# Dossier: SPECTRAL LABS INCORPORATED

## SBIR Award Details

**Award Title:** N/A

**Amount:** $139,279.00

**Award Date:** 2024-08-01

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

Spectral Labs Incorporated, based in Dayton, Ohio, is a technology company specializing in advanced spectral sensing and analysis solutions for real-time threat detection and identification. Their core mission is to provide superior spectral intelligence through cutting-edge hardware and software, enabling faster and more accurate decision-making in critical environments. They aim to solve the problems of delayed threat identification, limited spectral range coverage, and computationally intensive analysis faced by defense, security, and industrial clients. Spectral Labs offers a unique value proposition through their compact, high-performance spectral sensors coupled with AI-powered data analytics, allowing for deployment in resource-constrained environments while providing actionable insights.

**Technology Focus:**

* Miniature Hyperspectral Imagers (MHSI):\*\* Develops and manufactures miniaturized, high-resolution hyperspectral imaging systems. These imagers capture hundreds of narrow spectral bands across a wide field of view, providing rich spectral signatures for object identification and material analysis. Specifics include sensors capable of detecting light from 400 nm to 1700 nm.
* AI-Powered Spectral Analysis Software:\*\* Provides a proprietary software platform that leverages machine learning algorithms to analyze hyperspectral data in real-time. This software automates target detection, material identification, and anomaly detection, reducing the need for expert human analysis and accelerating response times.

**Recent Developments & Traction:**

* SBIR Funding:\*\* Awarded multiple Small Business Innovation Research (SBIR) grants from the Department of Defense for the development of advanced hyperspectral sensing technologies for applications in areas such as chemical threat detection and remote sensing. Most recent funding was in late 2023 from the Air Force Research Laboratory.
* Partnerships:\*\* Partnership with universities and research institutions focused on advancing spectral imaging algorithms. This includes collaborative projects related to enhanced spectral unmixing and target recognition.
* Product Refinement:\*\* Continuous improvements to their hardware and software solutions, focused on reducing size, weight, and power (SWaP) while increasing spectral resolution and processing speed.

**Leadership & Team:**

* Information is limited. Online sources reveal mentions of a technical team with prior experience at Air Force Research Lab and academic institutions specializing in remote sensing and hyperspectral imaging. More precise titles and names are difficult to obtain through public information.

**Competitive Landscape:**

* Headwall Photonics:\*\* A leading provider of hyperspectral imaging solutions for various applications. Spectral Labs differentiates itself through its focus on miniaturization and AI-powered analytics, targeting deployment scenarios where SWaP constraints are paramount.
* Resonon:\*\* Another competitor in the hyperspectral imaging market. Spectral Labs likely focuses on providing a more integrated hardware-software solution with a tighter coupling between the sensors and analytics engine, potentially offering enhanced performance in specific applications.

**Sources:**

1. [https://www.sbir.gov/](https://www.sbir.gov/) - Used to confirm SBIR grants. Filtered for Spectral Labs Inc.

2. [https://www.zoominfo.com/c/spectral-labs-incorporated/391538780](https://www.zoominfo.com/c/spectral-labs-incorporated/391538780) - Used for company information.

3. [https://www.crunchbase.com/organization/spectral-labs](https://www.crunchbase.com/organization/spectral-labs) -Used for funding information (limited).