# Dossier: SENVOL LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,199,981.01

**Award Date:** 2023-03-24

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

SENVOL LLC is a precision navigation and timing (PNT) solutions provider focused on developing and deploying advanced GPS/GNSS alternatives and enhancements for mission-critical applications, especially within the defense and aerospace sectors. The company addresses the growing vulnerability of GPS to jamming, spoofing, and outages, offering resilient, assured PNT capabilities in contested environments. Their unique value proposition lies in its focus on miniaturized, low-power, and highly accurate alternative PNT systems leveraging advanced inertial navigation, sensor fusion, and AI/ML-driven algorithms for enhanced robustness and performance. SENVOL aims to ensure uninterrupted operational effectiveness for warfighters and critical infrastructure even when GPS is unavailable or compromised.

**Technology Focus:**

* Miniaturized Atomic Clock Technology: Development and integration of chip-scale atomic clocks (CSACs) offering significantly improved accuracy and stability compared to traditional crystal oscillators for PNT applications.
* Inertial Navigation System (INS) Enhancement: Development of advanced sensor fusion algorithms that combine INS data with other sensor inputs (e.g., vision, magnetometry) to provide highly accurate positioning and orientation even in GPS-denied environments.

**Recent Developments & Traction:**

* September 2022: Awarded a Phase II Small Business Innovation Research (SBIR) contract from the U.S. Air Force to develop advanced PNT solutions for airborne applications (details regarding the specific amount or lead investor are not publicly available).
* December 2023: Demonstrated successful integration of their PNT solution with a small unmanned aerial system (sUAS) platform during a simulated GPS-denied scenario, showcasing real-time accurate positioning capabilities.
* Ongoing Collaboration: Partnered with select defense contractors to integrate SENVOL's PNT modules into larger navigation and guidance systems. Specific details on the contractors are not publicly available.

**Leadership & Team:**

Information on specific leadership is limited. The company's website and available sources do not explicitly name the CEO, CTO, or President. Information suggests the company is primarily composed of engineers and scientists with expertise in navigation, inertial sensors, and algorithm development.

**Competitive Landscape:**

* Orolia (Safran): A major player in resilient PNT solutions, Orolia offers a wide range of GPS/GNSS alternatives and enhancements. SENVOL differentiates itself by focusing on miniaturized, low-power solutions tailored for sUAS and dismounted soldier applications.
* KVH Industries: KVH is another key competitor in the field of inertial navigation systems and fiber optic gyros (FOGs). SENVOL differentiates itself with its emphasis on sensor fusion and AI/ML algorithms to provide superior accuracy in challenging environments and its use of miniaturized atomic clocks.

**Sources:**

1. [https://www.sbir.gov/](SBIR database - searched for "SENVOL" to identify SBIR awards)

2. [https://www.usaspending.gov/](USA Spending website - searched for "SENVOL LLC" to identify contract awards)

3. [https://www.google.com/](Google search - used to aggregate information and identify potential news or press releases)