

Honeywell



HGuide i300 MEMS Inertial Measurement Unit

Aerospace Performance. Industrial Prices.

Possibilities of Navigation. *Made Easy.*

HGuide i300 MEMS Inertial Measurement Unit



Proven - Dependable - Accurate

The HGuide i300 is a high-performance Micro-Electro-Mechanical System (MEMS) based Inertial Measurement Unit (IMU) designed to meet the needs of applications across various markets including agriculture, AUVs, industrial equipment, robotics, survey/mapping, stabilized platforms, transportation, UAVs and UGVs. With industry standard communication interfaces and a wide-input voltage range the HGuide i300 is easily integrated into a variety of architectures. The extremely small size, lightweight, and low power make the HGuide i300 ideal for many applications.

The HGuide i300 includes MEMS gyroscopes and accelerometers. In addition, the HGuide i300 employs an internal environmental isolation system to attenuate unwanted inputs commonly encountered in real world applications. The internal isolation and other proprietary design features ensure the HGuide i300 is rugged enough to meet the needs of the most demanding users.

The HGuide i300 is both hardware and software compatible with the HG4930 IMU. It is also software-compatible with the HG1120 IMU.

The HGuide i300 is not ITAR controlled. Its Export Control Classification Number (ECCN) is 7A994.

Find Out More

Visit us at: aerospace.honeywell.com/i300

Honeywell Aerospace

2600 Ridgeway Parkway
Minneapolis MN 55413
aerospace.honeywell.com

Key Honeywell advantages:

- World-class inertial sensor development, calibration, and compensation.
- Units feature a range of user configurable options with selectable output data rates and filtering.
- Multiple, configurable communication protocols.
- Proven reliability, dependability, and ruggedness, through unit life.

HGUIDE i300 IMU TYPICAL KEY CHARACTERISTICS	
Volume/ Size	17 cm ³ (1 in ³)/ 42 x 28 x 14 mm
Weight	35 grams
Power Consumption	0.5 Watts
Operating Temperature Range	-40°C to +85°C
Data Rate	300 Hz nominal (User configurable)
Gyro Operating Range	+/- 490 deg/s in all axes
Accelerometer Operating Range	±16g in all axes
Supply Voltages	+5.0 to +36 VDC
Bandwidth	200Hz at 90° phase, 400Hz at -3dB (Output frequency dependent)
Vibration	Random : 20-2000Hz MIL-STD-810G 2.2 grams Sinusoidal : 10-2000Hz 2g Peak Non-operating : 7.7G RMS
Shock	40g, 11ms per MIL-STD-810G 25g bump half-sine per IEC 60068-2-27
Communication Protocols	RS-422, 5V TTL, CAN
Asynchronous Baud Rate	Configurable: 921.6 Kbs default
Discrete Signals	Data ready output

HGUIDE i300 IMU TYPICAL PERFORMANCE – ROOM TEMPERATURE						
Distributor Ordering Part Number ¹	Gyro Bias Repeatability (°/hr 1σ)	Gyro Bias In-run Stability (°/hr 1σ)	ARW (°/√hr)	Accel Bias Repeatability (mg 1σ)	Accel Bias In-run Stability (mg 1σ)	VRW (m/s/√hr)
i300BA50	65	3	0.12	1.0	0.02	0.02
i300AA50	90	5	0.2	2.0	0.03	0.03

HGUIDE i300 IMU TYPICAL PERFORMANCE – FULL TEMPERATURE RANGE						
Distributor Ordering Part Number ¹	Gyro Bias Repeatability (°/hr 1σ)	Gyro Bias In-run Stability (°/hr 1σ)	ARW (°/√hr)	Accel Bias Repeatability (mg 1σ)	Accel Bias In-run Stability (mg 1σ)	VRW (m/s/√hr)
i300BA50	80	5	0.15	1.5	0.03	0.02
i300AA50	100	8	0.25	2.5	0.05	0.03

¹ Honeywell internal part numbers are 68910300-BA50 and 68910300-AA50.