



# SBIR TRANSITION SUCCESS STORY

SBIR INVESTMENT:  
\$1.75M

SBIR TOPIC NUMBER:  
HR001121S0007-01

PHASE III FUNDING:  
\$20.75M

## The Challenge

DARPA sought a robust, deployable, high-precision timing solution that delivered atomic clock-level accuracy without relying on GPS signals. The goal was to provide assured Positioning, Navigation, and Timing (PNT) capabilities in challenging operational environments, from mobile platforms to GPS-denied regions. This required transforming cutting-edge quantum technology into operational, field-ready systems.



## Technology | Transition

Infleqtion's Tiqker Optical Frequency Reference technology originated from the Rack-Integrated, Mountable Rubidium Optical Clock (RIMROC) project, a DARPA Small Business Innovation Research (SBIR)-funded effort. DARPA's SBIR investment of \$1.75M enabled Infleqtion to develop a working prototype and demonstrate operational feasibility.

Tiqker is a next-generation, optical atomic clock that combines precision timing with environmental resilience. Its features include high precision (offers more accurate and stable timing than traditional atomic clocks and provides lab-level precision in a compact, portable design), resilient design (strength-tested for deployment in non-lab environments, including mobile and airborne platforms), and compact Size, Weight, and Power (SWaP) profile (consumes ~14 percent less power and is 70 percent lighter than standard atomic clocks). Its 5.25-inch size fits in standardized racks, making Tiqker portable, modular, and easy to integrate into military and commercial systems.

Infleqtion's technology resulted in \$20.75M of Phase III funding (\$10.9M via the Accelerate the Procurement and Fielding of Innovative Technologies (APFIT) program, \$250K in Embedded Entrepreneurship Initiative (EEI) funding from DARPA, and \$9.6M from private venture capital investment), as well as a \$750,000 Tactical Funding Increase (TACFI) award from the Air Force. DARPA's guidance helped scale Tiqker from lab prototypes to deployable systems, accelerated its commercial readiness, and demonstrated how government support can help small business innovation meet national security needs. The company's success also attracted private investors. In February 2026, Infleqtion became a publicly traded company after completing a merger with Churchill Capital Corp X. The agreement was valued at more than \$540M and expanded Infleqtion's applications in areas such as artificial intelligence, national security, and space.

## Benefit to National Security

Tiqker provides the U.S. military and intelligence community with GPS-independent precision timing in several areas of operation, including:

- **Secure military communications:** Ensures reliable timing synchronization to prevent signal spoofing.
- **Navigation in contested environments:** Supports GPS-independent positioning for submarines, aircraft, and ground forces.
- **Data centers and networks:** Enhances cybersecurity by protecting time-sensitive communication networks.
- **Space-based applications:** Serves as an onboard clock for next-generation satellite navigation and improves precision and resilience against jamming.

## About Infleqtion

Infleqtion designs and builds quantum computers, precision sensors, and quantum software for governments, enterprises, and research institutions. Infleqtion's commercial portfolio includes quantum computers as well as quantum clocks and inertial navigation solutions.

Through DARPA's SBIR program and EEI, Infleqtion received targeted support to navigate technical and commercial challenges. This collaboration ensured rigorous development milestones were met, including planned testing and integration into military and commercial systems.

Since Infleqtion received its DARPA SBIR funding in 2021, the company has seen a 30% increase in workforce, from 135 to 175 employees.

## Future

Tiqker is moving toward full-scale production, with next steps including military and commercial certification and expanded deployment across U.S. and allied defense systems. In November 2025, Infleqtion announced a partnership with defense and space technology company Voyager Technologies to integrate Tiqker aboard the International Space Station.

Infleqtion's success highlights how DARPA SBIR-funded technology accelerates small business innovation, transforms research into deployable solutions, and strengthens U.S. defense capabilities. Tiqker is poised to become a foundational quantum technology for secure, GPS-independent timing across diverse platforms.