

PCIe M.2 SSDs

PCIe SSD 220S

Transcend's PCIe SSD 220S aims at high-end applications, such as digital audio/video production, gaming, and enterprise use, which require constant processing heavy workloads with no system lags or slowdowns of any kind. Utilizing the PCI Express® Gen3 x4 interface supported by the latest NVMe™ standard, 3D NAND flash memory, an 8-channel controller, and a DRAM cache, the PCIe SSD 220S offers supreme transfer speeds that override others.



Supreme transfer speeds

Transcend's PCIe SSD 220S follows NVMe 1.3 and utilizes the PCIe™ Gen3 x4 interface, meaning four lanes are used for transmitting and receiving data simultaneously. Its 8-channel controller supports ultra high data throughput, resulting in compelling performance of up to 3,500MB/s read and 2,700MB/s write.



Understanding the PCIe interface

PCIe (or PCI Express®) is a much faster interface than SATA (or Serial ATA) for connecting a host computer to solid-state storage devices over one or more lanes consisting of one transmit and one receive serial interface in each lane, meaning it can better fulfill new performance requirements.



Understanding the NVMe standard

NVMe (or NVM Express®) is a host controller interface standard designed to address the needs of enterprise and client applications that utilize PCI Express-based solid-state storage. NVMe calls for better performance vectors than AHCI (Advanced Host Controller Interface), including scalable bandwidth, increased IOPS, and low latency.

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Features

- Adopts PCIe Gen3 x4 interface and NVMe 1.3 standard
- Up to 3,500 MB/s read; 2,700 MB/s write
- 3D NAND flash memory, 8-channel controller, and DDR3 DRAM cache
- Engineered with LDPC (Low-Density Parity Check) coding to ensure data integrity; built-in SLC caching technology for exceptional transfer speeds
- Engineered dynamic thermal throttling mechanism

SSD Scope Software

Transcend SSD Scope is advanced, user-friendly software that makes it easy to ensure your Transcend SSD remains healthy, and continues to run fast and error-free by determining the condition and optimizing the performance of your drive.

Specification

Appearance

Dimensions	80 mm x 22 mm x 3.58 mm (3.15" x 0.87" x 0.14")
Weight	8 g (0.28 oz)

Interface

Bus Interface	NVMe PCIe Gen3 x4

Storage

Flash Type	3D NAND flash
Capacity	256 GB / 512 GB / 1 TB / 2 TB

Operating Environment

Operating Temperature	0°C (32°F) ~ 70°C (158°F)
Operating Voltage	3.3V±5%

Performance

Sequential Read/Write (CrystalDiskMark, max.)	Read: 3,500 MB/s Write: 2,700 MB/s
4K Random Read/Write (IOmeter, max.)	Read: 340,000 IOPS Write: 310,000 IOPS
Mean Time Between Failures (MTBF)	2,000,000 hour(s)
Terabytes Written (TBW)	4,400 TB
Drive Writes Per Day (DWPD)	2.4 (5 yrs)
Note	• Speed may vary due to host hardware, software, usage, and storage capacity. • Some motherboards only provide PCIe x2 connections for the M.2 slot, creating a bottleneck on even the fastest drives.

Warranty

Certificate	CE/FCC/BSMI
Warranty	Five-year Limited Warranty

Ordering Information

256GB	TS256GMTE220S
512GB	TS512GMTE220S
1TB	TS1TMTE220S
2TB	TS2TMTE220S

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PCIe M.2 SSDs Comparison



PCIe SSD 220S



PCIe SSD 110S

Appearance		
Dimensions	80 mm x 22 mm x 3.58 mm (3.15" x 0.87" x 0.14")	
Weight	8 g (0.28 oz)	
Interface		
Bus Interface	NVMe PCIe Gen3 x4	
Storage		
Flash Type	3D NAND flash	
Capacity	256 GB/512 GB/1 TB/2 TB	128 GB/256 GB/512 GB/1 TB
Operating Environment		
Operating Temperature	0°C (32°F) ~ 70°C (158°F)	
Operating Voltage	3.3V±5%	
Performance		
Sequential Read/Write (CrystalDiskMark, max.)	Read: 3,500 MB/s Write: 2,700 MB/s	Read: 1,700 MB/s Write: 1,400 MB/s
4K Random Read/Write (IOmeter, max.)	Read: 340,000 IOPS Write: 310,000 IOPS	Read: 160,000 IOPS Write: 140,000 IOPS
Mean Time Between Failures (MTBF)	2,000,000 hour(s)	1,000,000 hour(s)
Terabytes Written (Max.)	4,400 TB	400 TB
Drive Writes Per Day (DWPD)	2.4 (5 yrs)	0.2 (5 yrs)
Warranty		
Warranty	Five-year Limited Warranty	
Technology		
S.M.A.R.T.	✓	✓
DDR3 DRAM Cache	✓	-
Advanced Garbage Collection	✓	✓
RAID Engine	✓	-
LDPC Coding	✓	✓

*Speed may vary due to host hardware, software, usage, and storage capacity.

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