



Micron 6500 ION NVMe SSD



Big capacity. Bigger value.

Building the perfect cloud architecture or content delivery network has traditionally been a balancing act where IT teams are forced to sacrifice cloud storage performance for capacity or pay for speeds and endurance that will never be used. The high-capacity, 30.72TB¹ Micron® 6500 ION NVMe™ SSD solves these challenges, delivering TLC performance at QLC price points — all while achieving up to 25 times more 4KB random write IOPS, up to 54% better read QoS, and up to 56% better power efficiency than the competition². The Micron 6500 ION's massive capacities and purpose-built performance make the competition look small by comparison.

Best for



Cloud storage



Content delivery
networks

Key features

- Power loss protection
- Enterprise data path protection
- TCG Opal v2.01
- FIPS 140-3 L2
- TAA compliant
- NVMe 2.0
- NVMe Management Interface (NVMe-MI™) over SMBus
- NVMe power states
- Firmware activated without reset
- Secure firmware download
- Hardware root of trust, secure signed firmware
- Self-monitoring and reporting technology (SMART)
- 5-year limited warranty⁴

Big capacities make cloud storage challenges look small

Just a few years ago, multi-terabyte SSDs and petabyte-level deployments were the exception, not the norm. Today, customers are demanding, and applications are requiring, an ever-increasing level of storage capacity without sacrificing performance. The Micron 6500 ION represents a leap forward in that respect by offering a 30.72TB¹ capacity, which maximizes server density while maintaining excellent PCIe® Gen4 performance. The Micron 6500 ION delivers 6.8GB/s sequential reads and 1 million read IOPS, while delivering 53% better read quality-of-service than the QLC competition². The Micron 6500 ION has standout write performance as well, with random writes 25x faster than the QLC competition².

Sustainability in the data center

Balancing the multitude of factors, a storage architect must consider when designing a system whether it be performance, power or endurance, a difficult task. With the Micron 6500 ION, customers now have a storage solution that has 20% lower active power, 56% better power efficiency and up to 10x more random write endurance than the QLC competition². Combined with industry-leading density of 30.72TB¹ in a 2.5-inch U.2/U.3 form factor, you have a solution that reduces the number of racks, significantly lowering your infrastructure costs, which is a cornerstone of long-term sustainability.

Purpose-built portfolio

The IT world is full of “industry leaders,” but how do they really stack up against Micron? We were the first to introduce 232-Layer NAND³ to our comprehensive, purpose-built storage solutions portfolio — the very NAND inside our high-capacity Micron 6500 ION SSD. That’s a lot of layers of storage, but what does it mean for your customers? It means denser, more power-efficient TLC storage at QLC price points. Partner with Micron to be the first to offer your customers high-capacity NVMe storage — and a purpose-built storage portfolio — that stacks up against competitors.



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Product specifications

| | |
|--|------------------------|
| Capacity | 30.72TB |
| Interface | NVMe™ PCIe® Gen4 x4 |
| Form factor | U.3 (15mm) |
| Sequential reads ¹ (MB/s, 128KB, QD 128) | 6,800MB/s |
| Sequential writes ¹ (MB/s, 128KB, QD 128) | 5,000MB/s |
| 4KB Random reads (MB/s, QD 128) | 1.0M |
| 4KB Random writes (MB/s, QD 128) | 200K @ 20W |
| Endurance (DWPD) | 1.0 SDWPD 0.3 RDWPD |
| MTTF (million hours) | 2.5 |
| Warranty ⁴ (years) | 5 |

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1. 30.72TB capacity is the largest option. User capacity: 1GB = 1 billion bytes; formatted capacity is less

2. All comparisons to public datasheet values for 30.72TB Solidigm™ D5-P5316 QLC SSD as of March 2023

3. Additional information available here: www.micron.com/232

4. Warranty valid for 5 years from the original date of purchase or before writing the maximum total bytes written (TBW) as published in the product datasheet and as measured in the product's SMART data, whichever comes first.