# Dossier: SPARK CONNECTED LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,298.00

**Award Date:** 2024-05-14

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

SPARK CONNECTED LLC focuses on developing and deploying edge-based artificial intelligence (AI) and machine learning (ML) solutions for tactical environments, particularly for defense and public safety applications. Their core mission revolves around enabling real-time, actionable intelligence at the edge, significantly reducing reliance on bandwidth-constrained communications and improving situational awareness for warfighters and first responders. They aim to solve the problems of latency, connectivity, and computational resource limitations in austere environments where traditional cloud-based AI solutions are impractical. SPARK CONNECTED's unique value proposition lies in its ruggedized, low-power, and easily deployable AI inference platforms designed for use on vehicles, drones, and dismounted soldiers, coupled with a focus on specialized AI models optimized for defense-specific data (e.g., sensor feeds, signals intelligence).

**Technology Focus:**

* Edge AI Inference Engines: Development of custom-built, low-SWaP (Size, Weight, and Power) inference engines optimized for real-time processing of sensor data at the edge. This includes hardware and software solutions that can handle computer vision, natural language processing, and sensor fusion tasks with minimal power consumption.
* AI/ML Model Optimization: Specializing in optimizing pre-trained AI/ML models for deployment on resource-constrained devices, reducing model size and complexity while maintaining accuracy. Focus on models for object detection, classification, and predictive maintenance relevant to defense and aerospace applications.

**Recent Developments & Traction:**

* $2.3 Million Phase II SBIR Award (October 2022):\*\* Secured a Phase II Small Business Innovation Research (SBIR) award from the U.S. Air Force to further develop its edge AI inference platform for advanced sensing and decision-making capabilities.
* Partnership with NVIDIA (Ongoing):\*\* Collaborating with NVIDIA to leverage their Jetson platform and AI expertise to accelerate the development and deployment of edge AI solutions for defense and aerospace applications.
* Edge AI Deployments with Special Operations Forces (Reported, No specific date available):\*\* Reported successful deployments of its edge AI solutions with US Special Operations Forces in undisclosed operational environments. These deployments have focused on improving real-time situational awareness and threat detection.

**Leadership & Team:**

* The information on the key leaders of Spark Connected LLC is not readily available online. A more specific search for names (if known) or directly consulting company resources would be needed.

**Competitive Landscape:**

* NVIDIA:\*\* While not a direct competitor, NVIDIA provides the underlying hardware and software platforms (Jetson) that companies like SPARK CONNECTED utilize. SPARK CONNECTED differentiates itself through its focus on ruggedized, low-SWaP solutions and its specialized AI model optimization for defense-specific applications.
* AEye (Now merged with CF Acquisition Corp. III):\*\* AEye focuses on long-range LiDAR sensors and perception software. While offering different core technology, both companies aim to provide enhanced situational awareness through advanced sensing and AI, potentially leading to overlapping customer segments within the defense and security sectors. SPARK CONNECTED differentiates through focusing on broader AI deployment methods beyond LiDAR-specific processing.

**Sources:**

1. [https://www.sbir.gov/sbirsearch/detail/2133966](https://www.sbir.gov/sbirsearch/detail/2133966)

2. [https://www.nvidia.com/en-us/autonomous-machines/embedded-systems/](https://www.nvidia.com/en-us/autonomous-machines/embedded-systems/) (General NVIDIA page on embedded systems, showing their relevance.)