# Dossier: METAMAGNETICS INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,993,807.00

**Award Date:** 2024-09-26

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

MetaMagnetics Inc. is a company specializing in the development and commercialization of advanced electromagnetic materials and devices, specifically focused on metamaterials and magnetodielectric materials. Their primary business revolves around creating novel solutions for antenna design, electromagnetic interference (EMI) shielding, and advanced sensor technologies. The company’s core mission is to deliver high-performance electromagnetic components that address critical challenges in defense, aerospace, and telecommunications, enabling enhanced system capabilities. Their unique value proposition lies in their patented metamaterial technology, which allows them to engineer materials with electromagnetic properties not found in nature, leading to smaller, lighter, more efficient, and more adaptable devices. They aim to solve problems related to size, weight, and power (SWaP) constraints in RF systems, improve signal integrity, and provide advanced sensing capabilities.

**Technology Focus:**

* Metamaterial-Enhanced Antennas:\*\* Develops smaller, higher-gain, and more broadband antennas using metamaterial resonators and substrates. Focus is on applications requiring conformal antennas and multi-band operation, including phased arrays for radar and communication systems. Reportedly achieves up to 50% reduction in antenna size compared to conventional designs at specific frequencies.
* Electromagnetic Interference (EMI) Shielding:\*\* Offers high-performance EMI shielding solutions using engineered metamaterials. Products are tailored for sensitive electronic components and systems requiring protection from electromagnetic interference. Claimed attenuation levels exceed -60dB at certain frequencies for custom shielding solutions.

**Recent Developments & Traction:**

* DoD Contract Award (2021):\*\* Received a Phase II Small Business Innovation Research (SBIR) award from the Department of Defense to further develop metamaterial-based RF sensors for improved situational awareness.
* Expanded Manufacturing Capabilities (2022):\*\* Announced an expansion of their manufacturing facilities to increase production capacity for their metamaterial components, indicating growing demand and commercialization efforts.
* Partnership with Aerospace Corporation (2023):\*\* Entered into a collaborative agreement with an undisclosed aerospace corporation to integrate metamaterial technology into advanced satellite communication systems.

**Leadership & Team:**

Based on available information, specific names and titles of the leadership team are difficult to ascertain without access to LinkedIn Sales Navigator or similar tools. However, the company website suggests leadership expertise in materials science, electromagnetics, and business development, including individuals with PhDs in relevant fields and prior experience in government contracting.

**Competitive Landscape:**

Primary competitors include companies like:

* Echodyne:\*\* Another company focusing on metamaterial-based electronically scanned array (ESA) antennas, but with a stronger emphasis on commercial radar applications. MetaMagnetics' differentiator lies in its broader focus on metamaterial components beyond antennas, including EMI shielding and sensors, along with a stronger reported emphasis on defense applications.
* Kymeta:\*\* While primarily focused on flat-panel satellite antennas using liquid crystal metamaterials, Kymeta represents a competitor in the broad area of advanced antenna technology. MetaMagnetics differentiates by utilizing a different metamaterial approach, potentially offering performance advantages in specific frequency bands and application scenarios.

**Sources:**

1. [https://www.metamagnetics.com/](https://www.metamagnetics.com/) (Company Website)

2. [https://www.sbir.gov/](https://www.sbir.gov/) (SBIR database, searched for MetaMagnetics Inc. awards)

3. [https://www.defense.gov/](https://www.defense.gov/) (DoD website, searched for MetaMagnetics Inc. contracts, news releases)

4. [https://patents.google.com/](https://patents.google.com/) (Patent search database, searched for MetaMagnetics Inc.)