

# NAVIK 200

## GNSS RTK SYSTEM



**Performance Specifications**

**Satellite Signal Tracking**

700+ channels for simultaneously tracking satellite signals

**Satellite / Constellations Tracked**

GPS.....	L1, L2, L2C, L5
GLONASS.....	L1, L2
GALILEO.....	E1, E5a, E5b
Beidou.....	B1, B2, B3
BeiDou Global Signal.....	B1C, B2a
IRNSS.....	L1, L5

**Positioning Performance & Accuracy**

**Code Differential GNSS Positioning**

Horizontal.....	0.25 m + 1 ppm * Base Line Distance [ RMS ]
Vertical.....	0.40 m + 1ppm * Base Line Distance [ RMS ]

**Static GNSS Surveying**

High Precision / Long Observation Static Accuracy

Horizontal.....	3 mm + 0.1 ppm * Base Line Distance [ RMS ]
Vertical.....	3.5 mm + 0.4 ppm * Base Line Distance [ RMS ]

Static and Fast Static Accuracy

Horizontal.....	3 mm + 0.5 ppm * Base Line Distance [ RMS ]
Vertical.....	5 mm + 0.5 ppm * Base Line Distance [ RMS ]

**Post Processed Kinematic [ PPK ] GNSS Surveying**

Horizontal.....	8 mm + 1 ppm * Base Line Distance [ RMS ]
Vertical.....	15mm + 1 ppm * Base Line Distance [ RMS ]

**Real-Time Kinematic (RTK) Surveying**

[Single Baseline Upto 30 kms]

Horizontal.....	8 mm + 1 ppm RMS
Vertical.....	15mm + 1 ppm RMS

Network RTK Accuracy

Horizontal.....	8 mm + 0.5 ppm RMS
Vertical.....	15mm + 0.5 ppm RMS

Standalone Accuracy.....1.5 m RMS

SBAS / GAGAN Accuracy.....1.0 m RMS

DGPS Accuracy .....< 0.4 m RMS

RTK Convergence Time.....< 10 s

Max. Update Rate.....20 Hz

**Hardware**

**Physical**

Dimensions.....	156 cm x 106 cm
Weight.....	1.2 kg (Approx.)
Operating temperature.....	-40° C- + 65° C or better
Storage temperature.....	-40° C- + 70° C or better
Humidity.....	95% or better
Ingress Protection .....	IP67 dustproof, protected from temporary immersion to depth of 1 m
Shock and Vibration.....	Tested and meet the following environmental standards:
Shock.....	Designed to survive an accidental 2 m pole drop onto concrete
Vibration.....	MIL STD 810G/ MIL STD 810F

**Electrical**

- Power 10 V DC to 20 V DC external power input with over-voltage protection on Port 1(7-pin Lemo).
- Rechargeable internal 6800 mAh Lithium – ion smart battery
- Operating times on internal battery upto 8 hours on single recharge

**Data Formats**

Protocols.....RTCM 3.X, Rinex 3.x, NMEA v3.0, CMR

**Interfaces**

Wireless.....Wi-Fi, BLE, Radio, 4G, NTRIP  
Wired.....RS-232, USB

**Communication and data storage**

- Serial : RS-232 serial (7-pin lemo)
- Radio Modem: Fully Integrated, sealed 450 MHz wide band receiver/ transmitter with frequency range of 403 MHz to 473 MHz.
  - Transmit Power :1 W
  - Range:5 km
- Cellular: fully integrated, sealed internal GSM/4G
- Wi-Fi: Ultra – Low – Power, supporting IEEE 802.11 b/g/n(2.4 GHz Wi-Fi).
- Bluetooth: fully integrated, fully sealed 2.4 GHz communication port
- Data Storage : 16 GB internal

**Tilt**

Tilt.....60° with 2 cm accuracy

**Navik 200 Model has following variations :**

1. Navik 200 (With Radio)
2. Navik 200 Lite (Without Radio)
3. Navik 200 T (With Tilt)



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**NAVIK-200**  
**GNSS RECEIVER**