# Dossier: GSI TECHNOLOGY, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,140,912.00

**Award Date:** 2023-11-07

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

GSI Technology, Inc. is a leading provider of high-performance memory solutions for demanding applications in the networking, military, and automotive markets. The company designs, develops, and markets static random-access memory (SRAM) products, including its Gemini APU (Associative Processing Unit) designed to address computational workloads requiring intensive pattern search and exact match capabilities. Their core mission is to deliver extremely high-speed, low-latency memory solutions that solve computationally intensive problems related to big data analytics, artificial intelligence, image processing, and advanced signal processing. GSI's unique value proposition lies in their combination of high-bandwidth SRAM technology with their Gemini APU, offering a tightly coupled memory and processing solution that provides significant performance advantages over traditional architectures for specific applications, particularly in defense and aerospace sectors needing real-time data analysis.

**Technology Focus:**

* High-Performance SRAM:\*\* GSI Technology specializes in high-speed, low-latency SRAM solutions, offering densities up to 288Mb and operating speeds up to 250MHz. This is crucial for real-time data processing in demanding applications.
* Gemini APU:\*\* The Gemini APU is a novel architecture integrating SRAM with processing elements, optimized for accelerating associative processing tasks. It offers massive parallelism, allowing for rapid pattern matching and data analysis significantly faster than traditional CPUs or GPUs for targeted workloads.
* Radiation-Hardened Memory:\*\* GSI offers radiation-hardened SRAM solutions, crucial for space-based and high-altitude applications where electronics are exposed to high levels of radiation.

**Recent Developments & Traction:**

* May 2024: Achieved breakthrough performance on key AI workloads utilizing Gemini APU. Demonstrated significant speed and power efficiency improvements compared to competing architectures.\*\*
* October 2023: Secured multiple design wins with major defense contractors for Gemini APU implementation in radar processing and electronic warfare systems.\*\*
* January 2023: Introduced enhancements to the Gemini APU architecture, improving performance and reducing power consumption.\*\*
* February 2022: Awarded contract from U.S. government agency for the development of advanced memory solutions for space-based applications. The contract involves rad-hard by design memory solutions.\*\*

**Leadership & Team:**

* Lee-Lean Shu, Chairman, President and Chief Executive Officer:\*\* Mr. Shu has been with GSI Technology since 1995 and possesses extensive experience in the semiconductor industry, crucial for guiding the company's strategic direction and technology development.
* Douglas Schirle, Chief Financial Officer:\*\* Mr. Schirle has a background in financial management within technology companies.

**Competitive Landscape:**

* Micron Technology:\*\* A major memory manufacturer. GSI differentiates itself through its specialized Gemini APU architecture, offering a more tightly coupled memory and processing solution than Micron's broader memory product portfolio.
* Texas Instruments:\*\* While TI offers some memory solutions, GSI differentiates through the Gemini APU and focus on high-speed SRAM specifically tailored for computationally intensive applications, giving them an edge in certain niche markets.

**Sources:**

1. [https://www.gsitechnology.com/](https://www.gsitechnology.com/) (Official GSI Technology Website)

2. [https://investors.gsitechnology.com/](https://investors.gsitechnology.com/) (GSI Investor Relations)

3. [https://www.prnewswire.com/](https://www.prnewswire.com/) (filtered searches for GSI Technology news releases)

4. [https://www.electronicsweekly.com/](https://www.electronicsweekly.com/) (filtered searches for GSI Technology news releases)