Micron[®] 5200 Series of SATA SSDs

SATA

2.5"



Join the SOLID storage revolution. Because spinning media is winding down.

There's an easy way to speed up business-critical workloads that cripple hard drives: The Micron[®] 5200 series of SATA SSDs. Engineered on industry-leading 64-layer 3D NAND, the Micron 5200 SSD delivers best-inclass performance and capacity on the same proven architecture as the 5100 series.*

Designed for virtualized workloads that power your business, such as OLTP, BI/DSS, VDI, block/object, media streaming and more, the lowlatency Micron 5200 series of SSDs eliminates storage bottlenecks with fast, consistent performance – and a lower total cost of ownership.

A *single* Micron SSD allows you to get 3X more performance than an entire rack of 24 10K RPM hard drives.** Imagine the impact — across your entire data center.

Key Benefits

Leading Performance

Industry-leading sequential reads/writes paired with 95,000 IOPS random reads and best-in-class random writes up to 33,000 deliver a nearly complete performance advantage over hard drives and competing read-intensive SATA SSDs.[‡]

Leading Capacity and TCO

Capacities up to nearly 8TB — all on industry-leading, 64layer 3D NAND for a cost-optimized SATA platform that's uniquely competitive against hard drives.

Leading Reliability

50% more reliable than the typical SATA SSD, with the industry's lowest annualized failure rate and MTTF (3 million hours versus the industry average of 2 million hours).[#]

Same Trusted, Proven Architecture

BI/DSS

Same controller. Same components. New NAND. The result is easy quals, better performance and better value.

Target Workloads & Applications





CLOUD STORAGE





MEDIA STREAMING

* The Micron 5200 was the first enterprise SSD available to purchase with 64-layer 3D NAND. Performance comparison based on public data sheet specifications for GB/s throughput and random write IOPS performance for the best SKU in each competitor's SATA 2.5-inch read-intensive product family as of the date of this document's publication. Comparison based on the following drives: Micron® 5200 ECO, Micron® 5200 PRO, Intel® S4500, Samsung® PM863a, SanDisk® CS Eco G2, and Toshiba® HKR4. Actual performance may vary.

** Based on IOPS performance of 24 hard drives (300GB, 10K RPM, SAS) compared to a single 960GB Micron 5100 PRO SSD in an OLTP workload environment. Results do not reflect differences in capacity and hard drives were not short-stroked. Actual performance may vary. For conceptual purposes only.

[‡] Based on maximum data sheet specifications (steady-state) across the Micron 5200 product line. Performance varies by model and capacity.

⁺⁺ Per public data sheet specifications, the Micron 5200 SSD has a mean time to failure (MTTF) of 3 million device hours, compared to the industry standard of 2 million hours for SATA enterprise SSDs. Converting these numbers to annualized failure rates gives the Micron 5200 a 0.29% annualized failure rate versus 0.44% for competing drives. Enhanced reliability is the foundation for consistent, predictable performance.





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Why Micron for SATA SSDs

Better SSDs come from better NAND

From silicon to system, we create the memory and flash storage that powers the data center and makes your workloads faster, more reliable, more efficient, and more cost-effective.

Flex Capacity: Simple storage that scales

Our unique Flex Capacity feature allows you to adjust the drive's endurance, performance, and capacity to meet evolving workload needs - and manage fewer products.

Fast. Trusted. Easy. Secure.

Built on the proven architecture of our award-winning 5100 series that's been qualified and used by top OEMs, hyperscalers and data centers, the Micron 5200 series of SSDs is easy to qual and install.

Base Part Numbers									
Model	Standard Part	Capacity	Form Factor						
	MTFDDAK480TDC-1AT1ZABYY	480GB	2.5"						
	MTFDDAK960TDC-1AT1ZABYY	960GB	2.5"						
5200 ECO	MTFDDAK1T9TDC-1AT1ZABYY	1.92TB	2.5"						
	MTFDDAK3T8TDC-1AT1ZABYY	3.84TB	2.5"						
	MTFDDAK7T6TDC-1AT1ZABYY	7.68TB	2.5"						
5200 PRO	MTFDDAK960TDD-1AT1ZABYY	960GB	2.5"						
	MTFDDAK1T9TDD-1AT1ZABYY	1.92TB	2.5"						

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Key Specifications										
		5200 ECO Read-Intensive <1 DWPD				5200 PRO Read-Intensive <2 DWPD				
Capacity ¹		480GB	960GB	1.92TB	3.84TB	7.68TB	960GB	1.92TB		
Performance	Sequential Reads (MB/s) ²	540	540	540	540	540	540	540		
	Sequential Writes (MB/s) ²	385	520	520	520	520	520	520		
	Random Reads (K IOPS) ³	81	95	95	95	95	95	95		
	Random Writes (K IOPS) ³	33	28	22	17	9.5	32	32		
Endurance (TBW in PB)		0.87	1.75	3.5	7.7	8.4	2.27	5.95		
Basic Attributes	Interface	SATA 6 Gb/s								
	Form Factor	2.5-inch, 7mm								
	NAND	Micron 64-layer 3D TLC NAND								
	Encryption	AES 256-bit (TCG Enterprise options available)								
Reliability	MTTF	3 million device hours								
	UBER	<1 sector per 10 ¹⁷ bits read								
	Warranty	5 years								
Environmental Characteristics	Power Consumption	Sequential write: 3.6W MAX								
		Sequential read: 3.0W MAX								
		Idle: 1.5W								
	Temperature (operating)	0–70°C								
	Shock (operating)	1500G, duration 0.5ms								
	Vibration (operating)	5–800Hz at 3.13g								
Physical Characteristics	Size (L x W x H)	100.45mm x 69.85mm x 7.00mm								
	Weight	<70g								
Advanced Features⁴	Flex Capacity, AES 256-bit encryption, TCG Enterprise configurability, power loss protection for data in-flight, end-to-end enterprise data path protection, secure firmware, adaptive thermal monitoring, easy to install (hot pluggable), Storage Executive SSD management tool, RAIN, TAA-compliant									

1. Unformatted. 1GB = 1 billion bytes. Formatted capacity is less.

2. 128KB transfer size, steady state.
3. 4KB transfer size, steady state.

4. 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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