# Dossier: LIFTWAVE INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,849.00

**Award Date:** 2023-07-14

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

LIFTWAVE INC is a defense technology company focused on developing advanced power beaming solutions for military applications. Their primary business revolves around wireless power transfer (WPT) using directed energy, specifically millimeter wave technology, to remotely power unmanned systems (UxS) like drones and robots. Their core mission is to enable persistent surveillance, enhanced operational range, and improved logistical resilience for warfighters by eliminating the need for frequent battery changes or refueling of these critical assets. LIFTWAVE aims to solve the limitations of traditional battery-powered and tethered systems, offering a unique value proposition of providing reliable, on-demand power at a distance, increasing the operational effectiveness and autonomy of UxS in challenging environments.

**Technology Focus:**

* Millimeter Wave Power Beaming: LIFTWAVE utilizes high-frequency millimeter waves to transmit power wirelessly. Their technology enables the transmission of power over significant distances (claimed up to hundreds of meters, with ongoing efforts to extend range) with a high degree of accuracy and efficiency.
* Power Receiving Systems: They develop specialized rectenna systems integrated into UxS to efficiently convert the received millimeter wave energy into usable DC power for propulsion, sensors, and other onboard systems. These rectennas are designed for minimal weight and aerodynamic impact.

**Recent Developments & Traction:**

* In January 2024, LIFTWAVE received a $1.5 million Small Business Innovation Research (SBIR) Phase II award from the Air Force Research Laboratory (AFRL) to further develop and demonstrate their wireless power beaming technology for drone applications.
* Announced a partnership with a major defense contractor (name undisclosed) in late 2023 to explore integration of LIFTWAVE's power beaming technology into existing and future unmanned ground vehicles (UGVs) programs.
* Completed a series of field demonstrations in 2022 showcasing the ability to power a commercially available drone continuously via millimeter wave transmission, extending its flight time significantly beyond its standard battery life.

**Leadership & Team:**

* Name information not available on public sites. Information is very limited about company leadership.

**Competitive Landscape:**

* EMROD: EMROD is also developing long-range wireless power transfer solutions. LIFTWAVE differentiates itself with its specific focus on millimeter wave technology and its direct targeting of the military UxS market, whereas EMROD has demonstrated technology at much longer distances, but are not currently targeting a solution for UxS.
* WiBotic: WiBotic focuses on wireless charging solutions for robotics, but primarily utilizes inductive charging, requiring close proximity. LIFTWAVE's key differentiator is their longer-range directed energy approach.

**Sources:**

1. SAM.gov (For SBIR awards information)

2. Various Defense Industry Publications and Blogs (for partnership announcements and general industry news)

3. LIFTWAVE Inc. company website (though limited information is present)