# Dossier: Kent Optronics, Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $179,866.50

**Award Date:** 2024-09-30

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Kent Optronics, Inc. specializes in developing and manufacturing advanced optical components and systems for defense, aerospace, and industrial applications. Their core mission is to deliver innovative solutions that enhance performance and reliability in harsh environments, particularly by leveraging non-mechanical beam steering and wavefront control technologies. They aim to solve problems associated with traditional mechanical beam steering systems, such as slow response times, limited lifespan, and high power consumption, thereby offering more robust, efficient, and precise optical solutions. Their unique value proposition lies in their proprietary liquid crystal-based technology, offering high-speed, low-power, and compact alternatives to conventional optical systems.

**Technology Focus:**

* Non-Mechanical Beam Steering: Kent Optronics leverages liquid crystal based beam steering and wavefront control technology to enable rapid, precise, and non-mechanical control of optical beams. They claim microsecond response times and steering angles up to +/- 60 degrees.
* Free-Space Optical Communications (FSOC) Systems: They design and manufacture FSOC systems that can transmit data at high speeds (e.g., >1 Gbps) through the atmosphere, offering secure and jam-resistant communications for military and aerospace applications.

**Recent Developments & Traction:**

* January 2024:\*\* Kent Optronics was awarded a Phase II SBIR contract by the US Air Force, titled "High-Power, Broadband, and Low-Weight Beam Steering Module." This project aims to enhance the performance of optical targeting and tracking systems.
* June 2022:\*\* Kent Optronics was selected to participate in the U.S. Air Force AFWERX STTR program, focusing on the development of advanced beam steering technology for use in laser communication and remote sensing systems.
* 2021 - Ongoing:\*\* The company continues to highlight its involvement in various Department of Defense (DoD) programs.

**Leadership & Team:**

* Dr. Liang-Chy Chien (CEO): Dr. Chien has extensive experience in liquid crystal technology and optoelectronics, with a track record of developing and commercializing innovative optical solutions.
* Dr. Peter J. Bos (CTO): Dr. Bos is a renowned expert in liquid crystal technology, with several patents and publications in the field.

**Competitive Landscape:**

* Luminit LLC: Develops and manufactures holographic diffusers and light shaping diffusers that compete in beam shaping applications, though they do not specialize in non-mechanical beam steering like Kent Optronics.
* Analog Modules, Inc.: Offers components and subsystems for laser and optical systems, potentially overlapping in areas like laser communications. Kent Optronics differentiates itself with its focus on advanced liquid crystal-based beam steering.

**Sources:**

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

2. [https://www.sbir.gov/sbirsearch/detail/2229574](https://www.sbir.gov/sbirsearch/detail/2229574)

3. [https://www.afwerx.com/](https://www.afwerx.com/) (Search Kent Optronics)

4. [https://opencorporates.com/companies/us\_ny/2055913](https://opencorporates.com/companies/us\_ny/2055913) (corporate filings)