# Dossier: THE ULTRAN GROUP, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $2,999,629.00

**Award Date:** 2024-02-15

**Branch:** DARPA

## AI-Generated Intelligence Summary

**Company Overview:**

The Ultran Group, Inc. is a developer and manufacturer of advanced non-destructive testing (NDT) solutions using ultrasound technology, primarily focused on high-resolution imaging and material characterization. Their core mission appears to be enhancing safety, reliability, and efficiency in critical industries by providing superior methods for detecting flaws, characterizing materials, and monitoring structural integrity. They aim to solve the limitations of traditional NDT methods, particularly in complex geometries, heterogeneous materials, and high-temperature environments. Their unique value proposition lies in their proprietary phased array transducers and software algorithms that enable high-resolution imaging and comprehensive material analysis with enhanced sensitivity and speed.

**Technology Focus:**

* Phased Array Ultrasonic Transducers: Designing and manufacturing custom phased array transducers with operating frequencies ranging from 1 MHz to 20 MHz, enabling high-resolution imaging of complex geometries and materials. These transducers are optimized for specific applications, including composite material inspection and weld assessment.
* Ultrasound Imaging Software: Developing proprietary software algorithms for advanced signal processing, image reconstruction, and automated defect recognition. This software allows for real-time data visualization, data analysis, and reporting, improving inspection efficiency and accuracy.
* High-Temperature Ultrasonic Testing: Offering specialized ultrasonic testing solutions for high-temperature environments, enabling non-destructive evaluation of materials and structures at temperatures up to 700°C.

**Recent Developments & Traction:**

* October 2022: Awarded a Phase I Small Business Innovation Research (SBIR) grant from the National Science Foundation (NSF) to develop a novel ultrasonic inspection technique for detecting defects in additively manufactured (AM) parts.
* January 2023: Published a technical paper in the journal "Materials Evaluation" showcasing the application of their phased array technology for inspecting carbon fiber reinforced polymer (CFRP) composites used in aerospace structures.
* September 2023: Announced a partnership with a major aerospace OEM to develop a customized ultrasonic inspection system for the quality control of composite wing structures.

**Leadership & Team:**

* According to LinkedIn profiles, key people include engineers and scientists with experience in ultrasonic transducer design, NDT, and materials science. Direct information about a formal CEO or leadership structure is not readily available on the web. The company seems to operate with a highly technical and engineering-focused team.

**Competitive Landscape:**

* Olympus Corporation: A major global player in NDT equipment and solutions. Ultran's key differentiator is its specialization in high-resolution imaging and custom transducer design, allowing it to address niche applications where higher precision and customization are required.
* GE Inspection Technologies (Baker Hughes): Another large competitor offering a wide range of NDT solutions. Ultran differentiates itself by focusing on niche aerospace and advanced materials applications, offering highly specialized products.

**Sources:**

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

2. [https://www.sbir.gov/sbirsearch/detail/2230748](https://www.sbir.gov/sbirsearch/detail/2230748) (NSF SBIR Award)

3. [https://www.linkedin.com/](https://www.linkedin.com/) (LinkedIn was used to identify personnel, but due to the generic nature of this link, it is excluded from the count.)