



Micron Launches Space-Qualified Portfolio to Power Mission-Critical Data for Aerospace Innovation

July 22, 2025 at 9:00 AM EDT

Engineered to withstand the harsh environment of space, Micron's radiation-tolerant SLC NAND flash is optimized for demanding space applications

BOISE, Idaho, July 22, 2025 (GLOBE NEWSWIRE) -- Micron Technology, Inc. (Nasdaq: MU), the only-U.S. based memory manufacturer, announced today that it is launching the industry's highest-density, radiation-tolerant single-level cell (SLC) NAND product. With a die capacity of 256 gigabits (Gb), this product is the first in a portfolio that will include space-qualified NAND, NOR and DRAM solutions. The product is available now and represents the first in its class to be offered by any major memory manufacturer.

The space economy is skyrocketing, fueled by rapid growth in commercial and government missions. As computing and AI evolve, demand is rising for high-performance technology capable of processing data directly in orbit. AI-enabled edge computing is transforming space operations: allowing spacecraft to analyze sensor data, detect anomalies and make decisions autonomously, reducing reliance on Earth-based systems and preserving bandwidth.

"Micron's radiation-tolerant memory is essential for storing and processing data as we push the boundaries of computing in space," said Kris Baxter, corporate vice president and general manager of Micron's Automotive and Embedded Business Unit. "As AI expands in space operations — from autonomous navigation to real-time analysis — Micron is increasing our focus on delivering solutions that enable the resilience and intelligence needed for next-gen aerospace missions."

[A Media Snippet accompanying this announcement is available by clicking on this link.](#)

Micron SLC NAND: Tested for space's extreme environment and ready for launch

Spaceborne technologies must withstand harsh environmental conditions to deliver successful mission results. These challenges include extreme temperatures, shock and vibration, vacuum pressure, and radiation exposure from solar energetic particles and galactic cosmic rays.

To verify its radiation-tolerant NAND can meet customers' requirements, Micron arranges:

- **Extended quality and performance testing**, aligned with NASA's PEM-INST-001 Level 2 flow, which subjects components to a yearlong screening, including extreme temperature cycling, defect inspections and 590 hours of dynamic burn-in to enable spaceflight reliability.
- **Radiation characterization for total ionizing dose (TID) testing**, aligned with U.S. military standard MIL-STD-883 TM1019 condition D, which measures the cumulative amount of gamma radiation that a product can absorb in a standard operating environment in orbit and remain functional, a measurement that is critical in determining mission life cycle.
- **Radiation characterization for single event effects (SEE) testing**, aligned with the American Society for Testing Materials flow ASTM F1192 and the Joint Electronic Device Engineering Council (JEDEC) standard JESD57. SEE testing evaluates the impact of high-energy particles on semiconductors and verifies that components can operate safely and reliably in harsh radiation environments, reducing the risk of mission failure. This profiling information enables space engineers and architects to design in a way that mitigates the risk and disruption to the mission.

Micron in action: Powering Earth science research for NASA's Jet Propulsion Laboratory

With its DNA in the industrial and automotive markets, Micron has deep expertise in ruggedizing embedded memory and storage for operations at the edge — from factory automation to intelligent vehicles.

While this is its first officially space-qualified product, Micron's NAND flash is already flying on missions through collaborations and customer testing.

One key partner, [Mercury Systems](#), uses Micron memory in its solid-state data recorders (SSDRs) — equipment that captures and stores vast amounts of scientific and engineering data critical for missions. These SSDRs are currently aboard NASA's [Earth Surface Mineral Dust Source Investigation \(EMIT\)](#), an imaging spectrometer built by NASA's Jet Propulsion Laboratory and launched to the International Space Station in 2022. The spectrometer's original mission was to gather data on the world's arid regions, mapping the composition of mineral dust to better understand the effects on Earth and human populations. EMIT's spectroscopic data has also proven useful for studying such varied topics as water resources, rare earth elements and agriculture.

"Modern space systems are capturing higher volumes of more complex data, demanding solutions that provide vastly more capacity in compact packages — all while operating reliably in space's high-radiation environment for many years," said Vincent Pribble, principal product manager at Mercury Systems. "At the heart of Mercury's data recorders, Micron's flash memory has proven to be highly reliable in orbit — helping us enable groundbreaking missions and scientific research that is expanding our understanding of our planet and beyond."

With EMIT capturing 100,000 spectra per second, Micron's high-density, radiation-tolerant memory provides reliable, long-term data storage and

processing vital for mission success.

Micron's strategy: Expanding aerospace industry support with end-to-end supply chain

As the only U.S.-based memory manufacturer, Micron provides the end-to-end supply chain control paramount for aerospace and government sectors, providing quality, longevity, security, traceability and supply continuity. This advantage is bolstered by [recently announced plans](#) to strengthen Micron's U.S.-based manufacturing. These plans include modernizing the company's Manassas, Virginia, facility and expanding its portfolio of NOR, SLC NAND and DDR3, with longevity supply of DDR4 and LPDDR4 for critical applications such as aerospace.

Leveraging Micron's decades of experience in customer engineering labs that enable collaboration, the company is extending its capabilities to support the rapidly growing aerospace industry by building specialized regional customer labs and technical support and architecture teams. Micron is also optimizing a manufacturing process for aerospace solutions, enabling quality — from precision engineering to raw wafer selection to compliance — and addressing critical challenges faced by space platform developers.

Building on its newly launched aerospace portfolio, Micron plans to introduce additional space-qualified memory and storage solutions in the coming year and beyond to address the evolving demands of next-generation space missions.

Additional resources:

- **Micron portfolio page:** [Micron aerospace and defense](#)

About Micron Technology, Inc.

Micron Technology, Inc. is an industry leader in innovative memory and storage solutions, transforming how the world uses information to enrich life for all. With a relentless focus on our customers, technology leadership and manufacturing and operational excellence, Micron delivers a rich portfolio of high-performance DRAM, NAND and NOR memory and storage products through our Micron® and Crucial® brands. Every day, the innovations that our people create fuel the data economy, enabling advances in artificial intelligence (AI) and compute-intensive applications that unleash opportunities — from the data center to the intelligent edge and across the client and mobile user experience. To learn more about Micron Technology, Inc. (Nasdaq: MU), visit micron.com.

© 2025 Micron Technology, Inc. All rights reserved. Information, products, and/or specifications are subject to change without notice. Micron, the Micron logo, and all other Micron trademarks are the property of Micron Technology, Inc. All other trademarks are the property of their respective owners.

Micron Product and Technology Communications Contact:

Mengxi Liu Evensen
+1 (408) 444-2276
productandtechnology@micron.com

Micron Investor Relations Contact

Satya Kumar
+1 (408) 450-6199
satyakumar@micron.com