The R-100F is a high performance, navigation-grade Inertial Navigation System, based on advanced Fiber Optic Gyro (FOG) technology. It integrates navigation sensors with an embedded 16-channels CA-code GPS receiver and provides independent INS-only and blended INS/GPS solutions.

RADA’s navigation solutions introduce sophisticated and unique sensor fusion algorithms, and embed modular design principles leading to minimal integration efforts into larger mission systems.

The characteristics and performance of the R-100F make it suitable for a broad spectrum of INS applications, including mission control and flight control systems. The system is qualified for military environment.
R-100F
FOG-Based Embedded GPS/INS (EGI)

Advantages
- Advanced FOG sensor technology
- Three independent navigation solutions:
  - INS only
  - Blended INS/GPS
  - GPS only
- WASS, EGNOS, MSAS and Galileo - ready
- Steering calculations for various coordinate systems and datum
- Powerful interface capabilities
- Low weight and volume
- High reliability and affordability

Performance

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Pure Inertial</th>
<th>Blended GPS/INS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position (CEP)</td>
<td>&lt;0.8 NM/h</td>
<td>&lt;2.5m</td>
</tr>
<tr>
<td>Velocity (RMS)</td>
<td>&lt;1 m/sec</td>
<td>&lt;0.1m/sec</td>
</tr>
<tr>
<td>Pitch and Roll (1σ)</td>
<td>&lt;0.05°</td>
<td>&lt;0.05°</td>
</tr>
<tr>
<td>True Heading (1σ)</td>
<td>&lt;0.1°</td>
<td>&lt;0.01°</td>
</tr>
<tr>
<td>Altitude (CEP)</td>
<td>&lt;15m, relative to the pressure altitude input</td>
<td>&lt;10m</td>
</tr>
</tbody>
</table>

Interfaces
- 2 x MIL-STD-1553B channels
- 6 x RS429 output channels
- 4 x RS429 input channels
- 10/100 Ethernet channel
- 2 x RS422A channels
- Discrete signals

Characteristics
- Power: MIL-STD-704A, 45W max
- Dimensions: 182mm W x 156mm H x 260mm D
- Weight: Less than 8 kg
- Temperature: -54° C ÷ +71° C
- Cooling: Passive
- Vibration: 8.24g RMS
- Linear Velocity: 800m/sec
- Angular Rate: 750°/sec