HG1125/HG1126

Inertial Measurement Unit

PROVEN. DEPENDABLE. ACCURATE.

The HG1125/HG1126 is a micro-electro-mechanical system (MEMS) based inertial measurement unit (IMU) designed to meet the needs of a range of applications across various markets. This IMU is designed for harsh environments that require rugged inertial performance in a small form factor. Applications include drilling, military projectiles, munitions, interceptor platforms, unmanned aerial vehicles and commercial avionics.

With an industry-standard communication interface, the HG1125/HG1126 is easily integrated into the variety of architectures. The extremely small size, lightweight, and low power make the HG1125/HG1126 ideal for these applications. The HG1125/HG1126 includes MEMS gyroscopes, accelerometers and magnetometers. Internal isolation and other proprietary design features ensure the HG1125/HG1126 is rugged enough to meet the needs of the most demanding users.

Three different performance grades of the HG1125/HG1126 are available off-the-shelf. The HG1125/HG1126 also offers an array of configurable features to simplify system integration. The HG1125/HG1126 are not ITAR controlled. HG1125 Export Control Classification Number (ECCN) is 7A994. The HG1126 Export Control Classification Number (ECCN) is 7A003.d.1.

HG1125/HG1126 IMU KEY CHARACTERISTICS	
Volume/Size	<0.6in³, 31mm D x 11.7mm H
Weight	<24 grams
3-Axis Gyroscope Operating Range	Configurable up to 4000° /s
3-Axis Accelerometer Operating Range	±96G (HG1126 ±200G or ±400G)
3-Axis Magnetometer Operating Range	Configurable up to ±12Gauss
Supply Voltage	+3.3VDC +7%/- 3%
Power Consumption	<0.5W
Operating Temperature Range	-40°C to +71°C
Data Type[2]	Fully compensated control (incremental) and guidance (delta) message
Gyro Bandwidth @ -90°	145Hz (configurable to 260Hz)
Accel Bandwidth @ -90°	145Hz (configurable to 260Hz)
Data Rates	600Hz/100Hz (configurable to 1800Hz/300Hz)
Baud Rate	1.0M Baud (configurable to 2.5M Baud)

KEY ADVANTAGES

- World-class inertial product development, calibration and compensation.
- Proven reliability, dependability and ruggedness.
- High G capable to 40kG.
- LVDS asynchronous standard protocols.
- Highest-performing MEMS IMU of its size and price.
- Quick start evaluation kit available.[3]

HG1125/HG1126 PERFORMANCE OVER FULL OPERATING TEMPERATURE RANGE

MARKETING[1] PART NUMBER	GYRO BIAS REPEATABILITY (°/HR 1σ)	GYRO BIAS IN-RUN STABILITY (°/HR 1σ)	GYRO ARW (°/√HR)	ACCEL BIAS REPEATABILITY (mg 1σ)	ACCEL BIAS IN-RUN STABILITY (mg 1σ)	VRW (fps/√HR)
HG1125CA01	120	7	0.30	1.5	0.035	0.18
HG1125BA01	240	10	0.40	2.0	0.04	0.24
HG1125AA01	360	20	0.50	3.0	0.05	0.30
HG1126CA01	120	7	0.30	1.5	0.035	0.18
HG1126BA01	240	10	0.40	2.0	0.04	0.24
HG1126AA01	360	20	0.50	3.0	0.05	0.30

[1]When ordering directly from Honeywell, use part numbers 68901125-CA01, 68901125-BA01, 68901125-AA01, 68901126-CA01, 68901126-BA01 and 68901126-AA01.

[2]LVDS asynchronous protocol.

[3]When ordering an evaluation kit for an HG1125 or HG1126 directly from Honeywell, use part number 68012517-001

For more information

https://aerospace.honeywell.com/en/learn/products/sensors/inertial-measurement-units

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THE FUTURE IS WHAT WE MAKE IT

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