



Next-generation inertial measurement unit provides sophisticated guidance for tactical military applications.

HG1900 MEMS Inertial Measurement Unit

The HG1900 is a Micro Electromechanical Systems (MEMS) gyro-based inertial measurement unit suitable for various commercial and military guidance and navigation applications. Small, robust, low-power and affordable, the HG1900 has a performance range consistent with tactical missile and smart munition requirements.

Performance Characteristics:

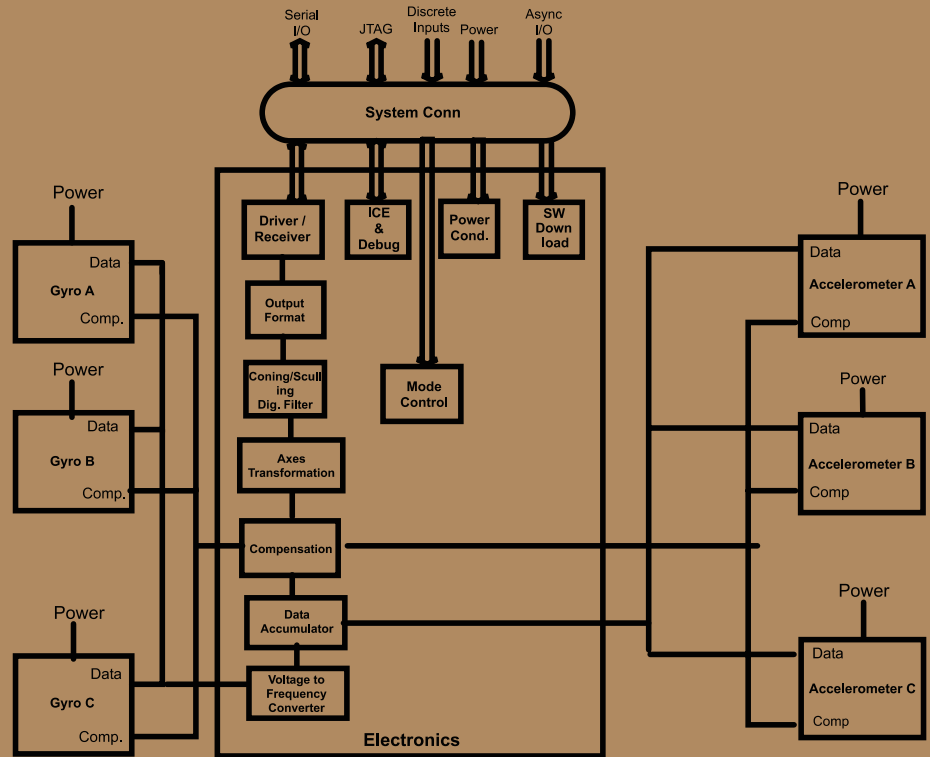
- Micro-miniature size
- Low power
- Low-cost tactical MEMS gyroscopes
- RBA accelerometers
- Reliable, low cost ARM7 microprocessor
- Excellent system performance at low-cost
- ± 15 Vdc; +5 Vdc input power
- Single, physically integrated, hermetically-sealed package
- Highly configurable per user requirements
- Programmable, expandable, serial I/O using RS422 interface
 - Standard SDLC
 - AMRAAM compatible
 - Asynchronous
 - Custom serial

For additional information, please contact us at:

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HG1900 IMU BLOCK DIAGRAM



SYSTEM PERFORMANCE

Reliability: MTBF	> 20,000 hrs.
Dormancy	> 20 years
Output Data Rate	Programmable to 3600 Hz
Gyro Input Range	$\pm 1,000$ deg/sec
Gyro Rate Scale Factor	150 ppm, 1σ
Gyro Rate Bias	Performance available from: 1 deg/hr. to 30 deg/hr., 1σ turn on - turn on
	0.3 deg/hr. to 10 deg/hr., 1σ in run stability
Angular Random Walk	0.1 deg/rt.hr. max
Accelerometer Range	$\pm 70g$
Accelerometer Linearity	500 ppm, 1σ
Accelerometer Scale Factor Accuracy	300 ppm, 1σ
Accelerometer Bias	1 mg, 1σ
2.9 dia. x 2.9 ht.	
< 20 cu. in.	
< 1.0 lbs.	
< 3 watts	
-55° C to 85° C	
> 92%	