Micron Delivers Industry-Leading Mainstream PCIe® Gen4 Data Center SSD

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Micron 7500 is the world's first mainstream data center SSD with 200+ layer NAND, providing superior quality of service and delivering new benchmarks in performance

BOISE, Idaho, Oct. 16, 2023 (GLOBE NEWSWIRE) -- Micron Technology, Inc., (Nasdaq: MU), today announced the Micron 7500 NVMe SSD for data center workloads. The 7500 SSD is the world's only mainstream data center SSD to feature 200+ layer NAND, utilizing Micron's 232-layer NAND and enabling up to 242% better random write performance than competitive drives.[1] The SSD also delivers sub-1 millisecond (1ms) latency for 6x9s quality-of-service (QoS) in mainstream drives, creating a new, industry-leading class of SSDs perfectly suited to deliver the consistency required in the cloud.[2]

The Micron 7500 SSD is designed to meet the demands of storage-intensive data center workloads, such as artificial intelligence (AI), databases, content delivery, real-time analytics, social media platforms, cloud computing and virtualization. Its remarkable QoS and performance provide rapid, reliable responsiveness for these demanding workloads. For example, the drive improves RocksDB performance by up to 2.1 times versus competitive SSDs.[3]

"The Micron 7500 SSD is a game-changer for data center workloads, delivering blazing-fast performance, exceptional QoS reliability and advanced security unmatched by any other SSD in its class," said Alvaro Toledo, vice president and general manager of Micron's Data Center Storage group. "Thanks to Micron's industry-leading 232-layer NAND technology, we have achieved a breakthrough in latency, enabling response times below 1ms for 6x9s QoS in mainstream drives. This means our customers can run their data-intensive workloads faster, more efficiently and with more predictability than ever before."

"Data center workloads are increasingly dependent on low latency. It is no longer a luxury, but a necessity for these workloads to deliver instantaneous and predictable results that businesses and consumers demand," said Jeff Janukowicz, research vice president of IDC's Solid State Drives and Enabling Technologies. "Whether it's for financial transactions, online gaming, or AI training and inference, every millisecond counts. The future of data center workloads is centered on performance and efficiency. SSDs like the Micron 7500, which deliver low and consistent latency, are at the heart of it."

The Micron 7500 SSD offers:

- Up to 7GB/s in sequential read and 5.9GB/s in sequential write performance
- Up to 242% better random write performance than competitive drives[1]
- Up to 97% better sequential write performance than competitive drives[1]
- Up to 13% better random read performance than competitive drives[1]
- Up to 83% lower random read latency than competitive drives in 100% read workloads[4]
- Up to 82% lower random mixed I/O latency than competitive drives in 70% read / 30 % write workloads[4]

The Micron 7500 SSD offers broad support for the Open Compute Project (OCP) SSD 2.0 specification,[5] which provides intelligent management, performance optimization, seamless integration, and error handling for data center environments. The drive includes leading-edge advanced management and security features[6] such as:

- Administrative commands to allow standardized control over functions such as namespaces and security, which easily integrate with OCP-compliant management systems.
- Latency monitoring to improve performance by enabling the tracking and diagnosis of latency issues reported through the storage stack.
- Error recovery and error injection features to enable rapid recovery of the drive and simulation of errors commonly encountered in servers.
- Self-encrypting drive (SED) options with AES-256 hardware-based data encryption, running at line rate, SHA-512 and RSA to keep data safe.
- Secure Encrypted Environment (SEE) to provide dedicated security processing hardware with physical isolation for improved security.
- SPDM 1.2 attestation verifies device identity and firmware integrity to validate trust in the SSD from manufacturing through deployment.
- Options for FIPS 140-3 Level 2 and TAA compliance to meet U.S. federal government procurement requirements.

The Micron 7500 is now available through select OEMs and channel partners. To learn more about the Micron 7500 SSD and how it can power your data center workloads, visit micron.com/7500.

Resources

- **Product pages:** micron.com/7500
- **Image gallery:** Gallery | Micron Technologies, Inc
- **Blog:** Micron 7500 launch blog
- **Product briefs:**
  - Micron 7500 product brief
  - RocksDB technical brief

About Micron Technology, Inc.

We are 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 and 5G 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.

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[1] Datasheet information obtained from publicly available sources for four-corner performance metrics using Micron 7500 MAX vs competitive SSDs as detailed in Footnote 2.

[2] For Gen4 U.2/U.3 mainstream competitive SSD suppliers with at least 10% data center SSD market share as of August 2023 as noted in Forward Insights analyst report *SSD Supplier Status Q2/Q3.* Micron internal testing results show sub-1ms latency in 6x9s QoS with 4K 100% random read up to and including QD128.

[3] RocksDB is a high-performance database that makes optimal use of SSD performance. Results based on Micron internal testing.

[4] Based on Micron internal testing vs competitive SSDs as detailed in Footnote 2.

[5] The Micron 7500 SSD complies with most, but not all, requirements of the Open Compute Project Datacenter NVMe SSD Specification 2.0r21.

[6] No hardware, software or system can provide absolute security under all conditions. Micron assumes no liability for lost, stolen or corrupted data arising from the use of any Micron products, including those products that incorporate any of the mentioned security features.

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