



# CompassCORE

## Precision PNT in GPS Denied/Degraded Environments

- ✓ Less than 10m RMS Position Accuracy in GPS-Denied Environments
- ✓ Modular Design for Seamless Integration
- ✓ Navigate with Real-Time FOM and Integrity Monitoring
- ✓ Adaptable to Your Mission Needs with a Flexible, Open Architecture
- ✓ Works with Air or Ground Applications

### RELIABLE NAVIGATION. SIMPLIFIED.

CompassCORE is a GPS-denied, vision-based navigation system that combines image processing, nonlinear sensor fusion, and machine learning techniques to deliver a flexible solution with demonstrated performance over a wide range of terrain types, cloud conditions, and day/night operation.

### PERFORMANCE AND FLEXABILITY

With proven TRL 9 technology, compatibility with systems like Novatel and ATACNAV, a customizable moving map, and reliable performance in adverse conditions, Lynx is built for mission success.

- CompassCORE Delivers Navigation You Can Trust
- Low SWAP Design, High Precision Results Under Any Conditions
- Versatile Interfaces: Ethernet, Serial, ARINC, and More for Hassle-Free Integration
- Navigate Beyond Boundaries – Day, Night, or Through the Clouds



**Mark Glover**  
Sr. Director,  
Business Development  
MGlover@aevox.com



### CompassCORE Applications

#### Aircraft

- ✓ Group 1 - 3 UAS
- ✓ Manned ISR
- ✓ General aviation



#### Visual-Based Navigation

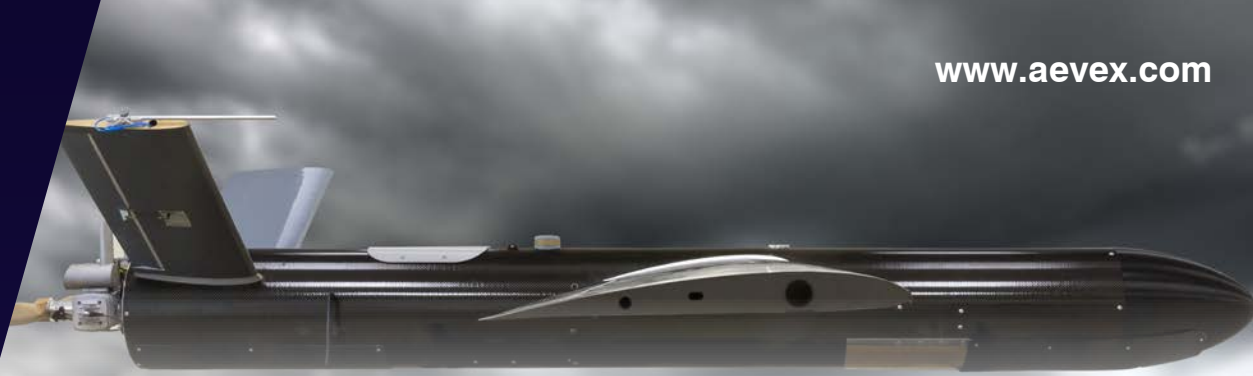
- ✓ Reference-quality GNSS+INS
- ✓ Passive GNSS-Degraded/Denied Navigation
- ✓ Airspeed Independent
- ✓ 10m RMS 3D Positioning Error (>500' AGL)
- ✓ Day / night / Clouds (up to 80% cloud coverage)
- ✓ FOM and Integrity Monitoring and Reporting



#### Targeting

- ✓ Automatic Target Recognition
- ✓ Optical Target Tracking
- ✓ Visual Guidance





# CompassCORE

**Navigate with Confidence - Day or Night,  
in Adverse Conditions**

CompassCORE is a TRL-9 GPS-denied Vision Navigation Module with best-in class accuracy and the flexibility to incorporate multiple sensor inputs on a variety of platforms

## Multiple Capabilities

- Navigate independent of external signals
- Monitor position, velocity, attitude, and view GPS for situational awareness
- Airspeed independent, altitude 500'AGL+
- Detect jamming/spoofing

## Multiple Configs & FoV



## Cessna O-2A Install



## AFRL AgilePod® Install



## Reference Moving Map



## Flexible / Low SWAP Installation Options

- EO or IR camera (<65 cm<sup>3</sup>, 60g, <1.6W, -40 to +80c operating range)
- VBN processing module (240 cm<sup>3</sup>, 190g, <25W)
  - Host processing available using Docker container support

### Interfaces

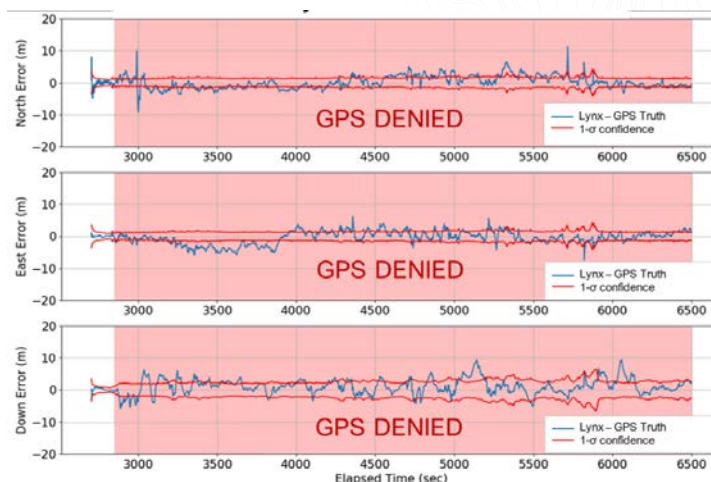
- Ethernet
- Serial (TTL / 232/ 422)
- ARINC 429

### Protocols

- NMEA 0183
- ASPN
- CoT/ATAK
- Novatel
- Vectornav
- MAVLINK

## System Performance (Land)

- <10m RMS position (typical)
- 100% GPS denied conditions
- Day / Night
- Up to 80% cloud cover
- Demonstrated on:
  - Commercial
  - Military



**Mark Glover**  
Sr. Director,  
Business Development  
MGlover@aeve.com