Embedded GPS/INS (EGI) Navigation System With Advanced Anti-Jam Protection

Supporting The Most Challenging Military Navigation Requirements While Adding Civil Interoperability Capabilities
Embedded GPS/INS (EGI) with Anti-Jam

Designated 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 60,000 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 are integrated with beam forming anti-jam systems that provide superior protection compared to legacy nulling systems in GPS challenged environments. We also 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 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, ARINC 429, and RS-422
  - Dual/Quad Ethernet 10/100/1000
  - Synchro/Discrete (ARINC 704)
  - Have Quick/1PPS
- Advanced GPS Anti-jam system:
  - Pre-integrated with leading beam forming anti-jam systems
  - Cobham DACU
  - IAI ADA
  - Lockheed Martin GSTAR
  - Can be purchased separately or as a package
- 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 – 35-60 watts
- MTBF >10,000 hours calculated, >25,000 hours demonstrated in certain applications
- State of the art GG1.320 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
- Free Inertial
  - 0.2-1.0 nm/hr CEP
  - 0.01 m/s (0.03 ft/sec)
- Blended INS
  - 5m SEP
  - <0.003-0.01 m/h
  - <0.015 deg
- Pitch/Roll
  - 0.05 deg
  - 0.01 deg

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