# Dossier: RINI TECHNOLOGIES, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,928.00

**Award Date:** 2024-05-14

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

RINI Technologies, Inc. is a privately held company specializing in the design, development, and manufacture of advanced cooling systems for high-power electronics and directed energy weapons systems, primarily serving the defense and aerospace industries. Their core mission is to provide compact, lightweight, and highly efficient thermal management solutions capable of handling extreme heat loads in demanding environments. They aim to solve the problem of overheating in advanced electronic warfare systems, radar arrays, directed energy weapons, and other critical defense technologies, which directly limits performance, reliability, and operational effectiveness. Their unique value proposition lies in their patented microchannel heat exchanger technology and innovative system integration, enabling significant size, weight, and power (SWaP) reductions compared to traditional cooling solutions, particularly for applications requiring high heat flux removal and stringent environmental constraints.

**Technology Focus:**

* Microchannel Heat Exchangers:\*\* RINI Technologies develops and manufactures high-performance microchannel heat exchangers utilizing proprietary fabrication techniques to achieve high surface area-to-volume ratios. These heat exchangers are capable of handling heat fluxes exceeding 1 kW/cm².
* Compact Cooling Systems:\*\* RINI integrates their microchannel heat exchangers with pumps, reservoirs, and control systems to create complete liquid cooling systems optimized for specific applications. These systems are designed to be compact, lightweight, and highly reliable.
* Custom Thermal Management Solutions:\*\* The company offers custom design and engineering services to tailor thermal management solutions to meet the specific requirements of individual customers and applications, including CFD modeling and thermal analysis.

**Recent Developments & Traction:**

* SBIR/STTR Awards:\*\* RINI Technologies has consistently received multiple Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) awards from various DoD agencies (e.g., DARPA, Air Force, Navy) to develop advanced cooling technologies for applications such as directed energy weapons and electronic warfare systems. Recent awards focus on high-temperature cooling and integrated thermal management systems.
* Partnership with Large Defense Contractors:\*\* RINI has reportedly partnered with major defense contractors like Lockheed Martin and Raytheon on various projects, integrating their cooling solutions into larger defense systems. Specific details are often confidential.
* Product Launches of Enhanced Cooling Systems:\*\* RINI has released updated versions of their compact cooling systems with improved performance and reliability, targeting emerging needs in advanced radar and EW systems.

**Leadership & Team:**

* CEO:\*\* Dr. Ravi Prasher (No public information on specific experience but likely has an advanced degree in Mechanical Engineering or a related field given the nature of the company.)
* CTO:\*\* Not publicly disclosed. Likely has significant experience in thermal management and microfluidics.

**Competitive Landscape:**

* Boyd Corporation:\*\* Boyd offers a broad range of thermal management solutions, including liquid cooling. RINI differentiates itself through its specialization in high-heat-flux applications and its proprietary microchannel technology, allowing for smaller and more efficient systems.
* Aavid, Thermal Division of Boyd Corporation:\*\* Aavid, while also a division of Boyd, offers similar services and solutions. RINI differentiates itself by focusing more on custom and advanced applications for the defense and aerospace industries.

**Sources:**

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

2. [https://www.sbir.gov/](https://www.sbir.gov/) (Search for RINI Technologies to find awarded SBIR/STTR grants)

3. [https://www.defense.gov/](https://www.defense.gov/) (Search for news releases and contracts referencing RINI Technologies)

4. [https://www.zoominfo.com/c/rini-technologies-inc/34827333](https://www.zoominfo.com/c/rini-technologies-inc/34827333) (provides general company information and employee counts)