HIGH PRECISION GNSS/INS

PolyNav 3000H

The PolyNav 3000H is a compact and robust navigation solution for ground, marine, rail or aircraft-based systems. It is a tightly coupled GNSS and INS system integrating a multi-constellation, triple-frequency GNSS receiver and a tactical grade IMU. It provides superior performance under GNSS challenged environments and helps bridge GNSS outages. With the built-in RTK engine, it delivers up to centimeter level accurate positioning, velocity and attitude solution. It is designed for easy integration with onboard NTRIP client and server support and customizable internal storage. Its software is upgradeable in the field, which allows the customers to generate custom solutions required for their application.
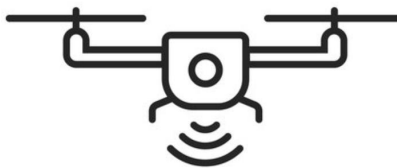
▬▬ FEATURES

- Multi-constellation tracking provides high availability
- Triple-frequency (L1/L2/L5) signal tracking enables high accuracy
- Tightly coupled GNSS and INS systems
- Dual antenna for rapid heading alignment
- Software upgradeable in the field
- Customizable onboard data storage
- 1 PPS output
- Support accessories: Ethernet, CAN, UART, DMI
- System options
    • Heave message for the marine application is available

▬▬ APPLICATIONS

Surveying and Mapping

UAV
Unmanned Aerial Vehicles

Marine Applications

Visit www.polyexplore.com for more information.

High-Performance, Cost-Effective Navigation & Mapping Solutions.

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POLYEXPLORE

SYSTEM SPECIFICATIONS

High Precision GNSS/INS
PolyNav 3000H

GNSS/INS

Constellations	GPS/GLONASS/BDS/Galileo
Signal Tracking	GPS L1C/A, L2C, L2P(Y), L5 GLONASS G1, G2 BDS B1I, B2I, B3I Galileo E1, E5a, E5b QZSS L1C/A, L2C, L5 SBAS L1C/A
Position Accuracy	
Single Point Positioning Horizontal Single Point Positioning Vertical	1.5 m 2.5 m
DGPS Horizontal DGPS Vertical	0.4 m 0.8 m
RTK Horizontal RTK Vertical	0.8 cm + 1 ppm 1.5 cm + 1 ppm
Velocity Accuracy	0.03 m/s
Pitch/Roll	0.03°
Heading	0.08° (1 m baseline)
Data Rate	
Dual Antenna RTK + Heading	20 Hz
Raw Data Output	20 Hz
Cold Start	< 30 s

IMU

Gyroscope	
Technology	MEMS
Dynamic Range	125 °/s
Bias Instability	0.8 °/hr
Angular Random Walk	0.03 °/√hr
Accelerometer	
Technology	MEMS
Dynamic Range	8 g
Bias Instability	3.2 μg
Velocity Random Walk	0.025 m/s/√hr

PHYSICAL & ELECTRICAL

Dimension	170 mm x 121 mm x 54 mm
Weight	840 g
Power	12 VDC
Interfaces	Ethernet CAN 2 Serial Ports Odometer

ENVIRONMENTAL

Operating Temperature	-40℃ to +85℃
Storage Temperature	-55℃ to +95℃
Ingress Protection Rating	IP67

* Supported by specific firmware