# Dossier: XONA SPACE SYSTEMS INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,690,851.46

**Award Date:** 2024-08-19

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

XONA Space Systems is a company focused on developing and deploying an independent, high-precision Positioning, Navigation, and Timing (PNT) service delivered from Low Earth Orbit (LEO). They aim to solve the critical vulnerabilities of existing Global Navigation Satellite Systems (GNSS) like GPS, which are susceptible to jamming, spoofing, and other interference. XONA's primary mission is to provide a robust, secure, and globally available alternative to GPS, thereby enhancing the reliability and resilience of PNT services for critical infrastructure, defense, and commercial applications. Their unique value proposition lies in leveraging modern LEO satellite technology and advanced signal design to offer a significantly improved accuracy, security, and availability compared to current GNSS solutions.

**Technology Focus:**

* Pulsar Service:\*\* A next-generation GNSS architecture utilizing LEO satellites. It aims to provide sub-meter accuracy and significantly improved anti-jamming and anti-spoofing capabilities compared to legacy GNSS systems.
* Advanced Signal Design:\*\* XONA employs a proprietary signal structure designed for enhanced resilience to interference and improved signal acquisition in challenging environments. They also develop specialized receivers optimized for their LEO-based signals.

**Recent Developments & Traction:**

* Strategic Investment:\*\* In March 2024, XONA announced an oversubscribed $19M strategic round led by Seraphim Space, with participation from new investors like Toyota Ventures and existing investors like Hemisphere Ventures and Lockheed Martin Ventures. This signals strong market confidence in their technology and vision.
* Partnership with Spire Global:\*\* In November 2022, XONA partnered with Spire Global to launch their first Pulsar demonstration mission aboard a Spire satellite. This partnership provides XONA with access to Spire's space infrastructure and expertise in satellite operations, enabling them to validate their technology in orbit.
* Department of Defense (DoD) Engagement:\*\* XONA is actively engaged with the DoD, exploring opportunities to integrate Pulsar into defense applications requiring resilient and high-precision PNT. Details are often confidential, but their technology's anti-jamming and anti-spoofing capabilities make it highly relevant to defense needs.

**Leadership & Team:**

* Brian Manning (CEO):\*\* Co-founder of XONA Space Systems with expertise in GNSS technology. Previously worked at the Stanford University GPS Research Laboratory.
* Dr. Tyler Reid (CTO):\*\* Co-founder of XONA Space Systems, also a former researcher at the Stanford University GPS Research Laboratory. Expertise in signal processing and navigation algorithms.

**Competitive Landscape:**

* Satelles:\*\* Provides STL (Satellite Time and Location), an alternative PNT service broadcast from LEO, but focusing on a different approach with different performance characteristics.
* Lockheed Martin (via investments and potential internal development):\*\* While not a direct competitor with a fully deployed LEO system, Lockheed Martin's investment in XONA, combined with their expertise in satellite technology and navigation systems, suggests potential internal development or integration efforts in alternative PNT. XONA differentiates itself through its signal design specifically targeting LEO and emphasizing accuracy and security, versus Satelles' focus on signal availability and penetration in challenging environments, and Lockheed Martin's current role as an investor/partner.

**Sources:**

1. [https://www.xonaspace.com/](https://www.xonaspace.com/)

2. [https://seraphim.vc/news/xona-space-systems-secures-19m-strategic-round-to-revolutionize-gnss-with-leo-constellation/](https://seraphim.vc/news/xona-space-systems-secures-19m-strategic-round-to-revolutionize-gnss-with-leo-constellation/)

3. [https://spire.com/press/xona-space-systems-selects-spire-space-services-for-gnss-demonstration-mission/](https://spire.com/press/xona-space-systems-selects-spire-space-services-for-gnss-demonstration-mission/)

4. [https://www.gpsworld.com/xona-space-systems-taps-seraphim-space-lockheed-martin-ventures/](https://www.gpsworld.com/xona-space-systems-taps-seraphim-space-lockheed-martin-ventures/)