



## NVMe for the Masses

From data center IT to performance in the cloud, your applications demand the fast, low latency and consistent performance of NVMe™ SSDs. Don't save NVMe for only the top workloads. Expand the benefits of NVMe across your data center with Micron's 7300 SSDs. Built for workloads that demand high throughput and low latency while staying within budget, the Micron 7300 is ideal for broadly deployed, mixed read-write, compute, and virtualized workloads of today.

### A Complete NVMe Platform

Get end-to-end NVMe — from system startup to caching to main data storage — from a single drive family. Whether you're booting, storing, or caching, the Micron 7300 series of mainstream NVMe SSDs is the solution for NVMe infrastructures.

- **System Startup:** Start your systems right with enterprise NVMe in 80mm and 110mm M.2 form factor with boot-specific capacities as low as 400GB.
- **Storing:** Unlock the value of vast data stores by finding the insights, sorting them, and acting on them right away with the Micron 7300 PRO
- **Caching:** When hot data drives your business day in and day out, handle the extreme workloads with the high endurance and low, predictable latency of the Micron 7300 MAX.



### Key Benefits

#### NVMe Performance; Approachable Price Point

Get up to 6X the performance of enterprise SATA SSDs at comparable prices.<sup>1</sup>

#### Single Port or Dual Port

Choose simple, scalable in-platform single port or dual path, external storage controller dual port, dual controller designs (enabling outside the drive redundancy) so storage systems can share the IO load for failover, high availability, or custom uses.

#### Micron's 96L NAND Technology

Bring the kind of high performance and reliability required for numerous applications.

#### Best Workloads for Micron 7300

Micron's 7300 series delivers NVMe to a broad range of workloads, including:

- Mixed read/write IO and in-platform compute.
- Online transaction processing (OLTP), demanding high, consistent transaction rates, with low power.
- Block and object stores: Vast pools of blocks and objects, massive streaming in less space.
- Emerging applications and read-intensive emerging applications (like machine learning).

#### A Real Cloud Pleaser

On-prem and off-prem cloud platforms support workloads at immense scale. Affordable mainstream NVMe SSDs like the Micron 7300 deliver the low-latency and high-performance combo that the cloud demands with an average 25µs write latency,<sup>2</sup> up to 520K random read IOPS, and up to 3.0 GB/s read and 1 GB/s write throughput.

1. Micron 7300 PRO SSD 2TB U.2 with NVMe (3,000 MB/s sequential read) is 6X higher performance vs Micron 5300 PRO SATA SSD 2TB (540 MB/s sequential read. 540 MB/s is the maximum bandwidth available to any SATA device) and MSRP as of August 2019.

2. 4KB transfers with a queue depth of 1 are used to measure READ/WRITE latency values.

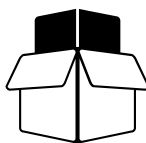
## Target Workloads and Applications



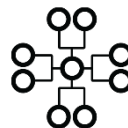
Transaction Processing



Analytics



Large Object / Small Block Stores



Hyper Converged Infrastructure



Emerging Applications

## Key Specifications

7300 PRO: U.2 (7mm)					7300 MAX: U.2 (7mm)				
Read-Intensive, 1 Drive Write per Day					Mixed-Use, 3 Drive Writes per Day				
Capacity <sup>3</sup>		960GB	1.92TB	3.84TB	7.68TB	800GB	1.6TB	3.2TB	6.4TB
Performance	Seq. Read (MB/s) <sup>4</sup>	2,400	3,000	3,000	3,000	2,400	3,000	3,000	3,000
	Seq. Write (MB/s) <sup>4</sup>	700	1,500	1,800	1,800	700	1,900	1,900	1,900
	Rand. Read (K IOPS) <sup>5</sup>	220	396	520	520	220	396	520	520
	Rand. Write (K IOPS) <sup>5</sup>	30	50	70	85	60	100	120	140
Endurance (Total bytes written in PB)		1.9	4.2	9.8	22.4	4.5	9.0	19.2	49
7300 PRO: M.2 (80mm, 110mm)					7300 MAX: M.2 (80mm)				
Read-Intensive, 1 Drive Write per Day					Mixed-Use, 3 Drive Writes per Day				
Capacity <sup>3</sup>		480GB	960GB	1.92TB	3.84TB	400GB	800GB		
Performance	Seq. Read (MB/s) <sup>4</sup>	1,300	2,400	3,000	3,000	1,300	2,400		
	Seq. Write (MB/s) <sup>4</sup>	400	700	1,000	1,000	400	700		
	Rand. Read (K IOPS) <sup>5</sup>	50	220	396	396	90	220		
	Rand. Write (K IOPS) <sup>5</sup>	15	30	40	70	30	60		
Endurance (Total bytes written in PB)		1.1	1.9	4.2	9.8	2.2	4.5		
7300 Family: Common Features									
Basic Attributes	Interface	PCIe Gen3 1x4, 2x2 NVMe							
	Form Factor	U.2 (2.5-inch, 7mm), M.2 (22x80, 22x110)							
	NAND	Micron 3D TLC NAND							
	Ave. Latency	Random read: 90µs; Random write 25µs							
Reliability	MTTF	2 million device hours							
	UBER	<1 sector per 10 <sup>17</sup> bits read							
	Warranty	5 years							
Environmental Characteristics	Power	Sequential read: 12W MAX U.2 / 8.25W M.2 Sequential write: 12W MAX U.2 / 8.25W M.2							
	Operating Temp.	0-70°C							
Advanced Features <sup>6</sup>		Flex Capacity, AES 256-bit encryption, 256-bit SED, 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, 5-year warranty, TAA-compliant capable							

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

4. 128KB transfer size, QD = 32, steady state.

5. 4KB transfer size, QD = 512, steady state.

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.

## Part Numbers

SSD Family	Standard Part	Capacity	Form Factor
PRO	MTFDHBE960TDF-1AW1ZABYY	960GB	U.2
	MTFDHBE1T9TDF-1AW1ZABYY	1.92TB	U.2
	MTFDHBE3T8TDF-1AW1ZABYY	3.84TB	U.2
	MTFDHBE7T6TDF-1AW1ZABYY	7.680TB	U.2
	MTFDHBA480TDF-1AW1ZABYY	480GB	M.2 22x80mm
	MTFDHBA960TDF-1AW1ZABYY	960GB	M.2 22x80mm
	MTFDHBA1T9TDF-1AW1ZABYY	1.92TB	M.2 22x110mm
MAX	MTFDHBA3T8TDF-1AW1ZABYY	3.84TB	M.2 22x110mm
	MTFDHBE800TDG-1AW1ZABYY	800GB	U.2
	MTFDHBE1T6TDG-1AW1ZABYY	1.6TB	U.2
	MTFDHBE3T2TDG-1AW1ZABYY	3.2TB	U.2
	MTFDHBE6T4TDG-1AW1ZABYY	6.4TB	U.2
	MTFDHBA400TDG-1AW1ZABYY	400GB	M.2 22x80mm
	MTFDHBA800TDG-1AW1ZABYY	800GB	M.2 22x80mm

[micron.com/7300](https://micron.com/7300)

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