# Dossier: FEMTOSENSE, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,303,513.00

**Award Date:** 2024-06-13

**Branch:** SOCOM

## AI-Generated Intelligence Summary

**Company Overview:**

FEMTOSENSE, INC. is a pioneering US-based technology company specializing in the development and commercialization of advanced optical sensors and imaging systems with a focus on high-speed, high-resolution, and compact solutions. Their core mission is to revolutionize sensing capabilities across various sectors, including defense, aerospace, industrial automation, and biomedical applications, by miniaturizing complex optical systems and making them more accessible and affordable. They aim to solve limitations in existing imaging and sensing technologies that struggle with speed, resolution, size, and cost, particularly in challenging environments. Their unique value proposition lies in their proprietary optical technology that enables ultra-fast data acquisition and processing, potentially enabling real-time or near real-time imaging and analysis in demanding applications.

**Technology Focus:**

* Chip-scale femtosecond laser source: FemtoSense is developing integrated femtosecond laser technology aiming to dramatically reduce the size, weight, power, and cost (SWaP-C) of femtosecond lasers used in advanced imaging and spectroscopy systems. This is crucial for deploying complex optical systems in portable and remote environments.
* High-Speed Optical Coherence Tomography (OCT) system: Develops miniature, high-speed OCT systems that can achieve micron-scale resolution at frame rates significantly higher than traditional OCT devices, allowing for real-time 3D imaging of biological tissues or industrial materials with enhanced clarity.

**Recent Developments & Traction:**

* October 2021:\*\* Awarded a $225,000 Small Business Innovation Research (SBIR) Phase I grant from the National Science Foundation (NSF) for "Chip-Scale Ultrafast Laser Source for Time-Resolved Spectroscopy and Imaging".
* July 2022:\*\* Presented research and development progress in chip-scale ultrafast laser sources at SPIE Photonics West.
* October 2023:\*\* Awarded a Phase II SBIR grant from the National Science Foundation.

**Leadership & Team:**

* Information on the leadership team could not be confidently verified. The company website lacks detailed information on key personnel.

**Competitive Landscape:**

* Thorlabs: A major player in the photonics industry, Thorlabs offers a broad range of optical components and systems, including lasers and OCT systems. FemtoSense aims to differentiate itself through miniaturization and cost-effectiveness, targeting applications where SWaP-C is critical.
* Lumentum: Another significant supplier of lasers and optical components. FemtoSense will need to demonstrate superior performance and reduced size and power consumption relative to Lumentum’s offerings to achieve market penetration.

**Sources:**

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

2. [https://www.nsf.gov/awardsearch/showAward?AWD\_ID=2125621](https://www.nsf.gov/awardsearch/showAward?AWD\_ID=2125621)

3. [https://www.nsf.gov/awardsearch/showAward?AWD\_ID=2322073](https://www.nsf.gov/awardsearch/showAward?AWD\_ID=2322073)