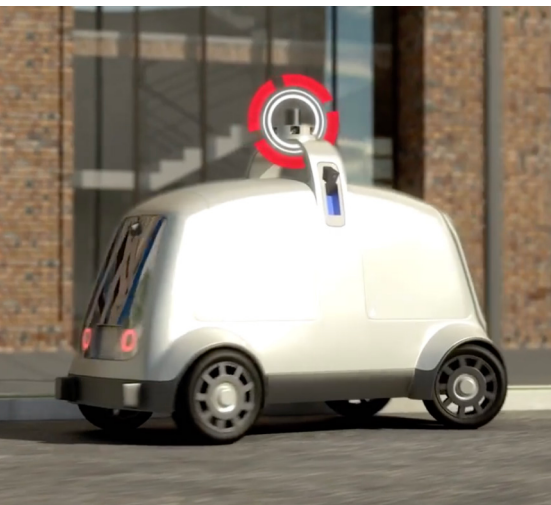
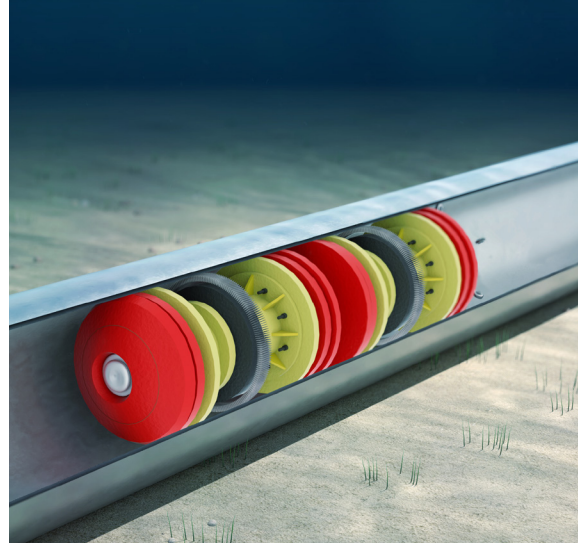




# **HGUIDE i300** **MEMS INERTIAL** **MEASUREMENT UNIT**

**Honeywell**

# 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, light weight, 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.

## 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 <sup>3</sup> (1 in <sup>3</sup> ) / 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<br>(Output frequency dependent)                                       |
| Vibration                     | Random : 20-2000Hz MIL-STD-810G 2.2 grams<br>Sinusoidal : 10-2000Hz 2g Peak<br>Non-operating : 7.7G RMS |
| Shock                         | 40g, 11ms per MIL-STD-810G<br>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

| Marketing Part Number <sup>1</sup> | 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                                    | 0.15        | 1.0                              | 0.02                                | 0.02          |
| i300AA50                           | 90                                | 5                                    | 0.25        | 2.0                              | 0.03                                | 0.03          |

<sup>1</sup> When ordering direct from Honeywell, use part numbers 68910300-BA50 and 68910300-AA50.

## For More Information

[aerospace.honeywell.com/HGuide](https://aerospace.honeywell.com/HGuide)

## Honeywell Aerospace

2600 Ridgeway Parkway  
Minneapolis MN 55413  
[aerospace.honeywell.com](https://aerospace.honeywell.com)

N61-2009-000-004 | 10/19  
© 2019 Honeywell International Inc.

THE  
FUTURE  
IS  
WHAT  
WE  
MAKE IT

**Honeywell**