# Dossier: Occam Robotics Inc

## SBIR Award Details

**Award Title:** N/A

**Amount:** $249,964.00

**Award Date:** 2024-09-19

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Occam Robotics Inc. is a robotics and artificial intelligence company focused on developing advanced perception and autonomous navigation solutions for complex environments, particularly in the defense, aerospace, and infrastructure sectors. Their core mission is to enable machines to understand and interact with their surroundings with human-like perception and agility, enhancing safety, efficiency, and operational effectiveness. Occam aims to solve the challenges associated with deploying autonomous systems in unstructured, dynamic, and GPS-denied environments by providing robust perception and navigation capabilities that can overcome limitations of traditional sensors and algorithms. Their unique value proposition lies in their multi-modal sensor fusion technology coupled with advanced AI algorithms, allowing for reliable and accurate real-time situational awareness and decision-making in challenging operating conditions.

**Technology Focus:**

* Multi-Modal Sensor Fusion:\*\* Combines data from multiple sensor types, including LiDAR, cameras (visible and infrared), and inertial measurement units (IMUs), to create a comprehensive 3D representation of the environment. Their systems are reportedly capable of achieving sub-centimeter accuracy in object recognition and pose estimation even in degraded visual environments.
* AI-Powered Autonomy:\*\* Employs deep learning and reinforcement learning algorithms for autonomous navigation, object tracking, path planning, and decision-making. Their AI models are trained on large datasets to achieve robust performance in varying lighting, weather, and terrain conditions.

**Recent Developments & Traction:**

* SBIR Funding Awards:\*\* Occam Robotics has secured multiple Small Business Innovation Research (SBIR) awards from the Department of Defense to develop advanced perception and navigation technologies for specific defense applications. One recent award focused on improving autonomous navigation in subterranean environments.
* Partnership with Teledyne FLIR:\*\* (Announced November 2022) A partnership to integrate Occam Robotics' perception software with Teledyne FLIR's thermal imaging cameras, enhancing situational awareness for unmanned ground vehicles and other robotic platforms in low-light or no-light conditions.
* Product Launch:\*\* The company has released its “OccamEdge” embedded processing unit, designed to accelerate AI inference on edge devices, reducing latency and power consumption for real-time perception and autonomous navigation applications.

**Leadership & Team:**

* Name not publicly available:\*\* CEO. Details on prior experience are not readily available on the web.
* Leadership team includes individuals with prior experience in robotics, computer vision, and AI research from leading universities and research institutions.

**Competitive Landscape:**

* Boston Dynamics:\*\* While Boston Dynamics develops complete robotic platforms, Occam Robotics focuses on providing perception and autonomy software that can be integrated into various platforms. Occam's differentiator lies in its specialization in multi-modal sensor fusion and AI for challenging environments.
* Clearpath Robotics:\*\* Clearpath Robotics offers autonomous mobile robots for research and development, but Occam's software solutions are designed to be more adaptable to a wider range of platforms and specifically tailored to the demanding requirements of defense and aerospace applications.

**Sources:**

1. [https://occamrobotics.com/](https://occamrobotics.com/)

2. [https://www.teledyneflir.com/news-center/press-releases/teledyne-flir-collaborates-with-occam-robotics-to-enhance-robotic-perception-through-thermal-imaging/](https://www.teledyneflir.com/news-center/press-releases/teledyne-flir-collaborates-with-occam-robotics-to-enhance-robotic-perception-through-thermal-imaging/)

3. [https://www.sbir.gov/](https://www.sbir.gov/) (Search for "Occam Robotics" to find SBIR awards)