

TACNAV™ II Fiber Gyro Navigation Engine

Integrated Navigation and Pointing Solution for the Digital Military



Key Features and Attributes

- Compact, lightweight design for easy installation.
- KVH fiber optic gyro-based design enables automatic “drive and calibrate” capability.
- Provides 100% availability of navigation data regardless of GPS availability.
- Outputs vehicle heading, steer-to, and dead reckoning with optional turret pointing and far target location.
- Scalable architecture offers a common system for the entire spectrum of military vehicles: combat, combat service, and CSS.
- Optional interfaces for turret angle encoders, laser warning receivers, laser rangefinders, and gunshot detection systems.

Easy Integration with BMS Platforms

TACNAV II offers a flexible, digital architecture readily adaptable to individual BMS interface protocols.

Introducing the Easy-to-Integrate, Affordable Solution for Battle Management and Weapon Systems

Aboard the modern military vehicle, seamless system integration is imperative, space is at a premium, and GPS is vulnerable to disruption by natural and hostile factors. Recognizing these needs and building on the success of its award-winning TACNAV systems, KVH Industries introduces TACNAV II, a host-controlled, fiber optic gyro (FOG)-based navigation and pointing solution.

The cost-effective TACNAV II Fiber Gyro Navigation Engine offers a compact design, continuous heading and pointing data output, and a flexible architecture. It can function either as a single-box navigation module or be expanded into a multifunction TACNAV system, making it ideal for complete integration within virtually any platform.

With KVH's precision FOG technology as the foundation and an optional compass sensor providing a complete backup to GPS, TACNAV II is designed to integrate with a host of applications, including navigation and data consolidation for Battle Management Systems (BMS). Small and lightweight, TACNAV II is designed to ensure ease and flexibility in platform integration. It is the ideal navigation and pointing solution for the digital military.



TACNAV II Fiber Gyro Navigation Engine

- Vehicle Power ▶
- Vehicle Odometer ▶
- Hull GPS Interface ▶



FLEXIBLE INTERFACE CAPABILITIES

TACNAV Displays

Commander's Display



Driver's Display



Battle Management Systems



Weapon Systems

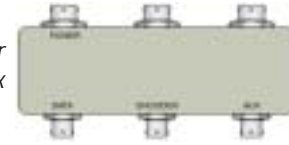


UPGRADE OPTIONS

Optional Turret Interface

- | | |
|---------------------------------|------------------------------------|
| <i>Optional interfaces for:</i> | <i>To provide:</i> |
| • GPS | Turreted GPS Interface |
| • Hull/Turret Interface | In-turret Navigation Functionality |
| • Turret Angle Encoder | Turret Pointing |
| • Laser Warning Receiver | Targeted Notification (North-up) |
| • Laser Rangefinder | Far Target Location |

Turret Angle Encoder Interface Box



Optional Magnetic Sensor

- Provides:*
- Long-term, Drift-free Heading Reference Backup
 - Time-independent Dead Reckon Backup
 - GPS-independent Navigation Capability
 - Instant-on Northpointing

Sensor Box OR Sensor Antenna



Technical Specifications

General Performance

- Positional Accuracy:
- With GPS: 5-10 meters RMS with PY Code PLGR
 - Without GPS (after GPS align): ±1% distance travelled for up to 20 min.
 - Without GPS: ±2.5% distance travelled independent of time (with compass option)
- Heading Accuracy:
- GPS Align Heading: <0.5° after 1,000 meters travelled (w/GPS)
 - Without GPS (after GPS align): ±1° for up to 20 minutes
 - Without GPS: ±3° independent of time (with compass option)
- Start-up:
- Cold Start (w/compass): Stores heading and location at shutdown
 - Headings (compass/FOG) compared and best source selected at start-up
- Location Format: UTM, MGRS New, or Lat/Long (selectable)
- Target Location Accuracy: 75 meters RMS at 5 km (±5° level after GPS align)
- Warm-up Time: <15 seconds
- Pitch & Roll Accuracy (static): <1.0°
- Latitude Capability: Latitude-independent with GPS
- Dip Angle: 80° N/S magnetic latitude (compass back-up)

Physical

- Input Voltage: +28 VDC (18-36 VDC) MIL-STD-1275
- Power Consumption: <12 watts
- Dimensions: 160 mm x 260 mm x 90 mm (6.3" x 10.2" x 3.5")
- Weight: 4 kg nominal (8.8 lbs.)

Environmental

- Temperature: MIL-STD-810E (-32°C to +50°C)
- Altitude: 15,000 meters (50,000 feet)
- Environment: MIL-STD-810E - Humidity, salt fog, sand, dust & fungus
- Shock: MIL-STD-810E - 40g, 11ms
- EMI/RFI: MIL-STD-461D Class A3, digital equipment
- Vibration: MIL-STD-810E
- Service Life: 10 years
- Storage Life: 5 years



Keeping Track of Your World

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Made in the U.S.A.

TACNAV IIBro_7102