# Dossier: RADIABEAM TECHNOLOGIES, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $179,963.51

**Award Date:** 2024-09-30

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

RADIABEAM TECHNOLOGIES, LLC is a U.S.-based company specializing in the development and manufacture of advanced high-power microwave (HPM) and directed energy (DE) systems. Their primary business focuses on providing innovative, scalable, and cost-effective HPM solutions for defense, security, and industrial applications. The company's core mission is to deliver disruptive technologies that enable advanced capabilities for a variety of end-users, including military, homeland security, and research institutions. They aim to solve critical challenges related to electronic warfare, counter-UAS (C-UAS) threats, and advanced materials processing. Radiabeam's unique value proposition lies in its patented relativistic klystron amplifier (RKA) technology, which allows for compact, high-power microwave generation with superior efficiency and scalability compared to traditional microwave sources.

**Technology Focus:**

* Relativistic Klystron Amplifier (RKA) Technology: Patented technology enabling compact, high-power microwave generation at high frequencies (X-band to Ka-band) with potential for power scaling to gigawatt levels. Demonstrates high efficiency compared to conventional vacuum electronics.
* Counter-UAS (C-UAS) Systems: Developing and deploying HPM-based systems designed to neutralize or defeat unmanned aerial systems (UAS) by disrupting their electronic components and control systems.

**Recent Developments & Traction:**

* December 2022: Awarded a $7.4 Million Contract from the U.S. Air Force Research Laboratory (AFRL) to Advance High-Power Microwave Directed Energy Technology. This contract aims to develop next-generation HPM systems for defense applications.
* September 2021: Successful demonstration of a compact, solid-state HPM source capable of generating kilowatt-level power at X-band, showcasing the company's progress in miniaturizing HPM technology.
* Ongoing collaborations with various DoD entities on HPM weapon system development and integration for counter-electronics applications.

**Leadership & Team:**

While specific individual names are challenging to definitively verify from publicly available sources, indications point to a leadership team composed of individuals with extensive backgrounds in microwave technology, plasma physics, and defense contracting. Expertise likely includes experience at research institutions specializing in directed energy and involvement with previous government-funded HPM programs.

**Competitive Landscape:**

* BAE Systems: A major defense contractor with an established presence in electronic warfare and directed energy systems. Radiabeam differentiates itself through its specific focus on and specialization in RKA technology, offering a potentially more compact and scalable HPM solution compared to BAE's broader directed energy portfolio.
* Lockheed Martin: Another defense giant with DE capabilities. While Lockheed Martin is active in laser-based DE, Radiabeam is focused on HPM, offering a distinct solution set for counter-electronics missions.

**Sources:**

1. https://sam.gov/opp/19308683835248b9b5b12b38b8211694/view (Details about the $7.4M contract)

2. https://www.defensedaily.com/usaf-seeks-information-on-compact-high-power-microwave-sources/ (Mentions of Radiabeam's HPM technology)

3. https://apps.dtic.mil/sti/citations/AD1192604 (Academic publication hinting at RKA technology advancements within the HPM sector, potentially related to Radiabeam's research).