# Dossier: CHARACTERISTIC SOLUTIONS COMPANY LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,118,040.00

**Award Date:** 2023-02-10

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Characteristic Solutions Company LLC (CSC) is a small business specializing in providing advanced signal processing, algorithm development, and data analytics solutions primarily to the U.S. Department of Defense (DoD) and intelligence communities. Their core mission appears to be enhancing situational awareness and decision-making capabilities for warfighters through the development of innovative technologies for electronic warfare, signals intelligence (SIGINT), and radar systems. CSC aims to solve critical challenges related to identifying, classifying, and responding to complex signals in contested electromagnetic environments. Their unique value proposition seems to be their expertise in developing custom, high-performance algorithms and software tailored to specific DoD requirements, offering agility and responsiveness often lacking in larger defense contractors.

**Technology Focus:**

* Advanced Signal Processing Algorithms: CSC develops proprietary algorithms for signal detection, classification, and geolocation, designed to operate in real-time and under challenging signal-to-noise conditions. Specific implementations include adaptive filtering, machine learning-based signal identification, and advanced modulation/demodulation techniques.
* Software Defined Radio (SDR) and Embedded Systems: They offer expertise in integrating their algorithms into SDR platforms and embedded systems for deployment on various platforms, from portable devices to airborne and space-based systems.

**Recent Developments & Traction:**

* Contract Award (2023):\*\* Awarded a contract worth several million dollars from an agency to develop advanced electronic warfare signal processing capabilities, as indicated by federal contracting databases.
* SBIR Phase III Award (2022):\*\* Successfully transitioned an SBIR Phase II project into Phase III, demonstrating the operational utility and potential for commercialization of their technology in the Electronic Warfare and SIGINT domains.
* Expanded Capabilities (2021-2023):\*\* Apparent expansion into leveraging Machine Learning/AI for enhanced Signal Intelligence processing, suggesting investment in newer technologies.

**Leadership & Team:**

Information regarding specific leaders at Characteristic Solutions Company LLC is not readily and publicly available.

**Competitive Landscape:**

* Mercury Systems: While larger, Mercury Systems also provides signal processing solutions for defense applications.
* L3Harris Technologies: Another significant competitor in the electronic warfare and SIGINT space. CSC differentiates itself through its specialized focus on custom algorithm development and its agility as a small business, allowing for rapid prototyping and tailored solutions.

**Sources:**

1. SAM.gov (for contract awards): [https://sam.gov/](https://sam.gov/)

2. SBIR.gov (for SBIR awards): [https://www.sbir.gov/](https://www.sbir.gov/)

3. USASpending.gov (for government spending data): [https://www.usaspending.gov/](https://www.usaspending.gov/)