

# Viking

## GNSS Receiver

Powered By  
**GAMA**  
RTK



*The Carlson Viking® is the ultimate solution for precision positioning in difficult environments. Used as either a base or a rover, the Viking system features a best-in-class GNSS antenna element and an integrated IMU offering centimeter-level accuracy, heightened flexibility, durability, and self-calibrating tilt compensation.*

### Cutting-Edge Performance and Connectivity

The Viking supports 632 channels, enabling simultaneous tracking of all major satellite constellations, including GPS, GLONASS, BeiDou, Galileo, QZSS, and NavIC (IRNSS).

Equipped with a 4G cellular modem and UHF radio, the Viking ensures robust internet connectivity and reliable RTK data transmission. Configure it as either a Rover or Base Station, providing unmatched flexibility.

### Uninterrupted Power for Maximum Efficiency



With two long-life lithium batteries, the Viking offers up to 10+ hours of uninterrupted operation. The hot-swappable design allows you to replace batteries on the go, ensuring seamless performance.



### Advanced Technology for Every Challenge

At its core, the Viking features the Gama RTK Navigation engine, paired with a sophisticated Web UI for effortless management and upgrades. Its innovative **RTK Triple-Fix** technology ensures high-fidelity positioning with virtually 100% reliability, guaranteeing precision in every task.

Its ruggedized antenna is engineered for extreme conditions and meets IP67 standards, making it an ideal choice for demanding environments.

### Versatility Across Industries

Whether you're conducting land or marine surveys, GIS mapping, construction projects, or advanced RTK applications, the Viking is your trusted partner.

### Precision, Performance, and Reliability

Combined with Carlson's SurvPC field software, the Viking is more than a positioning system—it's a powerful tool designed to enhance your efficiency, streamline your workflows, and deliver unparalleled accuracy.

#### Viking communication interfaces:

- Wi-Fi
- Bluetooth
- Cellular modem
- UHF Radio (400 + 900 MHz)
- 2x Serial RS232
- 1x USB for Ethernet over USB
- 1x removable SD card



## GNSS

- Dual GNSS RTK modules
- 3 RTK engines
- Multi-frequency
- Supports all constellations (Including GPS + GLONASS + Galileo + BeiDou + QZSS)
- 632 channels
- RTK<sup>1,2</sup>
  - Horizontal accuracy: 0.6 cm + .5 ppm
  - Vertical accuracy: 1 cm + 1 ppm
- Support for L-Band corrections

## PROCESSOR, MEMORY AND DATA STORAGE

- 1.7 GHz Dual Cortex-A55 + 250MHz Cortex-M33
- 2GB DDR4 RAM, 16 GB eMMC storage

## PORTS

- USB for ethernet
- 2 x RS232

## BATTERY

- Dual removable lithium batteries, xxxmAh
- Operates up to 10+ hours on one charge
- Hot-swappable, easily changeable in the field
- Optimized for strong performance in cold temperatures
- Excellent lifecycle performance
- Storage life of more than 6 months
- Ready for 10-18 V external power
- Battery indicators

## PHYSICAL

- Size: 6.3" (160mm) diameter, 3.75" (95mm) height
- Weight: 2.98 lbs (1.35 kg) with 2 batteries
- Durable, shock-resistant design
- Materials: powder coated aluminum housing, plastic top cover, nitrile rubber o-ring, steel screws

## WIRELESS CONNECTIVITY

- Integrated Bluetooth® BT 2.1 + EDR and BLE 5.4
- UHF radio, fully configurable with TX and RX capability
- Wi-Fi 802.11 ax/ac/b/g/n, 2.4 GHz
- Worldwide network coverage, LTE Cat 4, dual antennas

## CERTIFICATIONS AND STANDARDS

- FCC Class B
- CE Marking (applicable EMC, R&TTE, and LVD directives)

## FIELD-TESTED RUGGED

- IP67 for dust and water resistance
- Operating Temperature:
  - 40 F to 149 F (-40° C to 65° C)
- Storage temperature:
  - 40 F to 185 F (-40° C to 85° C)
- Up to 100% humidity
- Vibration: MIL-STD-810G, method 516.6
- Mechanical Shock: MIL-STD-810G, method 514.6E-I
- Unprotected drop: 2 m range pole drop on concrete, 1 m free drop on hardwood floor
- Inflammability: Fulfills US, EU safety standards; UL recognized batteries
- Chemical resistance: Cleaning agents, soapy water, industrial alcohol, water vapor, solar radiation (UV)

## STANDARD ACCESSORIES

- Viking batteries (2)
- USB wall charger (dual USB with USB-A and USB-C)
- Viking external battery charger (dual-bay)
- Viking 5-pin cable for 12 V power supply and USB-C charging
- Viking 7-pin cable USB cable to connect to PC
- UHF 400 MHz UHF antenna
- UHF 900 MHz UHF antenna
- UHF cable extension bracket
- 5/8" quick release adapter

## Visual and Audio Indicators

- 5x LEDs for indication of power and status
- Audio speaker for indication of GNSS status and warnings

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

2 Depends also on baseline length

Carlson products are constantly being improved, and all specifications are subject to change without notice.



## GAMA RTK

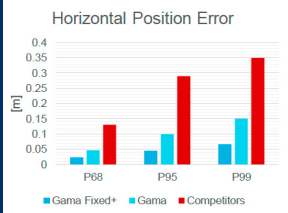
Carlson Software's next generation Gama RTK engine deploys a range of new technologies. The end result? Best-in-class performance for your work.

*And yes, we've tested it against the competition...*

### NEXT TO WALL



### Horizontal Position Error

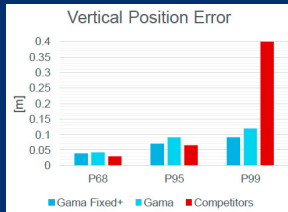


Based on a total of 90 hours of data from 22 different data sets recorded at different locations.

### DENSE FOLIAGE



### Vertical Position Error



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



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