InertialLabs

Attitude is Everything

www.inertiallabs.com

TAA-308
TAA-315
TAA-340

Navigation-grade MEMS Accelerometers

	TAA-308	TAA-315	TAA-340
Weighs	8 grams	15 grams	40 grams
Accelerometers Bias in-run stability	0.005 mg	0.01 mg	0.02 mg
Accelerometers Bias error over temperature range	0.5 mg	0.7 mg	1.2 mg
Accelerometers Bias One Year repeatability	1 mg	1.3 mg	1.5 mg
Velocity Random Walk	0.015 m/sec/√hr	0.035 m/sec/√hr	0.045 m/sec/√hr

www.inertiallabs.com

MADE IN USA

TAA-308EC
TAA-315EC
TAA-340EC

Navigation-grade MEMS Accelerometers

	TAA-308EC	TAA-315EC	TAA-340EC
Weighs	13 grams	13 grams	13 grams
Accelerometers Bias in-run stability	0.003 mg	0.005 mg	0.01 mg
Accelerometers Bias error over temperature range	0.2 mg	0.3 mg	0.5 mg
Accelerometers Bias One Year repeatability	0.35 mg	0.45 mg	0.55 mg
Velocity Random Walk	0.01 m/sec/√hr	0.02 m/sec/√hr	0.03 m/sec/√hr

www.inertiallabs.com

TAG-200
TAG-300

Two and Three Axis Gyroscopes

Size	39 x 45 x 22 mm
Weighs	70 grams
Data Update Rate	2000 Hz
Bias in-run stability	2°/hr
Noise (ARW)	0.08°/√hr

MADE IN USA

TAG-304

Three Axis Gyroscope

Size	19.5 x 15.2 x 5.5 mm
Weighs	10 grams
Data Update Rate	4000 Hz
Bias in-run stability	2°/hr
Noise (ARW)	0.02°/√hr

www.inertiallabs.com

KERNEL-100

MEMS Inertial Measurement Units

Size	28.5 x 19.5 x 8.5 mm
Weighs	7 grams
Gyroscopes Bias in-run stability	2°/hr
Accelerometers Bias in-run stability	0.01 mg
Velocity Random Walk	0.02 m/sec/√hr
Pitch & Roll accuracy	0.05°

MIL-STD 810 G

www.inertiallabs.com

MADE IN USA

www.inertiallabs.com

KERNEL-110
KERNEL-120

MEMS Inertial Measurement Units

Size	28.38 x 19.5 x 10.5 mm
Weighs	10 grams
Gyroscopes Bias in-run stability	2°/hr
Accelerometers Bias in-run stability	0.01 - 1 mg
Velocity Random Walk	0.02 - 15 m/sec/√hr
Pitch & Roll accuracy	0.05°

KERNEL-210
KERNEL-220

MEMS Inertial Measurement Units

Size	28.38 x 19.5 x 10.5 mm
Weighs	15-17 grams
Gyroscopes Bias in-run stability	1°/hr
Accelerometers Bias in-run stability	0.005 mg
Velocity Random Walk	0.015 - 15 m/sec/√hr
Pitch & Roll accuracy	0.05°
Shock	30,000 g

www.inertiallabs.com

MADE IN USA

IMU-P
TACTICAL A
TACTICAL S

MEMS Inertial Measurement Units

Gyroscopes Bias in-run stability	0.5 - 1°/hr
Angular Random Walk	0.06 - 0.2°/√hr
Accelerometers Bias in-run stability	0.005 mg
Velocity Random Walk	0.015 m/sec/√hr
Pitch & Roll accuracy	0.05°

www.inertiallabs.com

IMU-P
INDUSTRIAL A
INDUSTRIAL S

MEMS Inertial Measurement Units

Gyroscopes Bias in-run stability	0.5 - 1 °/hr
Angular Random Walk	0.06 - 0.2 °/√hr
Accelerometers Bias in-run stability	0.005 mg
Velocity Random Walk	0.015 m/sec/√hr
Pitch & Roll accuracy	0.05°

MADE IN USA

IMU-NAV-100-A
IMU-NAV-100-S

MEMS Inertial Measurement Units

Gyroscopes Bias in-run stability	0.5 - 1°/hr
Angular Random Walk	0.04°/√hr
Accelerometers Bias in-run stability	0.003 mg
Velocity Random Walk	0.008 m/sec/√hr
Pitch & Roll accuracy	0.03°

www.inertiallabs.com

IMU-FI-200C

Inertial Measurement Units

Gyroscopes bias repeatability.....0.5°/hr
Gyroscopes noise (ARW).....0.025°/√hr
Accelerometers Bias in-run stability .....0.015 mg
Accelerometers Bias repeatability .....1.2 mg
Accelerometers SF accuracy.....300 PPM

MIL-STD 810 G

www.inertiallabs.com

MADE IN USA

AHRS-10B
AHRS-10P

Attitude & Heading Reference System

Pitch & Roll accuracy ..... 0.05°
Heading/Azimuth accuracy ..... 0.3°
Gyro-compensated Fluxgate compass
Tactical-grade MEMS IMU

www.inertiallabs.com

AHRS-II-P

Attitude & Heading Reference System

Pitch & Roll accuracy . . . . . 0.05°
Heading/Azimuth accuracy. . . . . 0.3°
Gyro-compensated Fluxgate compass
Tactical-grade MEMS IMU
Input from External GNSS Receiver, Fluxgate Magnetometer

MADE IN USA

MINI-AHRS

Attitude & Heading Reference System

Size	53 x 19 x 13 mm
Pitch & Roll accuracy	0.05°
Heading/Azimuth accuracy	0.3°
Gyroscopes Bias in-run stability	2°/hr

Embedded 3D magnetic calibration

Suitable for Primary Attitude Reference

www.inertiallabs.com

OPTOAHRS-II

Opto Attitude & Heading Reference System

Azimuth & Deflection Accuracy . . . . . 3 MIL
Elevation Accuracy . . . . . 1 MIL
Hybrid North Finding and North Keeping System
Tactical-grade IMU

MADE IN USA

CHEETAH NAV

Tactical Inertial Navigation System

Heading accuracy ..... 1 MIL
Pitch & Roll accuracy ..... 0.5 MIL
Dead reckoning accuracy within 0.2% distance traveled
Main Display Unit & Driver Display Unit
MEMS tactical grade IMU or FOG IMU

www.inertiallabs.com

INS-U

GPS-Aided Inertial Navigation System

Heading accuracy . . . . . 0.3°
Pitch & Roll accuracy . . . . . 0.05°
Position accuracy. . . . . 1 cm
Velocity accuracy . . . . . 0.05 m/sec
IMU, AHRS, INS, and ADC solution
Embedded Air Data Computer (ADC)
Low Position Drift in GPS-denied Environment

www.inertiallabs.com

MADE IN USA

INS-P, B, D

GPS-Aided Inertial Navigation System

Heading accuracy . . . . . 0.1 - 0.15°
Dynamic Pitch & Roll accuracy . . . . . 0.03°
GPS, GLONASS, Galileo, BeiDou, DGPS, SBAS, RTK, PPK, PPP
Novatel, uBlox, Septenrtrio GNSS receiver
Low Position Drift in GPS-Denied environment
External Aiding Data

www.inertiallabs.com

INS-DM

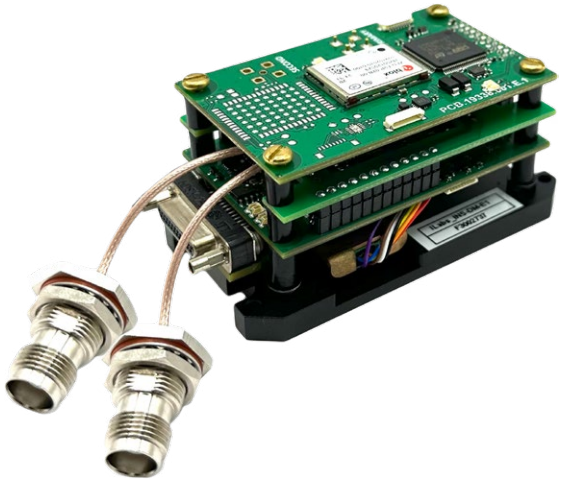
GPS-Aided Inertial Navigation System

MIL- STD - 810 G
MIL - STD - 461 E
MIL - STD - 1275

MADE IN USA

INS-B, P, D-OEM

GPS-Aided Inertial Navigation Systems



Size ..... 85.5 x 47.7 x 39.4 mm
RTK Position Accuracy ..... 0.5 - 1 cm
Heading accuracy ..... 0.03°
Pitch & Roll accuracy ..... 0.006°
High precision MEMS IMU
Novatel, uBlox, Septenrtrio GNSS receiver
GPS, GLONASS, Galileo, BeiDou, SBAS, DGPS

www.inertiallabs.com

INS-DH-OEM

GPS-Aided Inertial Navigation Systems

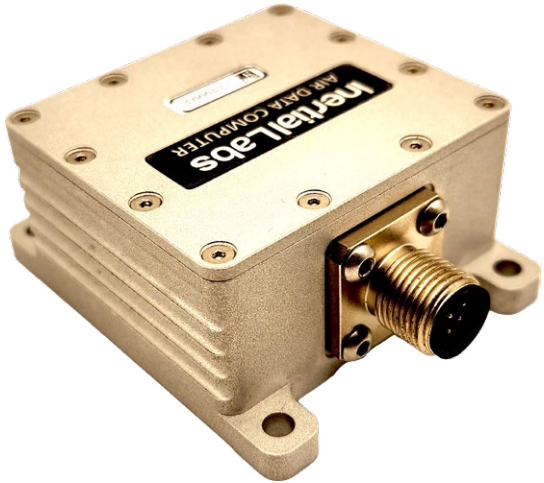
RTK Position Accuracy . . . . . 1 cm
Heading accuracy . . . . . 0.01°
Pitch & Roll accuracy . . . . . .0.002°
Honeywell HG4930 IMU
Novatel, uBlox, Septenrtrio GNSS receiver
GPS, GLONASS, Galileo, BeiDou, SBAS, DGPS, RTK, PPK, PPP

www.inertiallabs.com

MADE IN USA

ADC

Air Data Computer



Size	73.4 × 55 × 29.5 mm
Weight	130 grams
Pressure Sensor Measurement Range	±25; ±600 mbar
Baro-Corrected Pressure Altitude	-500 to 9000 meters
True Airspeed	5 to 64 meters/sec
True Angle of Attack	-50° to 50°
Outside Air Temperature (OAT)	-40°C to +85 °C

www.inertiallabs.com

MRU-B1, P, E, PD

Motion Reference Units

MIL-STD 810 G

Heave, Surge & Sway accuracy . . . . . 5 cm
Pitch & Roll accuracy . . . . . 0.02°
Heading accuracy . . . . . 0.1°
NMEA 0183, TSS1 data format
Compatibility with HYPACK, SBES & MBES
Solution for: AHC, DP, HMS, Buoys, Survey

www.inertiallabs.com

MADE IN USA

WS-E
WS-PD

Wave Sensor

www.inertiallabs.com

Wave Direction Accuracy	1 - 0.5°
Pitch & Roll Accuracy	0.02°
Heading Accuracy	0.05 - 0.06°

MRU-S

Subsea Motion Reference Units

Heave, Surge & Sway accuracy . . . . . 5 cm
Pitch & Roll accuracy . . . . . 0.02°
NMEA 0183, TSS1 data format
Compatibility with HYPACK, SBES & MBES
Up to 1000 meters depth rating

www.inertiallabs.com

MADE IN USA

RMCU

Railway Motion Control Unit

Size	123 x 53 x 49 mm
Weighs	120 grams
Gyroscopes Bias in-run stability	<2°/hr
Accelerometers Bias in-run stability	0.005 mg
Heading accuracy	0.3° static / 0.6° dynamic
Pitch & Roll accuracy	0.05° static / 0.08° dynamic

www.inertiallabs.com

RESEPI LIDAR

Remote Sensing Payload Instrument

MIL-STD 810 G

TEST CERTIFIED USA

USB Memory Drive ..... Up to 256 GB
Point cloud accuracy ..... 3-5 cm
High-performance GPS-Aided INS
Datalogging software bundle
SLAM – Simultaneous Localization and Mapping
Compatible with drones and other integrations

www.inertiallabs.com

NOTES:

Inertial Labs
Attitude is Everything

NOTES:

Inertial Labs
Attitude is Everything

NOTES:

Inertial Labs
Attitude is Everything

Inertial Labs

Attitude is Everything

+1 (703) 880-4222 www.inertiallabs.com

39959 Catoctin Ridge Street Paeonian Springs, VA 20129

MADE IN USA