

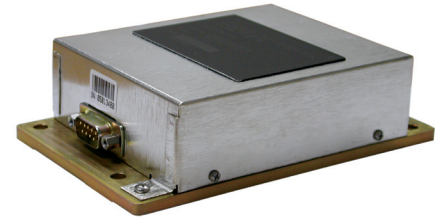


Powerful Sensing Solutions for a Better Life

IMU320

DYNAMIC MEASUREMENT UNIT

The MEMSIC IMU320 is a robust entry-level Dynamic Measurement Unit that combines MEMS inertial sensors and high-speed digital signal processing to provide unmatched value in terms of both price and performance. The IMU320 has a proven heritage in dynamic control and land navigation systems with over 1500 systems currently in service.



Dynamic Motion Instrumentation



Land Vehicle Control

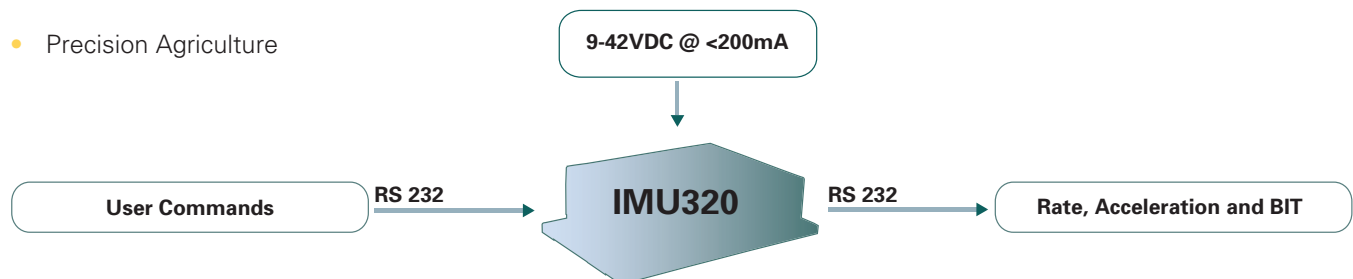
This rugged low-cost inertial system meets the demanding environmental requirements for operation in a wide variety of land vehicle and marine platform systems, and is ideally suited for either dynamic motion instrumentation or cost-sensitive high-volume OEM applications.

Features

- Rate and Accel Data at 100Hz
- High Reliability MEMS Sensors
- Wide Temp Range (-40 to +85C)
- Wide Input Power Range (9-42V)
- Low Profile <1.5"
- Lightweight <1.0lbs

Applications

- Dynamic Motion Instrumentation
- Land Vehicle Control
- Precision Agriculture



Performance

IMU320

Angular Rate	
Range: Roll, Pitch, Yaw (°/sec)	± 150
Bias Stability In-Run ¹ (°/hr)	< 30
Bias Stability Over Temp (°/sec)	< ± 0.5
Scale Factor Accuracy (%)	< 1
Non Linearity (%FS)	< 1
Resolution (°/sec)	< 0.02
Angle Random Walk (°/sq-rt hr)	< 3
Bandwidth (Hz)	20

Acceleration	
Input Range: X/Y/Z (g)	± 4
Bias Stability In-Run ¹ (mg)	< 1
Bias Stability Over Temp (g)	< ± 0.015
Scale Factor Accuracy (%)	< 1
Non Linearity (%FS)	< 1
Resolution (mg)	< 0.5
Velocity Random Walk (m/s/sq-rt hr)	< 1
Bandwidth (Hz)	20

Specifications

Environment	
Operating Temperature (°C)	-40 to +85
Non-Operating Temperature (°C)	-55 to +85

Electrical	
Input Voltage (VDC)	9 to 42
Power Consumption (W)	< 3
Digital Interface	RS-232

Physical	
Size (in)	4.25 x 3.50 x 1.50 (excl. flanges)
(cm)	10.80 x 8.90 x 3.81 (excl. flanges)
Weight (lbs)	< 1.0
(kg)	< 0.45
Connector	DSub-9, female

Reliability	
MTBF (hours)	>35,000

Ordering Information

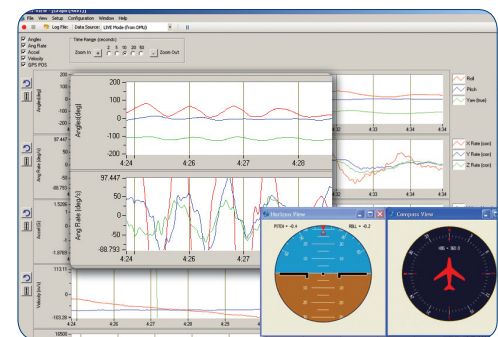
Model	Description
IMU320CA-150	Dynamic Measurement Unit

This product has been developed exclusively for commercial applications. It has not been tested for, and makes no representation or warranty as to conformance with, any military specifications or its suitability for any military application or end-use. Additionally, any use of this product for nuclear, chemical or biological weapons, or weapons research, or for any use in missiles, rockets, and/or UAV's of 300km or greater range, or any other activity prohibited by the Export Administration Regulations, is expressly prohibited without the written consent and without obtaining appropriate US export license(s) when required by US law. Diversion contrary to U.S. law is prohibited. Specifications are subject to change without notice. Notes: ¹ 1-sigma, constant temperature, Allan Variance curve.

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NAV-VIEW 2.0

Configuration & Display Software



NAV-VIEW 2.0 provides an easy to use graphical interface to display, record and analyze all of the IMU320 measurement parameters.

Other Components

Each IMU320 is shipped with an interface cable, MEMSIC's User's Manual and NAV-VIEW 2.0 configuration and display software.

Support

For more detailed technical information please refer to the 320-Series User's Manual available online at: www.memsic.com/Support

