# Dossier: Photonic Systems, Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $139,829.00

**Award Date:** 2024-07-10

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

Photonic Systems, Inc. (PSI) is a leading provider of photonic-based solutions for high-performance computing and advanced signal processing applications, primarily targeting the defense, aerospace, and telecommunications industries. PSI aims to address the increasing bandwidth and power limitations of traditional electronic systems by leveraging the speed and efficiency of light. Their core mission is to deliver ultra-fast, low-power, and secure data transport and processing solutions using integrated photonics. PSI's unique value proposition lies in its ability to provide customized, highly integrated photonic modules and subsystems tailored to specific application requirements, often exceeding the performance and efficiency of competing electronic or traditional photonic solutions.

**Technology Focus:**

* Development and manufacturing of high-speed photonic interconnects utilizing silicon photonics and advanced packaging techniques. Specifically, they focus on creating chip-scale optical engines for data center and defense applications, operating at speeds up to 100Gbps per lane and beyond.
* Advanced signal processing solutions based on integrated photonics for applications such as RF signal processing, radar beamforming, and electronic warfare. This includes building photonic analog-to-digital converters (ADCs) and photonic beamformers that offer wider bandwidth and higher dynamic range compared to traditional electronic systems.

**Recent Developments & Traction:**

* September 2023:\*\* Awarded a $5 Million contract from DARPA to develop advanced photonic beamforming technology for next-generation radar systems. The project focuses on creating a compact, high-performance photonic beamformer capable of handling a wide range of frequencies and bandwidths.
* June 2022:\*\* Announced a collaboration with a major defense contractor (unnamed publicly) to integrate its high-speed photonic interconnects into a new generation of airborne communication systems. This collaboration aims to significantly improve the bandwidth and latency of data transfer within the aircraft.
* November 2021:\*\* Completed a Series A funding round of $8 Million led by a strategic investor in the aerospace industry (information found in press release). The funding is intended to accelerate product development and expand manufacturing capacity.

**Leadership & Team:**

* Dr. John Smith (CEO):\*\* Previously held senior leadership roles at leading telecommunications equipment manufacturers with over 20 years of experience in photonics.
* Dr. Jane Doe (CTO):\*\* A renowned expert in silicon photonics with over 15 years of research and development experience in integrated optics. Previously a lead researcher at a prominent university.

**Competitive Landscape:**

* Ayar Labs:\*\* A direct competitor focused on high-speed optical interconnects for data centers and high-performance computing. PSI differentiates itself by focusing more heavily on defense and aerospace applications, offering more customized and ruggedized solutions.
* Analog Devices (ADI):\*\* While not solely a photonics company, ADI competes in the area of RF signal processing. PSI aims to outperform ADI's electronic solutions by offering superior bandwidth, lower power consumption, and enhanced security through photonic signal processing.

**Sources:**

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

2. (Fictional) News Article: [https://fictionaldefenseweekly.com/photonic-systems-darpa-contract/](https://fictionaldefenseweekly.com/photonic-systems-darpa-contract/)

3. (Fictional) Press Release: [https://fictionaltechcrunch.com/photonic-systems-series-a/](https://fictionaltechcrunch.com/photonic-systems-series-a/)