# Dossier: BEAM-WAVE RESEARCH, INCORPORATED

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,204,187.00

**Award Date:** 2024-02-26

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

BEAM-WAVE RESEARCH, INCORPORATED is a technology company specializing in the design, development, and manufacturing of advanced millimeter-wave (mmWave) and microwave components and systems. Their primary business focuses on providing cutting-edge solutions for radar, communications, and sensing applications, predominantly within the defense, aerospace, and telecommunications sectors. Their core mission is to deliver high-performance, highly integrated, and customizable mmWave and microwave solutions that enable superior situational awareness, enhanced communication capabilities, and advanced sensing functionalities. They address the critical need for increased bandwidth, higher data rates, and improved signal processing in increasingly congested and demanding electromagnetic environments. Their unique value proposition lies in their ability to deliver compact, high-efficiency, and cost-effective mmWave and microwave solutions, often leveraging proprietary design techniques and advanced manufacturing processes to achieve performance characteristics exceeding those of competing technologies.

**Technology Focus:**

* Advanced mmWave Active Electronically Scanned Arrays (AESAs): Focus on high-power, high-efficiency Gallium Nitride (GaN)-based AESAs for radar and communications systems, targeting applications in airborne, ground-based, and maritime platforms. Specific details include operating frequencies typically ranging from Ka-band (26.5-40 GHz) to W-band (75-110 GHz), and claimed improvements in power-added efficiency exceeding industry averages by 10-15%.
* Custom mmWave Integrated Circuits (MMICs): Development of custom MMICs for a variety of applications, including low-noise amplifiers (LNAs), power amplifiers (PAs), mixers, and phase shifters. Emphasis on achieving miniaturization and integration of multiple functionalities onto a single chip to reduce system size, weight, and power consumption (SWaP).

**Recent Developments & Traction:**

* DoD Contract Awards:\*\* Several Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) awards from the DoD for developing advanced mmWave technologies. Recent publicly available awards include projects focused on advanced radar sensor development for autonomous vehicles and enhanced communication systems.
* Partnerships:\*\* Collaborative efforts with prime defense contractors on developing advanced radar and communication systems. Specific details of these partnerships are often confidential.
* Product Releases:\*\* Introduction of new lines of high-performance mmWave components, including LNAs and PAs, with improved performance characteristics compared to previous generations.

**Leadership & Team:**

While specific names and backgrounds are not readily available in a consolidated source, the company's website and related publications indicate a leadership team with significant expertise in mmWave and microwave technology, including PhD-level engineers and scientists with experience in the defense and aerospace industries. Likely contains prior experience in DARPA-funded projects.

**Competitive Landscape:**

Key competitors include companies like Northrop Grumman and Raytheon Technologies. Beam-Wave Research's differentiator likely lies in its agility as a smaller company, enabling faster development cycles and greater customization for specific customer needs, as well as potentially offering more competitive pricing for certain niche applications.

**Sources:**

1. SBIR.gov (Search for BEAM-WAVE RESEARCH, INCORPORATED): [https://www.sbir.gov/](https://www.sbir.gov/)

2. SAM.gov (Contracting Opportunities): [https://sam.gov/](https://sam.gov/)

3. GlobalSpec.com (Product Catalog): [https://www.globalspec.com/](https://www.globalspec.com/)