industry Canada
- HERO (Hazard of Electromagnetic Radiation to Ordnance) certified

FIELD-TESTED RUGGED

- IP65 for dust and water resistance
- Operating Temperature: 14 F to 122 F (10° C to 50° C)
- Storage temperature: -4 F to 140 F (-20° C to 60° C)
- MIL-STD-810G for shock and vibration protection

WARRANTY

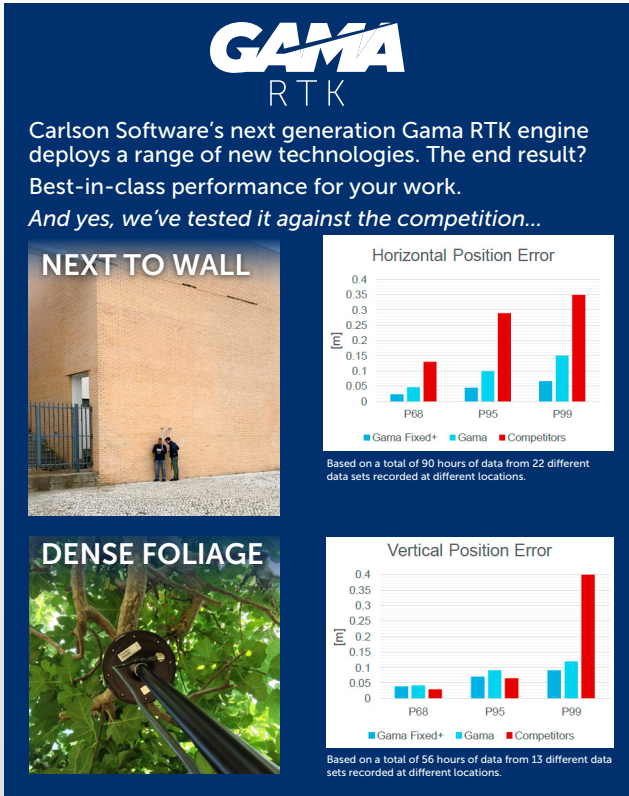
- 3-year warranty
- Service plans available

STANDARD ACCESSORIES

- Antennas: Survey grade, Helix/GIS, and
- Custom survey pole
- Custom cradle with pole mount & 1" ram arm
- Standard removable battery
- AC wall charger
- Quick Start Guide
- Hand strap

1 Depends on multipath environment, number of satellites in view, satellite geometry, and ionospheric activity

2 Depends also on baseline length



GAMA RTK

Carlson Software's next generation Gama RTK engine deploys a range of new technologies. The end result? Best-in-class performance for your work. And yes, we've tested it against the competition...

NEXT TO WALL

Horizontal Position Error

Model	Gama Fixed+	Gama	Competitors
P68	~0.05	~0.05	~0.15
P95	~0.05	~0.05	~0.25
P99	~0.05	~0.15	~0.35

Based on a total of 90 hours of data from 22 different data sets recorded at different locations.

DENSE FOLIAGE

Vertical Position Error

Model	Gama Fixed+	Gama	Competitors
P68	~0.05	~0.05	~0.05
P95	~0.05	~0.05	~0.05
P99	~0.05	~0.15	~0.35

Based on a total of 56 hours of data from 13 different data sets recorded at different locations.

PROCESSOR

- Quad-core Intel® Pentium Silver processor

OPERATING SYSTEM

- Microsoft® Windows 10 IoT Enterprise
- Multiple languages supported (English, French, Spanish, German, Portuguese)

MEMORY AND DATA STORAGE

- 8 GB RAM
- 256 GB flash storage
- User-accessible smart card reader

GRAPHICS

- Intel® HD Graphics

DISPLAY

- Active viewing area: 8" (203 mm)
- Resolution: WXGA (1280 x 800)
- High-visibility backlit LCD for sunlight viewability
- Portrait or landscape orientation with automatic screen rotation

TOUCH SCREEN

- Projected capacitive multi-touch interface for use with gloves, small tip stylus, and in wet conditions

Bundled with SurvPC 7

The Windows-based data collection program with the ability to run Esri in the field. Or use in the office with any Carlson office software.

