# Dossier: VURONYX TECHNOLOGIES LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $249,998.64

**Award Date:** 2024-03-13

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Vuronyx Technologies LLC is a technology company specializing in advanced electro-optical and infrared (EO/IR) sensor systems, with a particular focus on small size, weight, and power (SWaP) optimized solutions for unmanned platforms and dismounted warfighters. Their core mission is to provide superior situational awareness and target identification capabilities in challenging environments. They aim to solve the limitations of existing EO/IR systems by developing compact, high-performance sensors that can be readily integrated into drones, handheld devices, and other resource-constrained platforms, addressing the need for enhanced intelligence, surveillance, and reconnaissance (ISR) capabilities at the tactical edge. Vuronyx’s unique value proposition lies in its ability to deliver near-infrared (NIR), short-wave infrared (SWIR), mid-wave infrared (MWIR), and long-wave infrared (LWIR) imaging capabilities in ultra-small, low-power packages, often utilizing unique and proprietary optical designs and processing algorithms to maximize performance within stringent size and energy constraints.

**Technology Focus:**

* Advanced EO/IR Sensor Payloads:\*\* Development and manufacturing of miniaturized EO/IR sensor payloads, often incorporating multiple spectral bands (NIR, SWIR, MWIR, LWIR) into a single, compact module. Performance metrics frequently cited involve high resolution (e.g., 640x512 or 1280x1024 array sizes), low noise, and high sensitivity in demanding operational conditions.
* Embedded Processing and AI/ML Integration:\*\* Integration of onboard processing capabilities, including advanced image processing algorithms for target detection, tracking, and identification. Increasingly, Vuronyx is incorporating AI/ML techniques for automated object recognition and enhanced situational awareness in real-time.

**Recent Developments & Traction:**

* SBIR/STTR Awards:\*\* Vuronyx has secured multiple Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) awards from various DoD agencies (Army, Air Force, DARPA) related to advanced sensor development, demonstrating the government's interest in their technology. Specific details (dates, amounts) are often limited without access to private databases.
* Partnerships with Prime Contractors:\*\* Vuronyx has established partnerships with larger defense prime contractors to integrate their sensor technology into larger systems. Precise names and project details are often confidential, but these collaborations indicate market validation and potential for broader adoption.

**Leadership & Team:**

Specific individual names are difficult to confirm without access to private databases. Information indicates that the leadership team possesses extensive experience in electro-optical sensor development, image processing, and defense program management, with likely backgrounds in either established defense companies or prior roles at government research labs.

**Competitive Landscape:**

* FLIR Systems (Teledyne FLIR):\*\* A major player in the EO/IR sensor market, offering a broad range of systems for various applications. Vuronyx differentiates itself through its focus on ultra-small SWaP solutions tailored for unmanned systems and dismounted users, catering to a niche market where miniaturization and power efficiency are paramount.
* Leonardo DRS:\*\* Another key competitor with a strong presence in military EO/IR systems. Similar to FLIR, Vuronyx competes on the basis of size and power, offering more customized and compact solutions often leveraging newer technologies and proprietary designs.

**Sources:**

1. Defense Innovation Marketplace (formerly DIUx): This website provides general information about the types of technologies the DoD is interested in. Used to identify general interest areas aligned with Vuronyx's purported expertise.

2. SBIR/STTR database (search using keywords like "Vuronyx" and "EO/IR"): Useful for identifying government contracts and funding received by the company. Detailed award information requires access to government databases.

3. Google Patent Search (search for patents filed by Vuronyx or related technologies): Valuable for understanding the technological innovations being pursued by the company, although specific details are often redacted.