# Dossier: Ghost Robotics Corporation

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,984.00

**Award Date:** 2023-05-02

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Ghost Robotics Corporation is a Philadelphia-based company specializing in the design and manufacture of legged robots, specifically quadrupedal unmanned ground vehicles (Q-UGVs). Their core mission is to create highly adaptable and resilient robotic systems that can navigate challenging and unstructured terrain, offering significant advantages over traditional wheeled or tracked robots in diverse applications ranging from military and security to industrial inspection and exploration. Ghost Robotics aims to solve the problems of limited mobility and situational awareness in demanding environments. Their unique value proposition lies in their proprietary direct-drive actuator technology, enabling robust, agile, and cost-effective Q-UGVs capable of operating in environments previously inaccessible to robotic systems.

**Technology Focus:**

* Legged Robotics Platform:\*\* The company's flagship product is the Vision series of Q-UGVs. These robots are designed with modularity and adaptability in mind, allowing for integration of various sensors, payloads, and communication systems. Key features include customizable gait parameters and autonomous navigation capabilities.
* Direct-Drive Actuators:\*\* Ghost Robotics utilizes a proprietary direct-drive technology in its actuators, resulting in increased durability, reduced maintenance, and improved performance compared to traditional geared systems. This technology contributes to the robots' ability to withstand significant impacts and operate in harsh conditions.

**Recent Developments & Traction:**

* Strategic Partnership with Epirus (June 2024):\*\* Ghost Robotics partnered with Epirus to integrate their Leonidas high-power microwave (HPM) system onto the Ghost Robotics Q-UGVs for advanced counter-drone applications. This collaboration aims to provide a mobile, autonomous defense solution against unmanned aerial threats.
* U.S. Space Force Contract (November 2022):\*\* Ghost Robotics secured a contract with the U.S. Space Force to provide Q-UGVs for perimeter security and base monitoring at Cape Canaveral Space Force Station. This contract highlights the company's increasing adoption in the defense sector.
* Series B Funding (October 2021):\*\* Ghost Robotics raised $63 million in a Series B funding round led by Celesta Capital. This investment has fueled the company's expansion, product development, and strategic partnerships.

**Leadership & Team:**

* Jiren Parikh (CEO):\*\* Experienced technology executive with a background in venture capital and robotics.
* Avik De (CTO):\*\* Founder and technical lead with expertise in robotics, machine learning, and control systems.

**Competitive Landscape:**

* Boston Dynamics:\*\* A leading robotics company known for its advanced humanoid and quadrupedal robots. Ghost Robotics differentiates itself through a focus on cost-effectiveness and a modular design tailored for specific applications, particularly in defense and security, rather than general-purpose robotics.
* ANYbotics:\*\* A Swiss robotics company specializing in legged robots for industrial inspection and maintenance. Ghost Robotics targets a broader range of applications including security and defense, with a focus on robustness and operability in austere environments.

**Sources:**

* [https://www.ghostrobotics.io/](https://www.ghostrobotics.io/)
* [https://techcrunch.com/2021/10/19/ghost-robotics-raises-63m-for-its-legged-robots/](https://techcrunch.com/2021/10/19/ghost-robotics-raises-63m-for-its-legged-robots/)
* [https://www.epirus.com/epirus-and-ghost-robotics-partner-to-deliver-advanced-drone-defense-with-leonidas-hpm-system-integrated-on-q-ugv/](https://www.epirus.com/epirus-and-ghost-robotics-partner-to-deliver-advanced-drone-defense-with-leonidas-hpm-system-integrated-on-q-ugv/)
* [https://www.defensenews.com/unmanned/2022/11/08/space-force-bolsters-security-with-robotic-dogs-at-cape-canaveral/](https://www.defensenews.com/unmanned/2022/11/08/space-force-bolsters-security-with-robotic-dogs-at-cape-canaveral/)