FEATURES:

Sub-centimeter position accuracy with RTK corrections

Accurate SOG measurement at low velocities (up to 5cm/s or 0.1 knot)

Differential corrections via reference station, satlink, SBAS, MSK DGPS, Omnistar

State-of-the-art geo-navigational software for better situational awareness

Designed for demanding environments

INDUSTRIES SERVED:

Offshore construction activities (wind farms, breakwaters, bridges, caissons, piles, marinapiers and coastal defences)

Dredge vessel positioning

Positioning and tracking of barges, tugs and other construction vessels

Offshore-rig-positioning and anchor-handling applications

Sample surveying





NaviGNSS+ by NavSim for Offshore Precise Positioning

NaviGNSS+ by NavSim delivers precise real-time positioning services for offshore construction vessels, pipelay and cable lay activities, FPSO installation and monitoring, dive support, seismic surveys and all other activities with demand for high performance positioning.

With four independent satellite constellations, NaviGNSS+ provides the highest performance of positioning, availability, reliability and coverage for your offshore operations. With the introduction of NaviGNSS+, we introduced new industry standards for precision and reliability.

Our embedded GNSS-based technology uses all available satellites (GPS, GLONASS, Galileo and BeiDou) without any constellation preference, to deliver fast and stable solutions. Based on orbit and clock corrections from a base station (either local or remote), NaviGNSS+ provides up to centimetre level horizontal and vertical position accuracy.

Flexible, Scalable, Upgradable

Depending on the circumstances, NavGNSS+ enables you to use differential corrections from Satellite-based Augmentation Systems (WAAS/EGNOS), MSK Beacon (free-to-air) and OmniSTAR VBS/XP/HP. If required you can also connect to NavSim's global network of shore base stations (via internet satlink) or use a dedicated offshore reference station (either moving or stationary) installed on your own field-operating vessel.

On top of that, utilizing a state-of-the-art inertial technology, NaviGNSS+ delivers unprecedented accuracy and instant responsiveness providing Rate of Turn data at 0.1 degree per minute resolution and +/-60 degree per minute range.

Upgrading situational awarness

Alongside robust and dependable hardware, NavSim's geo-navigation software upgrades your situational awareness to further optimize field productivity and efficiency. Easy-to-use planning tools and powerful navigation features such as routes with XTE (cross-track error), user objects (including user-drawn docking lines, markers and area boundaries), zones and zone alarms, and many more



NaviGNSS+ for Offshore Precise Positioning

GNSS CHARACTERISTICS

- Position Antenna 220 Channel:
- GPS: Simultaneous L1 C/A, L2E, L2C, L5
- GLONASS: Simultaneous L1 C/A, L2 C/A
- BeiDou: B1, B2
- Galileo: Simultaneous L1 BOC, E5A, E5B
- SBAS: Simultaneous L1 C/A, L5
- QZSS: L1 C/A, L1 SAIF, L2C, L5
- Vector Antenna 220 Channel (option):
 - GPS: Simultaneous L1 C/A, L2E, L2C
 - GLONASS: Simultaneous L1 C/A, L2E, L2C
 BeiDou: B1
- High precision multiple correlator for GNSS pseudorange measurements
- Unfiltered, unsmoothed pseudorange measurements data for low noise, low multipath error, low time domain correlation and high dynamic response
- Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth
- Maximum output rate: 50 Hz

POSITIONING SPECIFICATION¹⁾

- Single Baseline RTK (<50km):
 horizontal: 0.008 m + 1 ppm
 vertical: 0.015 m + 1 ppm
- DGPS:
 - horizontal: 0.25 m + 1 ppm
 - vertical: 0.50 m + 1 ppm

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Canada

NAVSIM TECHNOLOGY INC.

- SBAS:
 - horizontal: 0.50 m
 - vertical: 0.85 m

COMMUNICATION INTERFACES

• 1x USB port

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- 1x CAN port
- 3x RS232 portS
- Baud rates up to 460,800
- 1x CAN port
- 1x LAN Ethernet port:
- Supports links to 10BaseT/100BaseT networks

- All functions are performed through a single IP

address simultaneously - including web GUI

access and raw data streaming

- Network Protocols supported:
 - HTTP (web GUI)
 - NTP Server
 - NMEA, GSOF, CMR etc over TCP/IP or UDP
 - NTripCaster, NTripServer, NTripClient
 - mDNS/uPnP Service discovery
 - Dynamic DNS
 - eMail alerts
 - Network link to Google Earth
 - Support for external modems via PPP

OUTPUTS

- 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 & 50 Hz positioning outputs (depends on installed option)
- Up to 50 Hz raw measurement & position outputs

Reference outputs/inputs : CMR, CMR+, SCMRX, RTCM 2.1, 2.2, 2.3, 3.0, 3.1

– Navigation outputs NMEA-0183 GSV, AVR,
RMC, HDT, VGK, VHD, ROT, GGK, GGA, GSA,
ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS

1 Pulse Per Second Output

EUROPE - AFRICA - ASIA

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PERFORMANCE SPECIFICATION¹⁾

- Time to First Fix: <45s (cold) / <30s (warm) - Signal Re-acquisition: <2s
- Velocity Accuracy:
 - horizontal: 0.007 m/s
 - vertical: 0.020 m/s
- Acceleration: 11 g
- Rate of Turn: 0.1°/min (optional)
- Heading: <0.05° @10m baseline (optional)

PHYSICAL, ELECTRICAL AND ENVIRONMENTAL CHARACTERISTICS²⁾

Power Consumption: 4.1W @9-28V DC

- Weight: 1.9 kg
- Vibration/Mechanical shock: MIL810F/MIL810D
- Operating temperature: -40° to +85°C (-40° to +185°F)
- Storage temperature: -40° to +85°C (-40° to +185°F)
- Humidity: 95% non-condensing
- IP Rating: IP67

Notes

- Accuracy and TTFF specifications may be affected by atmospheric conditions, signal multipath, satellite geometry and corrections availability and quality. Position accuracy specifications are for horizontal positioning. Vertical error is typically < 2 times horizontal error.
- 2) Dependent on appropriate mounting/enclosure design.
- List includes all available and compatible communication modules which are not included in standard configuration (should be purchased separately depending on local requirements/needs).

