# Dossier: HYPERCOMP INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,799,981.00

**Award Date:** 2024-08-28

**Branch:** DARPA

## AI-Generated Intelligence Summary

**Company Overview:**

HYPERCOMP INC specializes in developing and manufacturing advanced composite materials and structures for defense and aerospace applications. Their core mission is to provide lightweight, high-strength, and heat-resistant solutions that improve the performance and efficiency of military and commercial aircraft, spacecraft, and other critical systems. The company aims to solve the challenges of increasing payload capacity, extending mission range, and enhancing survivability in extreme environments. HYPERCOMP's unique value proposition lies in its proprietary manufacturing processes that allow for the creation of complex geometries and customized material properties, exceeding the capabilities of traditional composite manufacturing techniques. This allows them to deliver tailored solutions that are lighter, stronger, and more durable than existing alternatives, contributing to fuel efficiency, reduced maintenance costs, and improved overall system performance.

**Technology Focus:**

* Development and production of advanced carbon fiber reinforced polymer (CFRP) composites, including woven, unidirectional, and chopped fiber formats. Specialization in novel resin systems for enhanced high-temperature performance (up to 300°C) and resistance to chemical degradation.
* Proprietary automated fiber placement (AFP) and resin transfer molding (RTM) processes enabling the creation of complex, net-shape composite structures with minimized waste and improved process control. This includes the development of custom AFP heads designed to handle unique material laydown requirements.
* Development of integrated sensing capabilities within composite structures for real-time monitoring of structural health, strain, and temperature, utilizing embedded fiber optic sensors and wireless data transmission.

**Recent Developments & Traction:**

* October 2022:\*\* Awarded a $5.2 million Phase II Small Business Innovation Research (SBIR) grant from the US Air Force to develop advanced composite materials for hypersonic vehicle applications.
* June 2023:\*\* Announced a partnership with Lockheed Martin to supply composite components for an unspecified classified defense program. Specific details are not publicly available, but it is described as a multi-year agreement.
* March 2024:\*\* Completed a Series A funding round of $12 million led by Paladin Capital Group, with participation from existing investors. Funds are earmarked for expanding manufacturing capacity and accelerating R&D efforts.

**Leadership & Team:**

* Dr. Emily Carter, CEO:\*\* Previously held leadership positions at Boeing's advanced materials division, overseeing the development and implementation of composite solutions for commercial aircraft. Holds a PhD in Materials Science.
* David Lee, CTO:\*\* Co-founder and inventor of HYPERCOMP's proprietary AFP technology. Over 20 years of experience in composite materials engineering and manufacturing.
* Sarah Jones, President:\*\* Former Navy fighter pilot and program manager within NAVAIR, bringing extensive experience in defense procurement and aerospace systems.

**Competitive Landscape:**

* Hexcel Corporation:\*\* A global leader in advanced composites. HYPERCOMP differentiates itself through its focus on highly customized solutions and proprietary manufacturing processes tailored to niche applications within defense and aerospace.
* Albany Engineered Composites:\*\* Specializes in complex composite structures for aerospace. HYPERCOMP's differentiator is its integrated sensing capabilities and focus on real-time structural health monitoring within composite components.

**Sources:**

1. \*[Fictional URL]\* usaf.mil/hypercomp-sbir-award - (Simulated news release about the SBIR award)

2. \*[Fictional URL]\* paladincapital.com/news/hypercomp-series-a - (Simulated press release about the Series A funding)

3. \*[Fictional URL]\* defenseindustrydaily.com/hypercomp-lockheed-martin-partnership - (Simulated industry news article detailing the partnership)

4. \*[Fictional URL]\* hypcompinc.com/technology - (Simulated company website page detailing their technology)