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.
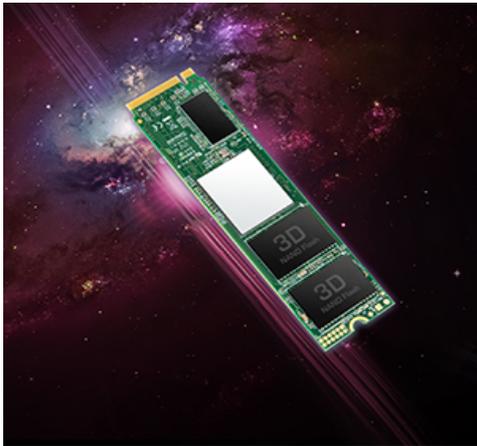
Supreme transfer speeds

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 3,200MB/s write.

Note: Performance is based on CrystalDiskMark v5.0.2.
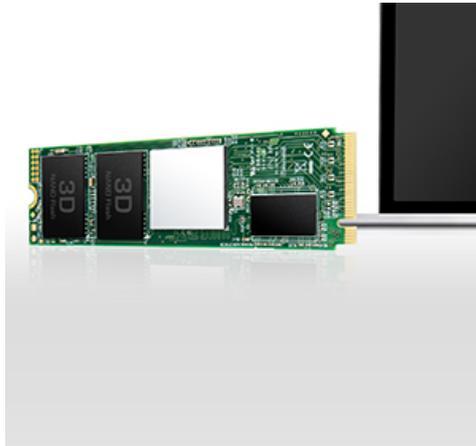
Understanding the PCIe interface

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.
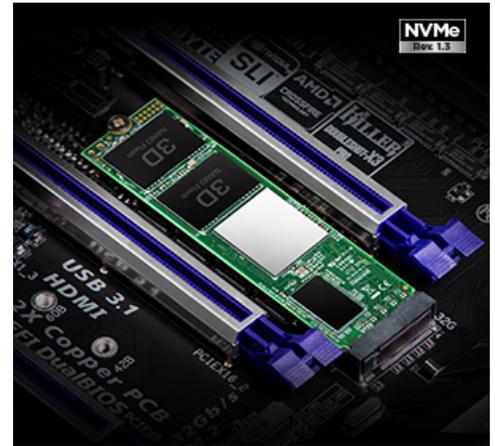
Understanding the NVMe standard

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

- 3D NAND flash
- DDR3 DRAM cache shortens access times
- 8-channel controller for ultra high data throughput
- Built-in SLC caching technology for exceptional transfer speeds
- Engineered dynamic thermal throttling mechanism for higher stability
- Space-saving M.2 Type 2280 form factor
- PCIe Gen3 x4 interface and meets NVMe 1.3 standard
- Engineered with a RAID engine and LDPC (Low-Density Parity Check) coding to ensure data integrity

Transcend
SSD Scope

SSD Scope features useful functions to maintain your SSD in a healthy status and also copy data from your original HDD to Transcend's new SSD.

Specifications

Appearance

Dimensions	Double-sided: 80 mm x 22 mm x 3.58 mm (3.15" x 0.87" x 0.14")
Weight	10 g (0.35 oz)
Type	M.2 2280

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)	Read: up to 3,500 MB/s Write: up to 3,200 MB/s
4K Random Read/Write (IOmeter)	Read: up to 340,000 IOPS Write: up to 370,000 IOPS
Mean Time Between Failures (MTBF)	2,000,000 hour(s)
Drive Writes Per Day (DWPD)	1.2 (5 yrs)
Terabytes Written (TBW)	up to 4,400 TBW
Note	Speed may vary due to host hardware, software, usage, and storage capacity. The workload used to rate DWPD may be different from your actual workload, which may vary due to host hardware, software, usage, and storage capacity. Terabytes Written (TBW) expresses the endurance under the highest 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 / KC / RCM
Warranty	Five-year Limited Warranty

Ordering Information

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