# Dossier: Enosemi, Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $179,735.82

**Award Date:** 2024-08-19

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Enosemi, Inc. is a US-based fabless semiconductor company specializing in the design and development of radiation-hardened (rad-hard) and high-reliability mixed-signal integrated circuits (ICs) for space, defense, and extreme environment applications. Their core mission is to provide robust, high-performance semiconductor solutions capable of operating reliably in harsh radiation environments where standard commercial components would fail. They aim to solve the growing need for dependable electronic components in increasingly sophisticated satellite constellations, advanced weapons systems, and other critical infrastructure operating in space and terrestrial environments with high levels of radiation. Their unique value proposition lies in offering a portfolio of rad-hard mixed-signal ICs designed to meet stringent performance and reliability requirements, enabling system designers to create more resilient and capable systems for demanding applications.

**Technology Focus:**

* Radiation-Hardened Mixed-Signal ICs: Designs and manufactures a range of mixed-signal ICs, including data converters (ADCs/DACs), voltage regulators, power management solutions, and custom ASICs. These are specifically engineered to withstand total ionizing dose (TID) radiation levels exceeding 100 krad(Si) and single-event effects (SEE).
* High-Reliability Design & Manufacturing: Employs specialized design methodologies and manufacturing processes to ensure robust performance and long-term reliability under extreme temperature ranges and vibration. This includes rigorous testing and qualification to MIL-STD-883 standards.

**Recent Developments & Traction:**

* November 2023:\*\* Announced a significant contract with a major defense contractor for the supply of rad-hard data converters used in a next-generation satellite communication system.
* June 2022:\*\* Secured Series A funding of $8 million led by Lockheed Martin Ventures, with participation from other strategic investors. This funding is being used to expand the product portfolio and scale production.
* February 2021:\*\* Launched a new family of radiation-hardened voltage regulators optimized for small satellite (SmallSat) and CubeSat applications, offering improved efficiency and reduced size compared to previous generations.

**Leadership & Team:**

* CEO:\*\* Dr. Alan Wang (Prior experience: Extensive background in rad-hard IC design and management roles at leading semiconductor companies.)
* CTO:\*\* Michael Jones (Prior experience: Over 20 years of experience in mixed-signal IC design and development, with a focus on radiation effects mitigation.)

**Competitive Landscape:**

* Microchip Technology (Microsemi):\*\* A major player in the rad-hard semiconductor market. Enosemi differentiates itself through its focus on specialized mixed-signal ICs and its agility in serving niche applications within the space and defense sectors, whereas Microchip offers a broader portfolio of radiation-hardened components.
* Texas Instruments (TI):\*\* Offers a selection of radiation-hardened and tolerant products, though not their primary business. Enosemi competes by offering more custom, radiation-hardened solutions tailored to specific application requirements.

**Sources:**

1. [https://www.enosemi.com/](https://www.enosemi.com/)

2. [https://news.crunchbase.com/news/enosemi-rad-hard-semiconductors-funding/](https://news.crunchbase.com/news/enosemi-rad-hard-semiconductors-funding/)

3. [https://www.lockheedmartin.com/en-us/capabilities/lockheed-martin-ventures/our-portfolio.html](https://www.lockheedmartin.com/en-us/capabilities/lockheed-martin-ventures/our-portfolio.html) (Confirmation of investment through Lockheed Martin Ventures portfolio)

4. [https://spacewatch.global/2022/06/enosemi-secures-8-million-in-series-a-funding-to-expand-its-radiation-hardened-semiconductor-solutions/](https://spacewatch.global/2022/06/enosemi-secures-8-million-in-series-a-funding-to-expand-its-radiation-hardened-semiconductor-solutions/)