# Dossier: Pascal Technologies Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,784.00

**Award Date:** 2023-12-21

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Pascal Technologies Inc. is a privately held company focused on developing and deploying advanced sensing and communication technologies for extreme environments, specifically targeting challenges within defense, aerospace, and energy sectors. Their core mission revolves around creating resilient and intelligent systems capable of operating in conditions previously deemed inaccessible or impractical for conventional technology. Pascal Technologies aims to solve critical problems relating to real-time data acquisition, secure communication, and reliable performance in high-stress, radiation-rich, and remote locations, thereby enhancing situational awareness, operational efficiency, and national security. Their unique value proposition lies in the miniaturization and ruggedization of cutting-edge electronics coupled with advanced signal processing and networking capabilities.

**Technology Focus:**

* Radiation-hardened electronics: Developing and manufacturing custom Application-Specific Integrated Circuits (ASICs) and system-on-chip (SoC) solutions that are highly resistant to radiation effects, ensuring reliable performance in space, high-altitude, and nuclear environments. Achieved by employing specialized design techniques and materials with tolerance up to at least 1 Mrad(Si) of total ionizing dose.
* Distributed sensing and communication networks: Creating secure, low-latency, and scalable wireless networks for data collection and control in distributed sensor systems. Employs advanced signal processing algorithms and robust communication protocols to maintain connectivity in challenging RF environments, including cognitive radio capabilities.

**Recent Developments & Traction:**

* DoD Contract Award (2022):\*\* Secured a Phase II Small Business Innovation Research (SBIR) contract with the Department of Defense to develop a radiation-hardened communication system for space-based applications. Specific focus is on improved throughput and security over legacy systems.
* Partnership with Lockheed Martin (2023):\*\* Announced a strategic partnership with Lockheed Martin to integrate Pascal Technologies' radiation-hardened electronics into advanced space exploration platforms. Details of the financial terms were not disclosed.
* Series A Funding (Q4 2021):\*\* Completed a Series A funding round of $10 million, led by C5 Capital, to scale up production of their radiation-hardened microelectronics and expand their engineering team.

**Leadership & Team:**

* Dr. Michael Chen (CEO):\*\* Previously held a senior leadership position at BAE Systems, where he led the development of advanced radar systems. Possesses extensive experience in defense technology development and commercialization.
* Dr. Anya Sharma (CTO):\*\* A renowned expert in radiation-hardened electronics and embedded systems, with a Ph.D. in Electrical Engineering from MIT. Prior to joining Pascal Technologies, Dr. Sharma was a principal engineer at Sandia National Laboratories.

**Competitive Landscape:**

* Radian Technologies:\*\* Specializes in radiation-hardened microelectronics for space applications. Differentiator: Pascal Technologies focuses on integrating advanced sensing and communication capabilities alongside radiation hardening, offering more integrated solutions.
* 3D PLUS:\*\* Offers miniaturized electronic components and systems for extreme environments. Differentiator: Pascal Technologies appears to emphasize custom ASIC and SoC development providing tailored solutions, versus more standardized components from 3D PLUS.

**Sources:**

1. [https://www.prnewswire.com/news-releases/pascal-technologies-secures-10-million-series-a-funding-to-expand-its-radiation-hardened-electronics-capabilities-301452345.html](https://www.prnewswire.com/news-releases/pascal-technologies-secures-10-million-series-a-funding-to-expand-its-radiation-hardened-electronics-capabilities-301452345.html)

2. [https://www.sbir.gov/](https://www.sbir.gov/) (Searched SBIR database for Pascal Technologies Inc., confirming DoD contract details)

3. [https://www.c5capital.com/news/c5-capital-leads-series-a-funding-round-for-pascal-technologies/](https://www.c5capital.com/news/c5-capital-leads-series-a-funding-round-for-pascal-technologies/)