

Exascend Industrial-grade Wide-temperature Gen4 Storage Solution

THE FUTURE OF HIGH-PERFORMANCE DATA LOGGING FOR THE AUTOMOTIVE INDUSTRY AND BEYOND

Exascend PCIe Gen3 SSD (3.84 TB)



Performance

Max. read: 3,100 MB/s
Max. write: 1,700 MB/s

Energy efficiency

Power consumption: < 8.25 W
Write performance per watt: 206 MB/s

VS.



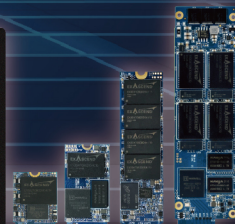
Performance

Max. read: 3,500 MB/s
Max. write: 2,600 MB/s

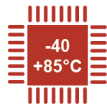
Energy efficiency

Power consumption: < 7.5 W
Write performance per watt: 347 MB/s

Exascend PCIe Gen4 SSD (3.84 TB)



Key features



True wide-temperature
NAND



Industry's strictest
testing



Patented *Adaptive Thermal Control™*
technology



SuperCruise™
technology



Performance tuning



Rugged customization

- ▶ Advanced **high-performance, low-power** flash controller from Marvell based on the 12 nm process.
- ▶ Available in **M.2, U.2** and the **industry's first E1.S**.
- ▶ **PCIe Gen4**, backward compatible with **PCIe Gen3**.
- ▶ **53% higher write performance, 68% higher energy efficiency** than Gen3 SSD.
- ▶ **10-year product lifecycle support.**

PI4 lineup



Exascend PI4 Series U.2 (up to 8 TB)

Exascend PI4 Series M.2 (up to 8 TB)

Exascend PI4 Series E1.S (up to 8 TB)

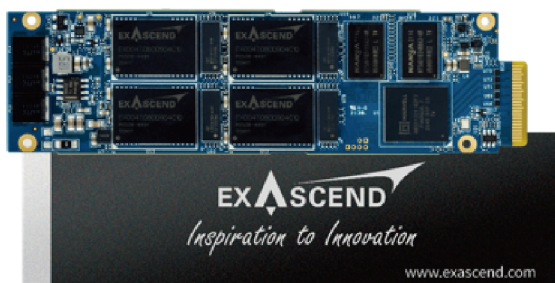
The PI4 series is Exascend's flagship industrial-grade SSD lineup, available in the U.2, M.2 (2280, 2242 and 2230) and E1.S form factors and featuring Exascend's trademark storage technologies and wide temperature-support for operation in -40 to 185 °F (-40 to 85 °C) industrial environments.

Launched in December 2021, the PI4 series E1.S SSD is the world's first rugged SSD in the enterprise E1.S form factor – combining enterprise-class performance and storage density with a thoroughly tough design ideal for extreme environments.



Enterprise performance everywhere with E1.S

Exascend's PI4 series E1.S SSD is available for immediate order with capacity configurations from 960 GB to 7,680 GB (1 TB to 8 TB) and a wide range of industrial technologies and value-added features.



ADVANTAGES OVER TRADITIONAL M.2 2280 SSD:

- ▶ Improved 12 V input, supports up to 20 W max sustained power delivery in a 9.5 mm enclosure.
- ▶ Doubled capacity, available with 8 TB capacity.
- ▶ Integrated hardware power loss protection (PLP).
- ▶ Enclosure for an improved thermal footprint and protection from the elements.

PI4 specifications

Form factor	M.2 (2280, 2242 & 2230)	E1.S	U.2
Interface	PCIe 4.0 (NVMe 1.4)		
Capacity	M.2 2280: 960–7,680GB M.2 2242: 960–1,920GB M.2 2230: 240–960GB (Dramless)	960–7,680GB	960–7,680GB
Flash type	3D TLC		
Input voltage	3.3V±5%	12V±5%	
Power consumption	Active <7.5W; Idle <1.0W		
Max. sequential read/write (MB/s)	3,500/3,000		
Max. 4K random read/write (IOPS)	600,000/450,000		
Operational temp. (°C)	-40–85		
Storage temp. (°C)	-50–95		
TBW (max.)	4,800		
MTBF (hours)	2,000,000		

Exascend is a service-oriented provider of innovative standard and custom storage solutions specialized in low-power, high-performance, and high-reliability products. Since its founding, the company has been awarded more than 60 U.S. and worldwide patents on storage-related technologies. With full product lines of enterprise and industrial **PCIe NVMe** and **SATA-III SSDs**, **CFast**, **CFexpress cards** and **DRAM**, Exascend's capabilities span across hardware, firmware, software, product engineering, manufacturing and customization services.

Exascend takes pride in enabling its global customers to push the boundary of possibilities and to differentiate with quality, reliability and flexibility – *Inspiration to Innovation*.