# Dossier: APPTRONIK INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,997.00

**Award Date:** 2022-11-22

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Apptronik Inc. is a robotics company specializing in the design, development, and commercialization of advanced humanoid robots. Their core mission is to create general-purpose robots capable of performing a wide range of physically demanding tasks in various industries, including defense, aerospace, logistics, and manufacturing. They aim to address labor shortages, improve safety in hazardous environments, and automate repetitive tasks. Their unique value proposition centers on building human-centric robots that can seamlessly integrate into existing workflows, leveraging human-like dexterity and mobility while simplifying robot training and integration compared to specialized, task-specific robotic solutions.

**Technology Focus:**

* Apollo Humanoid Robot:\*\* A bipedal humanoid robot designed for physical work, boasting a modular design, fully electric actuators, and an advanced control system for precise movements and balance. Specifications claim a payload capacity of 55 lbs per arm and a walking speed of up to 4 mph.
* Actuator Technology:\*\* Development of high-performance electric actuators that prioritize force density, energy efficiency, and reliability, crucial for enabling the robots' strength, endurance, and precision. Their focus appears to be on advanced motor control algorithms and gear reduction systems.

**Recent Developments & Traction:**

* Partnership with NASA (August 2023):\*\* NASA awarded Apptronik a contract to develop and deliver the next generation of humanoid robots for use in space exploration and maintenance of space facilities. Specifics of the contract were not disclosed beyond initial collaboration.
* Strategic Investment from Lockheed Martin Ventures (December 2023):\*\* Lockheed Martin Ventures made a strategic investment in Apptronik, signaling confidence in their technology and potential for applications in the aerospace and defense sectors. The investment amount was not publicly disclosed.
* Commercial Launch of Apollo (Early 2024):\*\* Apptronik initiated the commercial launch of its Apollo humanoid robot, targeting early adopters in manufacturing, logistics, and other industries. They are focusing on demonstrating Apollo's ability to improve efficiency and safety in real-world applications.

**Leadership & Team:**

* Jeff Cardenas (Co-Founder & CEO):\*\* Background in mechanical engineering and robotics, with experience in leading the development of advanced robotics systems.
* Nick Paine (CTO):\*\* Holds a PhD and has significant experience in robotics research and development, particularly in control systems and mechatronics.

**Competitive Landscape:**

* Boston Dynamics:\*\* While primarily known for quadrupedal robots like Spot, Boston Dynamics is also developing humanoid robots like Atlas. Apptronik differentiates itself by focusing on ease of integration into existing human-centric workflows and lower overall cost of ownership, versus Boston Dynamic's approach which features more advanced and complex movements/ capabilities.
* Figure AI:\*\* Focused on developing general-purpose humanoid robots, Figure AI is a direct competitor. Apptronik distinguishes itself through its demonstrated partnerships and experience, particularly in the aerospace sector.

**Sources:**

* [https://apptronik.com/](https://apptronik.com/)
* [https://www.lockheedmartin.com/en-us/news/2023/lockheed-martin-ventures-invests-in-apptronik.html](https://www.lockheedmartin.com/en-us/news/2023/lockheed-martin-ventures-invests-in-apptronik.html)
* [https://www.nasa.gov/directorates/spacetech/home/humanoid-robotics/](https://www.nasa.gov/directorates/spacetech/home/humanoid-robotics/)
* [https://spectrum.ieee.org/apptronik-apollo](https://spectrum.ieee.org/apptronik-apollo)