



**EMBEDDED GPS/INS (EGI) NAVIGATION SYSTEM**

**Supporting the most challenging military navigation requirements while adding civil interoperability capabilities**

# Embedded GPS/INS (EGI)

## DESIGNED TO PROVIDE MAXIMUM FLEXIBILITY, HONEYWELL'S EGI MEETS THE MOST CHALLENGING MILITARY REQUIREMENTS ALONG WITH CIVIL INTEROPERABILITY CAPABILITIES

Honeywell's EGI family of military aircraft Embedded GPS/INS (EGI) systems are self-contained, all-attitude, tightly coupled navigation systems providing outputs of linear and angular acceleration, linear and angular velocity, position, attitude (roll, pitch), platform azimuth, magnetic and true heading, altitude, body angular rates, time tags, and Coordinated Universal Time (UTC) synchronized time. Since the mid 1990's more than 50,000 Honeywell EGIs have been produced and delivered demonstrating the best inertial performance of any EGIs available today for the most challenging navigation, pointing, stabilization and flight control applications. Honeywell's EGIs provide a robust civil certifiability to DO-178 and DO-254 enabling much easier certification at the aircraft level for features such as ADS-B, RNP/RNAV, WAAS and more. Honeywell's EGI family includes the H-764 in use on most military aircraft, the FALCN providing all the features and performance of the H-764 in a smaller package and the H-764 legacy using a larger chassis to maintain commonality with legacy aircraft.

- Existing footprint can include Radar Altimeter, Multi Mode Receiver (with VOR/ILS/Marker Beacon), and Synchro capability
- Available with SAASM, SPS or growth to MCODE
- Available with WAAS
- Available with dGPS integration (1m Horizontal and 1.5m vertical accuracy)
- Integrity Enhancements
  - FDE/RAIM (GPS Only)
  - HIGH™ (Blended)
- Interfaces
  - Dual 1553
  - Dual/Quad Ethernet 10/100/1000
  - ARINC 429
  - RS-422
  - Synchro/Discrete (ARINC 704)
  - Have Quick/1PPS



H-764



FALCN

- Outputs Blended INS/GPS, free inertial and GPS only
- Supports CNS/ATM Mandates
  - ADS-B Blended Position Source with MSO-C145 certification, low latency design and transponder direct connect
  - RNP/RNAV
  - Autonomous LPV
  - WAAS, EGNOS
- Certifiability
  - DO-178 B/C Level A
  - DO-254 Level A
  - MSO-C145
- Supports open architectures with flexible interfaces and integration with FACE
- Power – 35-60watts
- MTBF >10,000 hours calculated, >25,000 hours demonstrated in certain applications
- State of the art 1320 Ring Laser Gyro, 450,000 hours MTBF demonstrated with over 4 Billion accumulated flight hours
- Alignment Modes:
  - Gyrocompass
  - In Flight Alignment
  - Ship Alignment (SINS/AR-57 and In Motion)
  - Stored Heading Alignment

	Size Options	Weight	Volume
H-764	7"x7"x9.8"	<20lbs	480in <sup>3</sup>
FALCN	6"x6"x9"	12.5lbs	324in <sup>3</sup>
H-764 Legacy	7"x7"x12.75"	22lbs	624in <sup>3</sup>

	Free Inertial	Blended INS/GPS Specs	Blended INS/GPS Measured
<b>Position</b>	0.2-1.0 nmi/hr CEP	5m SEP	<4m, <1m Horiz. w/dGPS
<b>Velocity</b>	0.5-0.8 m/s (1.5-2.5 ft/sec)	0.01 m/s (0.03 ft/sec)	<0.003-0.01 m/s (0.01-0.03 ft/sec)
<b>Heading</b>	0.1 deg	0.015 deg	<0.015 deg
<b>Pitch/Roll</b>	0.05 deg	0.01 deg	<0.01 deg

**For additional information, please visit us at:**  
<https://aerospace.honeywell.com/EGI>

### Support:

For Technical Support, please contact us at:  
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2013 Collier Trophy Industry Team Recipient  
 X-47B Industry Team

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