GNSS RTK SMARTK RECEIVER

Superior Performance
Top of the line integrated RTK receiver
- Simplistic 1 button operation
- Wide and visible Graphic OLED Display
- Works as Rover by UHF or Mobile Network
- Transmits as Base by UHF or Mobile Network
- Internal transmitting UHF 2W and 45W external
- Water and Shockproof enclosure
- Operates with 2 Lithium batteries simultaneously
- Compatible with any NMEA software for PC, Windows Mobile or Android
- The best Cost/Benefit ratio of the market

Total Power and Control
Flexible and Potent to adapt into any application
- GPS L1+L2 RTK (Basic Activation)
- GPS L1+L2 + GLONASS G1+G2 RTK
- Internal UHF Transmits at 2W
- External UHF Transmits at 45W
- Exclusive Auto-Caster Technology:
  Direct Data Link between Base and Rovers by mobile network
- 3D Digital Compensator
- Auditive Verticality Alarm
- Every option configurable on display

Millimetric Accuracy
444 Channels Double Frequency

IT’S TIME TO GO NORTH
Made in Europe by North Group, Barcelona
**GNSS RTK SMARTK Receiver**

**GPS, GLONASS, SBAS, RTK**

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**SmaRTK GNSS RTK Integrated Receiver**

**System Overview**

- Dual-frequency GNSS RTK Receiver with 444 channels and integrated antenna.
- Internal Transceiving Radiomodem compatible with most brands.
- Works as Network, Auto-Caster or UHF Rover with its internal radiomodem.
- Works as Base with Auto-Caster, internal (2W) or external (25/45W) radio modem.
- Integrated cellular modem with North Auto-Caster® P2P technology.
- Triple Axis Compensator with integrated Auto-Calibration.
- Verticality Alert that permits the survey work without using the bubble.
- Integrated Bluetooth® wireless technology
- IP68 Rugged and water-resistant design

**North Software Options - Unique design to work Natively with NMEA drivers.**

- North TopView™ for Android, Windows CE, Windows Mobile or Windows PC.
- North GIS Surveyor™
- Carlson SurvCE™
- Microsurvey Field Genius™
- Esri ArcPad™
- Compatible with Windows PC, Mobile, Linux, Android or Embedded NMEA Software.

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**Performance Specifications**

**Receiver**

- North Stealth Survey GNSS chip board with 444 Channels
- North Stealth Multipath Shield technology, for maximum error filtering.
- Multiple radio samplers gives the most accurate band tuning available.
- Patented SAW filtering method for Doppler signal sampling.
- Available as GPS or GNSS versions (software activated)
- High precision multicorrelating GNSS pseudorange measurements.
- GNSS carrier phase with low noise with <1 mm precision in a 1 Hz bandwidth
- North Low-Track Technology for increased reception of horizontal signals.
- Signal-to-Noise ratios reported in dB-Hz
- Satellite signals tracked:
  - GPS: L1C/A, L1C, L1E, L2C, L2E and L5
  - GLONASS: L1C/A, L1P, L2C/A, L2P and L3
  - COMPASS: B1 and B2 (available upon request)
  - GALILEO: E1, E5a and E5b (available upon request)
  - SBAS: EGNOS, WAAS, MSAS, GAGAN

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**Data Link UHF Radiomodem**

**Internal GNSS Antenna**

- Four Element Multi-Feed Transducer with Resin platform for maximum sensibility.
- Integrated Multi-Path rejection filter to eliminate noise from the source.
- High Power impedance of 50 Ohm, with > 5dBi Zenithal gain.
- Maximum Phase Center error of ± 1.00mm.
- RHCP Polarization and 360° Axial ratio with low-elevation boost

**Data Link Auto-Caster for Mobile Network**

- Direk Auto-Caster Base to Rover P2P communication
- Protocols: Transparent / NTRIP
- CORS and Auto-Caster support

**User Interphase**

- Exterior use Industrial Graphical Blue OLED Display, 100 x 16 pixels
- Industrial Stainless Steel 19mm operation Button, IP68
- Auto-Calibrating Double Axis Digital Compensator.
- Auditive North Verticality Alarm™.

**Energy**

- Typical power consumption: 2.8W (UHF Rx) // 6.3-10.0 VDC Rx/Tx
- Battery: 4800mAh Lithium-Ion battery (split in two modules of 2400mAh each)
- Operating times on internal batteries : 12h Static, 10h Rover UHF, 9h Rover Network
- External power input : 12 VDC, 2000 mAh - 110V/220V AC
- Integrated internal Battery Charger with charge monitor.

**Communications**

- Rs232 serial port with USB converter
- Internal switchable UHF Radio modem transmitter / receiver
- Quad-Band Cell Modem: GSM 850, EGSM 900, DCS 1800, PCS 1900 / 85.6 kbps
- Integrated Type II Bluetooth® communications port

**HARDWARE**

**Physical**

- Dimensions (W×H) 17.5 cm × 8.5 cm
- Weight 1.4 kg with internal battery, internal radio, standard UHF antenna
- Working Temperature: -30 °C to +70 °C / Storage Temperature: -40 °C to +80°C
- 1GB internal SD Memory, records more than 1000hours @ 1 sec. (upgrades up to 16GB)
- Humidity 100%, condensing
- Water/dustproof IP67 / IEC 60529 JPX7 (Optional IP68)
- Shock and vibration tested to meet the following environmental standards:
  - Shock Non-operating: Designed to survive a 2 m pole drop onto plywood over concrete.

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**STANDARD ROVER SET INCLUDES:**

- 1 SmaRTK Receiver
- 1 Controller Bracket
- 2 Rechargeable Batteries (internal and removable)
- 1 Battery Charger
- 1 USB Data / Power Cable (Serial optional)
- 1 IP68 Plastic Rugged Carrying Case
- 1 UHF Antenna

**STANDARD BASE AND ROVER SET INCLUDES:**

- 2 SmaRTK Receivers
- 1 Controller Bracket
- 4 Rechargeable Batteries (internal and removable)
- 2 Battery Chargers
- 2 USB Data / Power Cables (Serial optional)
- 1 IP68 Plastic Rugged Carrying Case
- 2 UHF Antennas
- 1 Tribarach
- 2 10cm Minipoles with Washer adapter for Tripod
- 1 25/45W U-Cast UHF Radiomodem Booster with Power, UHF cable and whip antenna

**Notes:**

- TTFF and reliability specifications may be affected by multipath, satellite geometry and atmospheric conditions. Specifications assume at least 5 satellites and follow up of recommended practices.
- Specifications are subject to change without previous notice. This description may include typographical errors
- UHF type approvals are country specific