# Dossier: Holoptic, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $249,082.10

**Award Date:** 2024-05-15

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Holoptic, LLC appears to be a technology company specializing in the design and manufacturing of advanced optical systems, particularly diffractive optical elements (DOEs) for various applications within defense, aerospace, and related sectors. Their primary business revolves around creating high-performance, miniaturized, and robust optical components that enhance imaging, sensing, and light manipulation capabilities. They aim to solve the problems of size, weight, and power (SWaP) constraints in optical systems, particularly for deployment in challenging environments. Their unique value proposition lies in their ability to create custom DOEs with complex designs, offering superior performance and integration flexibility compared to traditional refractive optics. They seem to focus on providing customized solutions for specific customer needs, rather than mass-producing off-the-shelf products.

**Technology Focus:**

* Design and fabrication of custom Diffractive Optical Elements (DOEs): Holoptic focuses on developing high-performance DOEs that enable complex wavefront shaping, beam steering, and image correction. This can lead to more efficient and compact optical systems. They claim to be able to produce DOEs with feature sizes down to the nanometer scale, allowing for sophisticated optical functionalities.
* Miniaturized Optical Systems: The company designs and develops compact optical modules incorporating their DOEs for applications like laser beam shaping, light detection and ranging (LiDAR), and advanced sensing. Their expertise extends to integration of optical elements with sensors and electronics for complete system solutions.

**Recent Developments & Traction:**

* In September 2023, Holoptic announced they were awarded a Phase I Small Business Technology Transfer (STTR) program from the National Science Foundation (NSF) to develop advanced optical coherence tomography (OCT) probes utilizing their holographic optics technology.
* Holoptic's research and technology were presented at the SPIE Defense + Commercial Sensing conference in 2022 and 2023, indicating ongoing R&D efforts and engagement within the defense and aerospace community.
* Holoptic has been awarded multiple SBIR (Small Business Innovation Research) contracts, implying continued support from government agencies and validation of their technology's potential for defense applications.

**Leadership & Team:**

* While specific leadership names are not prominently available, their online presence points to a team comprised of experienced optical engineers and scientists with expertise in diffractive optics, micro-fabrication, and optical system design. Further information requires direct contact.

**Competitive Landscape:**

* Holoeye Photonics AG: A German company specializing in diffractive optical elements and spatial light modulators. Holoptic's differentiator might be its specific focus on custom DOE designs and its strong ties to the US defense sector through SBIR grants.
* Edmund Optics: While Edmund Optics offers a wide range of optical components, including DOEs, Holoptic's competitive advantage lies in its ability to create highly customized DOE solutions tailored to specific customer needs and its dedicated expertise in advanced wavefront shaping.

**Sources:**

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

2. [https://www.nsf.gov/awardsearch/showAward?AWD\_ID=2317594](https://www.nsf.gov/awardsearch/showAward?AWD\_ID=2317594)

3. [https://spie.org/profile/Holoptic%20LLC-55474](https://spie.org/profile/Holoptic%20LLC-55474)