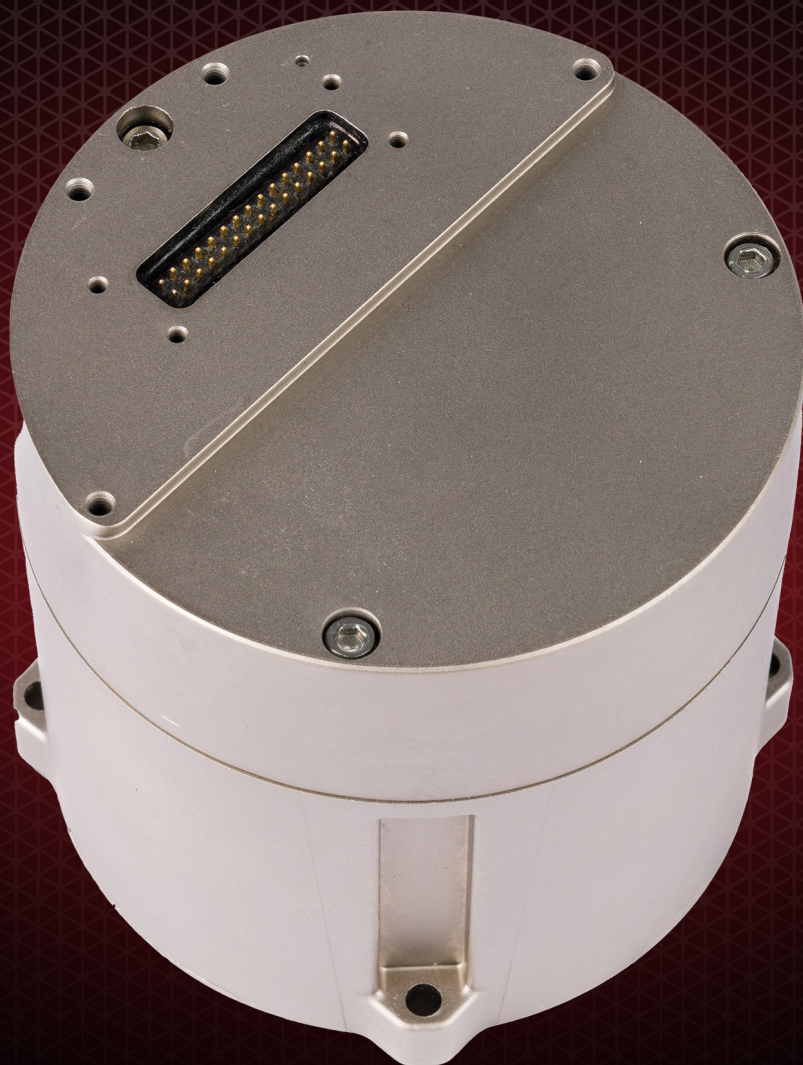


HG2802 **FIBER OPTIC GYRO INERTIAL MEASUREMENT UNIT**

Lowest-power, high-performance, small, low-noise IMU in the market



Honeywell

HG2802 FIBER OPTIC GYRO INERTIAL MEASUREMENT UNIT

The HG2802 is a higher operating range option within the HG2800 family of high-performance tactical grade IMUs that includes Honeywell's next-generation micro-electromechanical systems (MEMS) accelerometers in addition to closed-loop fiber optic gyros (FOGs), providing improved dynamic range and scale factor linearity performance. These IMUs are developed to affordably meet the needs of a broad range of guidance and control applications.

Its small-size, lightweight, high-bandwidth, low-noise, zero-maintenance configuration makes the HG2800 series of IMUs ideal for electro-optical (EO)/FLIR stabilization, camera/radar stabilization, pointing and positioning, mapping/inspection, autonomous underwater (AUV) and UAV navigation, odometer/DVL, and silent operation for acoustic-sensitive systems.

The HG2800 flexible power supply design simplifies system integration for a single +10 to +30VDC supply, or dual +15VDC and +5VDC supplies, while consuming less power than competing fiber optic gyro-based IMUs in the market."

As our first-ever Tactical FOG IMU, the HG2800 series fills an important void for commercial and government needing precision imaging, platform stabilization, and low-noise acoustically-sensitive navigation and stabilization solutions. The HG2800 is a dual-use non-ITAR restricted IMU designed specifically to meet both commercial/industrial and military needs.

FEATURES

- Lower cost of ownership over the life of the IMU
- Zero-maintenance design
- Non-ITAR restricted
- Improved dynamic range and SF linearity

HG2802 IMU TYPICAL KEY CHARACTERISTICS

Diameter	3.5 in (8.89 cm)
Height	3.29 in. (8.35 cm)
Weight	1.65 lbs (750 gm)
Power Consumption	7 W Nominal (11 W Max)
Operating Temperature Range	-40°C to +71°C
Data Rate	200 Hz (Guidance) and 1200 Hz (Control) — Other data rates available
Standard Interface Protocol	RS422: SDLC, UART
Gyro Operating Range	Standard $\pm 900^\circ/\text{sec}$ – Extended Range $\pm 1,900^\circ/\text{sec}$ available with -BA configurations
Accelerometer Operating Range	Standard $\pm 60g$ – Extended Range $\pm 80g$ available with -BA configurations
Supply Voltages	Single +10 to +30VDC supply, or Dual +15VDC & +5VDC supplies
Bandwidth @ 3dB	Standard: >260 Hz; High Bandwidth Option: >1500 Hz

HG2802 IMU PERFORMANCE OVER FULL OPERATING TEMPERATE RANGE

PART NUMBER	GYRO BIAS REPEATABILITY ($^\circ/\text{HR } 1\sigma$)	GYRO BIAS STABILITY ($^\circ/\text{hr } 1\sigma$)	GYRO ARW ($^\circ/\sqrt{\text{hr}}$)	GYRO SCALE FACTOR ACCURACY (PPM 1σ)	ACCEL BIAS REPEATABILITY ($\mu g \ 1\sigma$)	ACCEL BIAS STABILITY ($\mu g \ 1\sigma$)	ACCEL SCALE FACTOR ACCURACY (PPM 1σ)
HG2802AA01 ¹	<1.0	0.05	0.05	150	<1000	50	300
HG2802BA01 ²	<1.0	0.05	0.03	100	<300	35	100

¹ When ordering, use part number 68902802-AA01

² When ordering, use part number 68902802-BA01

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THE
FUTURE
IS
WHAT
WE
MAKE IT

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