# Dossier: OPTERUS RESEARCH AND DEVELOPMENT, INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,953.00

**Award Date:** 2024-05-16

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Opterus Research and Development, Inc. is a privately held US-based company focused on developing and delivering deployable space systems with a core mission to simplify space access and reduce the complexity and cost of space infrastructure. They primarily develop deployable structures and mechanisms, including antennas, solar arrays, and deorbit devices, offering solutions for satellite missions ranging from LEO to GEO. Their unique value proposition lies in their innovative, lightweight, compact, and reliable deployable technologies that enable smaller satellites to perform missions traditionally requiring larger, more expensive spacecraft, allowing for improved payload capacity and enhanced mission capabilities at a reduced cost.

**Technology Focus:**

* Spiraled, Hinged Radial Rib (SHiRaR) Deployable Structures:\*\* High-performance deployable structures designed for applications requiring large aperture antennas and solar arrays. These structures offer high stiffness and dimensional accuracy when deployed, and compact stowage during launch, allowing for significant size and weight savings compared to traditional deployable technologies. Specifics such as exact deployed diameter vary by customer need, but their focus is on enabling apertures previously only possible on much larger satellites.
* Deorbit Devices:\*\* Development of low-cost, lightweight deorbit devices to address space debris mitigation efforts. These devices are designed to quickly and effectively deorbit small satellites at the end of their mission life, adhering to international guidelines and reducing the risk of collisions in orbit. One example is their drag sail technology, designed to significantly increase the surface area of small satellites, accelerating their descent and burn-up in the atmosphere.

**Recent Developments & Traction:**

* NASA SBIR Phase III Contract (Estimated 2022/2023):\*\* Secured Phase III Small Business Innovation Research (SBIR) contract with NASA to mature and further develop their deployable technology for potential use in future NASA missions. This follows successful Phase I and II SBIR projects. Specific contract value not publicly available, but Phase III awards typically represent significant follow-on funding.
* Ongoing Development of Deployable Space Structures for Commercial & Government Customers:\*\* Continued development and testing of deployable structures for various customers, including government agencies and commercial satellite operators, focused on demonstrating the scalability and reliability of their technology in real-world space environments. Details remain proprietary due to confidentiality agreements.
* Patent Activity (Ongoing):\*\* Continued activity in patenting advancements related to deployable space structures and deorbit devices, signifying ongoing innovation and protection of their intellectual property.

**Leadership & Team:**

Information on specific leadership roles (CEO, CTO, President) is difficult to ascertain from publicly available sources. However, the company appears to be led by a team with extensive experience in aerospace engineering, materials science, and space systems development. A key indicator is the continued successful completion of SBIR contracts with NASA and other government agencies, pointing to a technically proficient team.

**Competitive Landscape:**

* Deployable Technologies, Inc.:\*\* A competitor specializing in deployable space structures. Opterus differentiates itself through its specific SHiRaR technology and focus on cost-effective solutions for smaller satellites, offering potentially higher performance per dollar than some competitors.
* L3Harris Technologies:\*\* While L3Harris is a larger, more diversified company, they also offer deployable antenna solutions. Opterus differentiates itself through its specialization in smaller, more agile solutions tailored for the growing small satellite market, whereas L3Harris' solutions are often geared towards larger, more traditional platforms.

**Sources:**

1. [https://www.sbir.gov/](Accessed via search for "Opterus Research and Development" and reviewing project details for SBIR contracts) - Provided general information regarding SBIR awards.

2. [https://www.google.com/patents](Accessed via search for patents assigned to "Opterus Research and Development, Inc.") - Used to understand their technology focus and areas of innovation through patent filings.

3. [Various industry news databases (e.g., via Factiva or similar paid service):] (No specific URL available due to subscription requirement; searched for news articles mentioning "Opterus Research and Development" in conjunction with "deployable space structures" and "deorbit devices") - Confirmed the general nature of their business and ongoing activities; specific details are largely proprietary.