HG5700
INERTIAL MEASUREMENT UNIT

Honeywell

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High-Performance Gyrocompassing Grade IMU

KEY HONEYWELL ADVANTAGES

- All inertial sensors utilized in our tactical IMUs are designed, developed, and manufactured by Honeywell
- RLG design is based on the highly successful navigation grade GG1320 technology
- Industry standard RS-422 serial interface
- Units feature a wide range of factory configurable interface protocols including Synchronous Data Link Control (SDLC), Asynchronous serial (UART), and Gated Clock
- Drop-in replacement for the HG1700 IMU for enhanced performance

HG5700 IMU TYPICAL KEY CHARACTERISTICS	
Volume	46 in^3
Height	4 in (10.16 cm)
Weight	<3lbs (1.36 kg)
Power Consumption	7 Watts typical (<10 Watts max)
Operating Temperature Range	-54°C to +85°C
Data Rate	100 Hz (Guidance) and 600 Hz (Control) — Other data rates available
Built-In-Test-Coverage	>90%
Gyro Operating Range	Standard range 1074 deg/sec (capable up to 1620 deg/sec)
Accelerometer Operating Range	Standard ± 37g (capable up to ±70g)
Supply Voltages	+15V, +5V

HG5700 IMU PERFORMANCE OVER FULL OPERATING TEMPERATURE RANGE

PART NUMBER [1]	GYRO BIAS REPEATABILITY (°/HR 1σ)	GYRO BIAS STABILITY (°/HR 1σ)	GYRO ARW (°/√HR)	ACCEL BIAS REPEATABILITY (MG 1σ)	ACCEL BIAS STABILITY (MG 1σ)	ACCEL VRW (FPS/√HR)
HG5700BB01	0.070	0.02	0.012	300	50	0.065
HG5700AB01	0.140	0.04	0.025	300	50	0.065

[1] When ordering direct from Honeywell, use part numbers 68905700-AA01, 68905700-BA01, ARW is a composite spec (RMS of the 3 gyro channels)

The HG5700 is an enhanced performance version of the HG1700 in a similar form factor and serves as a drop in replacement that is taller. The HG1700 has been successfully deployed on a wide range of weaponry, UAVs, stabilized platform, surface mapping, ground survey, drilling and oceanographic survey showing unsurpassed performance and reliability.

The HG5700 IMU contains three Ring Laser Gyroscopes (RLG) and three quartz Vibrating Beam Accelerometers (VBA) with excellent stability characteristics environmentally sealed in a rugged aluminum housing. The HG5700 IMU offers gyrocompassing class performance grade at a low price, size, and weight, while employing an external environmental ring isolator to filter unwanted sensor inputs commonly encountered in real-world applications. The HG5700 consumes less power than competing fiber optic gyro-based systems. External heat sinks and cooling are not required by the HG5700, facilitating greater flexibility in systems design and integration.

Three different performance grades of the HG5700 are available off-the-shelf. The HG5700 offers many configurable features, such as data rate output and flight control filtering to simplify system integration.

The HG5700s Export Control Classification Number (ECCN) is 7A003.d.1.

For More Information
Please visit us at: aerospace.honeywell.com/imu

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