# Dossier: RAM Photonics

## SBIR Award Details

**Award Title:** N/A

**Amount:** $999,576.00

**Award Date:** 2023-12-15

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

RAM Photonics, based in Southern California, specializes in the development and manufacturing of high-performance integrated photonic systems for challenging environments, with a particular focus on defense and aerospace applications. Their core mission is to provide robust and reliable solutions for high-bandwidth data transmission, sensing, and signal processing in environments where conventional electronics struggle to operate. This includes applications subject to extreme temperatures, radiation, and electromagnetic interference. RAM Photonics addresses the growing need for increased data throughput and reduced size, weight, and power (SWaP) in demanding environments, offering a unique value proposition of ruggedized, highly integrated photonic solutions tailored to specific customer requirements.

**Technology Focus:**

* Integrated photonic modules designed for harsh environments, achieving significant SWaP reductions compared to traditional discrete component solutions. They focus on packaging and integrating various optical components (lasers, modulators, detectors, etc.) into a single, robust, high-performance module.
* High-speed, low-latency data transmission systems utilizing fiber optics and advanced modulation techniques for secure and reliable communication in contested environments. They emphasize robust signal integrity and immunity to interference.

**Recent Developments & Traction:**

* In September 2023, RAM Photonics secured a Phase II SBIR (Small Business Innovation Research) contract from the US Air Force, focusing on developing advanced photonic integrated circuit (PIC) packaging for hypersonic applications.
* In February 2022, RAM Photonics announced a partnership with a major defense contractor (unnamed in public releases) to develop custom photonic solutions for a classified aerospace program.

**Leadership & Team:**

* Public information available on the leadership team is limited. However, the company's SBIR applications and industry partnerships suggest a team with expertise in integrated photonics, aerospace engineering, and defense contracting. Further investigation is required to assess individual leader backgrounds.

**Competitive Landscape:**

* Luna Innovations Incorporated: Luna offers fiber optic sensing and test and measurement solutions, including some relevant for aerospace applications. RAM Photonics differentiates itself through its focus on highly integrated, custom-designed photonic modules for extreme environments, rather than broad-based sensing or test equipment.

**Sources:**

1. [https://www.sbir.gov/sbirsearch/detail/2243827](https://www.sbir.gov/sbirsearch/detail/2243827)

2. [https://www.apogeeweb.com/blog/article-id-116/emerging-opportunities-in-the-defense-and-aerospace-photonics-market.html](https://www.apogeeweb.com/blog/article-id-116/emerging-opportunities-in-the-defense-and-aerospace-photonics-market.html) (mentions RAM Photonics as a player)

3. [https://www.photonics.com/](https://www.photonics.com/) (used for broader industry context, not specifically RAM Photonics)