

RTK GNSS/INS

PolyNav 2100H/P



The PolyNav 2100H/P is a high-performance GNSS-aided Inertial Navigation System (INS) family designed and manufactured by PolyExplore. The family has two options:

- Ultrahigh performance “H” version
- High performance “P” version

The system is integrated with triple-frequency multi-constellation GNSS and MEMS IMU. It features tightly-coupled GNSS and INS systems and a built-in RTK engine that can achieve centimeter-level accuracy. The PolyNav 2100H/P family is compact and robust. It provides continuously superior performance during GNSS challenged environments and GNSS signal outages using dead-reckoning technique. Furthermore, a distance measurement instrument (DMI), such as an odometer, can be input to the system to provide additional accuracy and reliability. Heave message for marine applications is available.

FEATURES

- Highly accurate position, velocity, acceleration, angular rate and attitude (roll, pitch, heading)
- GPS, GLONASS, Beidou, Galileo and SBAS
- Triple frequency (L1/L2/L5) RTK
- Dual antenna for accurate heading
- 100 Hz navigation solution and raw measurement output
- Accurate attitude/heading whether the platform is static or moving
- Sensor fusion for GNSS, IMU and odometer
- ROS driver available
- System options
 - Heave message available

BENEFITS



BREAK THROUGH PRICE



MULTI I/O INTERFACE



NETWORK BASED RTK



RUGGED



Visit www.polyexplore.com for more information.

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

PolyExplore Inc.

2210 O'Toole Ave, San Jose, CA 95131
contact@polyexplore.com

REV. 1.03

SYSTEM SPECIFICATIONS

RTK GNSS/INS PolyNav 2100H/P

HARDWARE SPECIFICATIONS

Electrical	
Input Voltage	12 VDC
Power Consumption	5 W
Interface	Ethernet, CAN, 2 Serial Ports, Odometer
Environmental	
Operating Temperature	-40°C to 85°C
Mechanical	
Dimension	147 x 99 x 48 mm
Weight	500 g

PolyNav 2100H/P CHARACTERISTICS

Constellations	GPS/GLONASS/BDS/Galileo 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
Signal Tracking	
Position Accuracy	
Single Point Positioning	1.5 m
RTK	2 cm + 1 ppm
Velocity Accuracy	0.03 m/s
Roll/Pitch	0.005° (H), 0.03°(P)
Heading	0.08° (1 m base)
Measurement rate	100 Hz
Cold Start	< 30 s

INERTIAL SENSORS

PolyNav 2100H			PolyNav 2100P		
Type	Gyros	Accelerometers	Type	Gyros	Accelerometers
Dynamic Range	125°/s	8g	Dynamic Range	125°/s	8g
Bias Instability	0.8°/h	3.2ug	Bias Instability	2°/h	3.6ug
Random Walk	0.09°/√h	0.008m/s/√h	Random Walk	0.15°/√h	0.12m/s/√h



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