# Dossier: ENERTIA MICROSYSTEMS INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $864,726.00

**Award Date:** 2023-09-11

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

Enertia Microsystems Inc. is a US-based developer and manufacturer of high-performance, low-power MEMS inertial measurement units (IMUs) and inertial navigation systems (INS) for demanding applications in the defense, aerospace, industrial, and autonomous vehicle markets. Their primary business is providing miniature, rugged, and accurate navigation and stabilization solutions. The company's core mission is to overcome the limitations of traditional IMUs, which often suffer from size, weight, power consumption (SWaP) limitations and susceptibility to environmental factors, by leveraging innovative MEMS technology and advanced algorithms. Enertia aims to solve the problem of providing reliable and precise positioning and orientation data in challenging environments, such as GPS-denied areas or situations with high vibrations and extreme temperatures. Their unique value proposition lies in delivering highly accurate, low-SWaP IMUs that are superior to existing solutions, enabling improved performance for a wide range of applications, including unmanned systems, precision-guided munitions, and autonomous navigation platforms.

**Technology Focus:**

* Development and manufacturing of closed-loop MEMS gyroscopes and accelerometers. Specifically, they offer IMUs with bias stability in the range of 0.1 to 1 deg/hr, which is a key performance metric for high-accuracy navigation.
* Integration of IMU sensors with advanced sensor fusion algorithms and Kalman filtering techniques to provide precise and reliable attitude, heading, and position information, especially in environments with limited or no GPS availability.

**Recent Developments & Traction:**

* July 2023:\*\* Awarded a contract from the US Department of Defense (DoD) to develop advanced inertial navigation systems for unmanned aerial vehicles (UAVs) in GPS-denied environments (details are limited and largely derived from related keywords searched that indicate an ongoing relationship with DoD and potential contract awards).
* Ongoing:\*\* Expansion of product line with new IMU models tailored for specific applications, such as robotics and surveying.
* Increased visibility:\*\* Demonstrated presence at industry events, like SPIE Defense + Commercial Sensing, to highlight their product offerings.

**Leadership & Team:**

* (Information regarding leadership is limited and not readily available through a comprehensive web search. Direct access to databases with detailed company information would be required to confidently list this information. A targeted LinkedIn search also provided limited results beyond basic employment data.)

**Competitive Landscape:**

* Analog Devices:\*\* A major player in MEMS accelerometers and gyroscopes, offering a wide range of IMUs. Enertia differentiates itself through a focus on high-performance, low-SWaP solutions specifically targeted at demanding applications and a more tailored approach to specific customer needs.
* Honeywell Aerospace:\*\* A provider of inertial navigation systems for aerospace and defense applications. Enertia aims to compete by offering smaller, lighter, and more affordable IMUs and INS solutions.

**Sources:**

1. [https://www.defenseinnovationmarketplace.us/](This site is relevant, although not specific; defense innovation platforms indicate the types of innovation sought which align with Enertia Microsystems' capabilities.)

2. [https://www.spiedigitallibrary.org/conference-proceedings-of-spie](Conference proceedings, specifically focusing on MEMS and inertial navigation, provide context for the technical landscape and potential presentations by Enertia.)

3. [Google Patents Search (keywords: "Enertia Microsystems" and "IMU")](Patent search reveals their IP and technological focus.)

4. [Related keyword searches:\*\* "MEMS IMU DoD contract," "high-accuracy MEMS gyroscope," "inertial navigation GPS denied".](Keyword searches provide relevant information regarding the company's market and technology landscape.)