Viking
GNSS Receiver

Assembled in Maysville, Kentucky
Componenents from USA + Europe

Carlson
BREAK NEW GROUND

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, Triple-Fix reliability 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 12+ hours of uninterrupted operation. In-unit USB-C charging and a hot-swappable design allows you to charge or replace batteries on the go, ensuring seamless performance.

Advanced Technology for Every Challenge

At its core, the Viking features Carlson's Gama RTK 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.

The Viking comes features industry-leading anti-jamming, anti-spoofing interference monitoring & mitigation technology, advanced protection against ionospheric disturbances, multipath mitigation to remove reflected signals, and robust tracking during high vibrations and shocks. The Viking is also engineered for extreme environmental conditions and meets IP67 standards, making it an ideal choice for demanding situations.

Versatility Across Industries

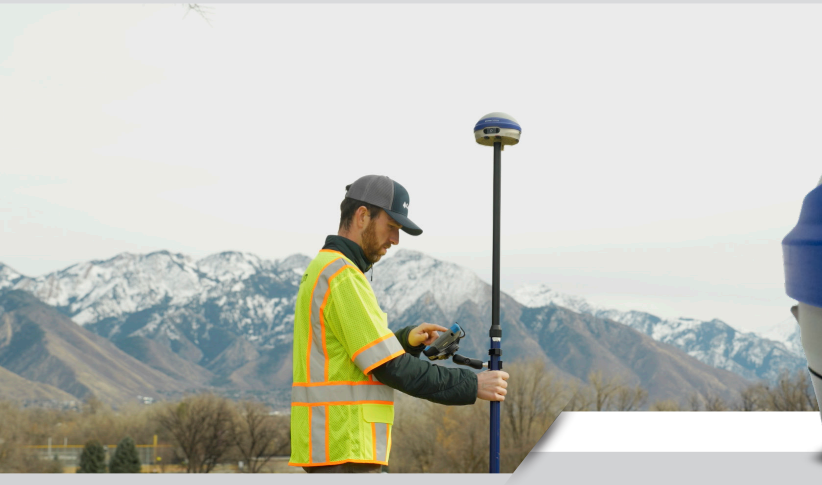
Whether you're conducting land or marine surveys, GIS mapping, construction projects, or advanced RTK applications, the Viking is your trusted partner.

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 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



BREAK NEW GROUND

Carlson Viking - Specifications

GNSS
- Dual GNSS RTK modules
- 3 RTK engines
- Multi-frequency
- Supports all constellations:
  -GPS: L1C/A, L1PY, L2C, L2P, L5
  -GLONASS: L1CA, L2CA, L2P, L3 CDMA
  -BeiDou: B1I, B1C, B2a, B2b, B2I, B3
  -Galileo: E1, E5a, E5b, E5 AltBOC, E6
  -QZSS: L1C/A, L1C/B, L2C, L5
  -NavIC: L5
  -SBAS: EGNOS, WAAS, GAGAN, MSAS, SDCM (L1, L5)
  -L-band: supported by module
- 632 channels
- RTK (UHF/NTRIP, single-baseline)1,2,3
  - Horizontal accuracy: 0.6 cm + 0.5 ppm
  - Vertical accuracy: 1 cm + 1 ppm
- PPK/Static post processing1,2
  -Horizontal accuracy: 3.0 mm + 0.1 ppm
  -Vertical accuracy: 3.5 mm + 0.4 ppm
- Industry-leading anti-jamming and anti-spoofing protection
- Resilience to heavy vibrations and shocks
- Excellent resistance to space weather events
- Advanced multipath mitigation for stable operation near buildings, heavy machinery and construction sites

TILT COMPENSATION
- Accuracy with 2 m pole
  - 0.7 cm @ 20 deg
  - 0.9 cm @ 30 deg
  - 1.2 cm @ 45 deg
  - 1.5 cm @ 60 deg

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, 25 Wh each
- Operates up to 12+ hours on one charge
- Hot-swappable, easily changeable in the field
- In-unit USB-C charging or external charger (both included)
- 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: anodized aluminum housing, plastic top cover, nitrile rubber o-ring, steel screws

WIRELESS CONNECTIVITY
- Integrated Bluetooth® BT 2.1 + EDR
- 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)

VISUAL AND AUDIO INDICATORS
- 6x LEDs for indication of power and status
- Audio speaker for indication of GNSS status and warnings

WARRANTY
- Standard Viking receiver warranty: 1 year

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 floor (flat surface), 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)

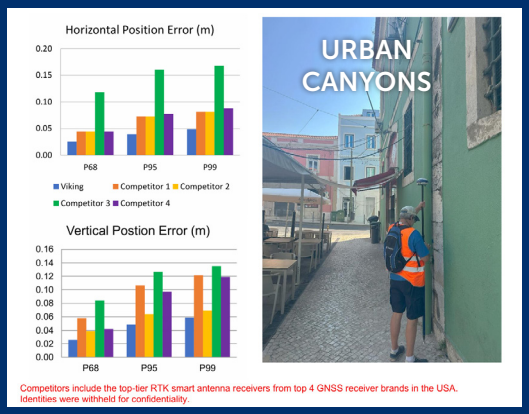
STANDARD ACCESSORIES
- Viking batteries (2)
- USB wall charger (dual USB with USB-A and USB-C)
- Viking external battery charger (dual-bay)
- Viking 5-pin cable for 12 V power supply and USB-C charging
- Viking 7-pin cable USB cable to connect to PC
- 400 MHz UHF antenna
- 900 MHz UHF antenna
- UHF cable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

1 Depends on multipath environment, number of satellites in view, satellite geometry, and ionospheric activity
2 Depends also on baseline length
3 Network RTK / VRS performance depends on the correction network and service implementation

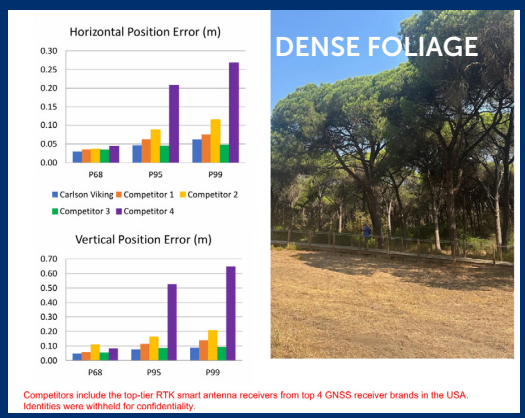
Carlson products are constantly being improved, and all specifications are subject to change without notice.

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...



Competitors include the top-tier RTK smart antenna receivers from top 4 GNSS receiver brands in the USA. Identities were withheld for confidentiality.



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MANUFACTURED IN MAYSVILLE, KENTUCKY, USA

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