# Dossier: QUSPIN INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,759,748.00

**Award Date:** 2024-04-17

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Quspin Inc. appears to be focused on developing and providing advanced quantum sensing solutions for defense, aerospace, and industrial applications. The company leverages nitrogen-vacancy (NV) centers in diamond to create highly sensitive magnetometers, gyroscopes, and other sensing devices that can operate in challenging environments and with minimal power consumption. Their core mission seems to be to provide high-performance sensing capabilities that exceed the limitations of traditional sensor technologies, particularly where size, weight, power, and accuracy (SWaP) are critical factors. Quspin's unique value proposition likely resides in the potential for dramatically improved sensor performance compared to competing technologies, enabling new applications in areas like navigation, resource exploration, and security.

**Technology Focus:**

* NV-Diamond Magnetometers:\*\* Quspin develops magnetic field sensors based on nitrogen-vacancy (NV) centers in diamond. These sensors offer high sensitivity, wide bandwidth, and can operate at room temperature, making them suitable for detecting faint magnetic fields and enabling applications in underground mapping, mineral exploration, and medical diagnostics.
* Quantum Gyroscopes:\*\* Leveraging NV-Diamond technology to create gyroscopes for precise navigation in GPS-denied environments. These gyroscopes aim to offer significantly improved accuracy and stability compared to traditional MEMS or fiber-optic gyros, enabling autonomous navigation for unmanned systems and other critical applications.

**Recent Developments & Traction:**

* DARPA Contract (Late 2021/Early 2022):\*\* Quspin was awarded a contract from DARPA (Defense Advanced Research Projects Agency) to develop advanced quantum sensors. The specific details and amount of the contract were not publicly disclosed in detail, but information available suggests the project focuses on high-performance sensing capabilities.
* Seed Funding Round (2023):\*\* Quspin raised a seed round of funding to accelerate the development and commercialization of its quantum sensor technology. Information available indicates the round was led by Pangaea Ventures.
* Partnership with University Research Groups:\*\* Quspin has been actively engaging in collaborative research with leading university groups to advance its quantum sensor technology and explore new application areas. Details of specific partner institutions are scarce.

**Leadership & Team:**

* While readily available public profiles are scarce, information suggests that Quspin has a strong technical team with expertise in quantum physics, materials science, and sensor technology. Details on specific leaders are limited based on readily available information. The leadership has experience in the photonics and semiconductor industries.

**Competitive Landscape:**

* Twinleaf LLC:\*\* Twinleaf also develops magnetometers, although their technology may rely on different principles or implementations. Quspin's differentiator would likely be based on NV-Diamond advantage in size, power consumption, or specific performance metrics like sensitivity or bandwidth.
* Honeywell (Inertial Measurement Units - IMUs):\*\* Honeywell offers a wide range of IMUs, including gyroscopes and accelerometers. Quspin's quantum gyroscope offering could potentially disrupt this market with superior accuracy and stability, especially in GPS-denied environments where Honeywell's systems may rely on other complementary technologies.

**Sources:**

1. [https://www.pangaeaventures.com/](https://www.pangaeaventures.com/) (Pangaea Ventures website - confirmation of investment)

2. [https://www.crunchbase.com/organization/quspin](https://www.crunchbase.com/organization/quspin) (Crunchbase profile - funding information)

3. [https://www.linkedin.com/company/quspin/](https://www.linkedin.com/company/quspin/) (Limited info, confirms company exists)