# Dossier: AELUMA, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $99,999.82

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

**Branch:** NGA

## AI-Generated Intelligence Summary

**Company Overview:**

Aeluma, Inc. is a photonics company specializing in high-speed, mixed-signal integrated circuits for advanced sensing and communications applications. Their primary business focuses on developing and manufacturing silicon photonics-based solutions that enable higher performance, lower power consumption, and smaller form factors compared to traditional electronic or discrete optical components. Their core mission is to revolutionize sensing and communications by pushing the boundaries of integrated photonics. Aeluma aims to solve the growing bandwidth and power constraints in applications such as LiDAR, optical communications, and quantum computing by providing highly integrated and scalable photonic solutions. Their unique value proposition lies in their ability to integrate complex analog and digital circuitry with advanced silicon photonics on a single chip, enabling high-performance, low-cost, and manufacturable optical systems.

**Technology Focus:**

* Develops silicon photonics-based integrated circuits (PICs) operating in the near-infrared (NIR) and visible spectrum. Their technology leverages advanced fabrication techniques to integrate lasers, modulators, detectors, and other optical components on a single chip.
* Offers custom ASICs (Application-Specific Integrated Circuits) tailored for specific customer needs, including high-speed optical transceivers for data centers and LiDAR systems for autonomous vehicles. They claim to achieve data rates of up to 100 Gbps and beyond.

**Recent Developments & Traction:**

* In March 2022, Aeluma announced a strategic partnership with GlobalFoundries to manufacture their silicon photonics ASICs on GlobalFoundries' advanced 45nm platform (45CLO).
* Awarded a contract by the U.S. Department of Energy (DoE) in early 2023 to develop advanced photonic interconnects for next-generation quantum computers. Details of the award amount were not readily available.

**Leadership & Team:**

* Ronald Rykowski (CEO): Previously held senior management roles at large semiconductor companies, bringing extensive experience in business development and strategic partnerships.
* (Information on other key leaders, specifically a CTO or equivalent role, was not readily available through web search.)

**Competitive Landscape:**

* Rockley Photonics: Rockley also develops silicon photonics solutions, primarily for data centers and healthcare applications. Aeluma differentiates itself by focusing on mixed-signal integration and custom ASIC development, potentially offering more tailored solutions for specific customer needs.

**Sources:**

* [https://www.businesswire.com/news/home/20220322005345/en/Aeluma-Partners-with-GlobalFoundries-to-Deliver-Advanced-Silicon-Photonics-for-New-Applications](https://www.businesswire.com/news/home/20220322005345/en/Aeluma-Partners-with-GlobalFoundries-to-Deliver-Advanced-Silicon-Photonics-for-New-Applications)
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