

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.

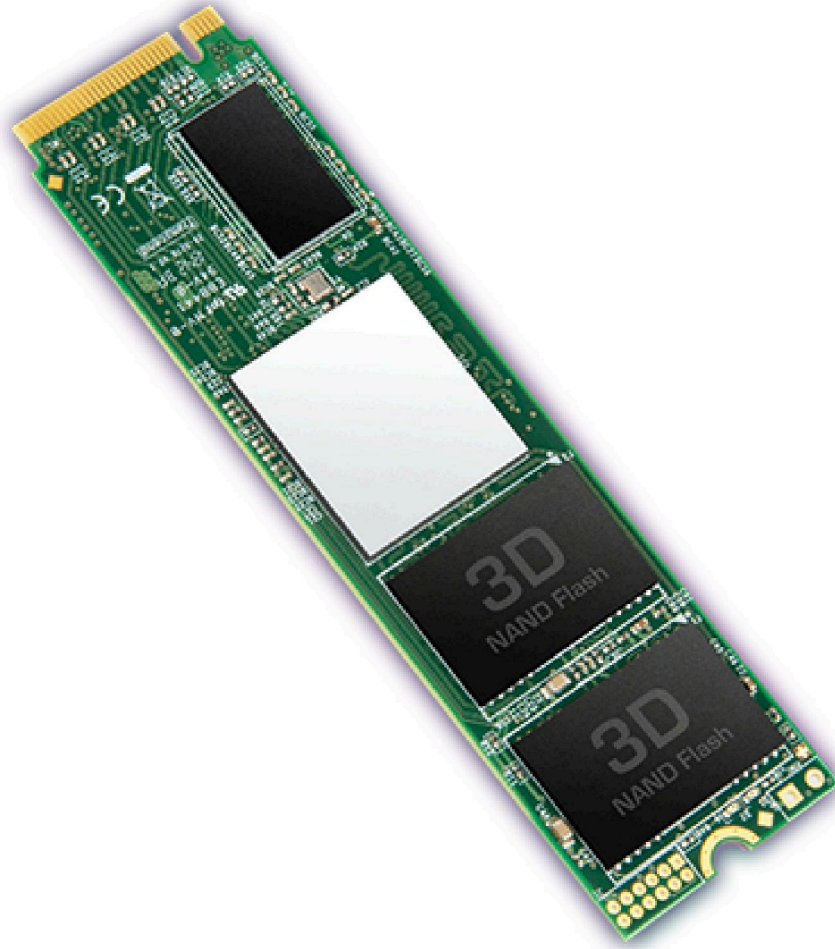
PCIe M.2 SSDs - Unleash performance beyond expectation



Supreme transfer speeds

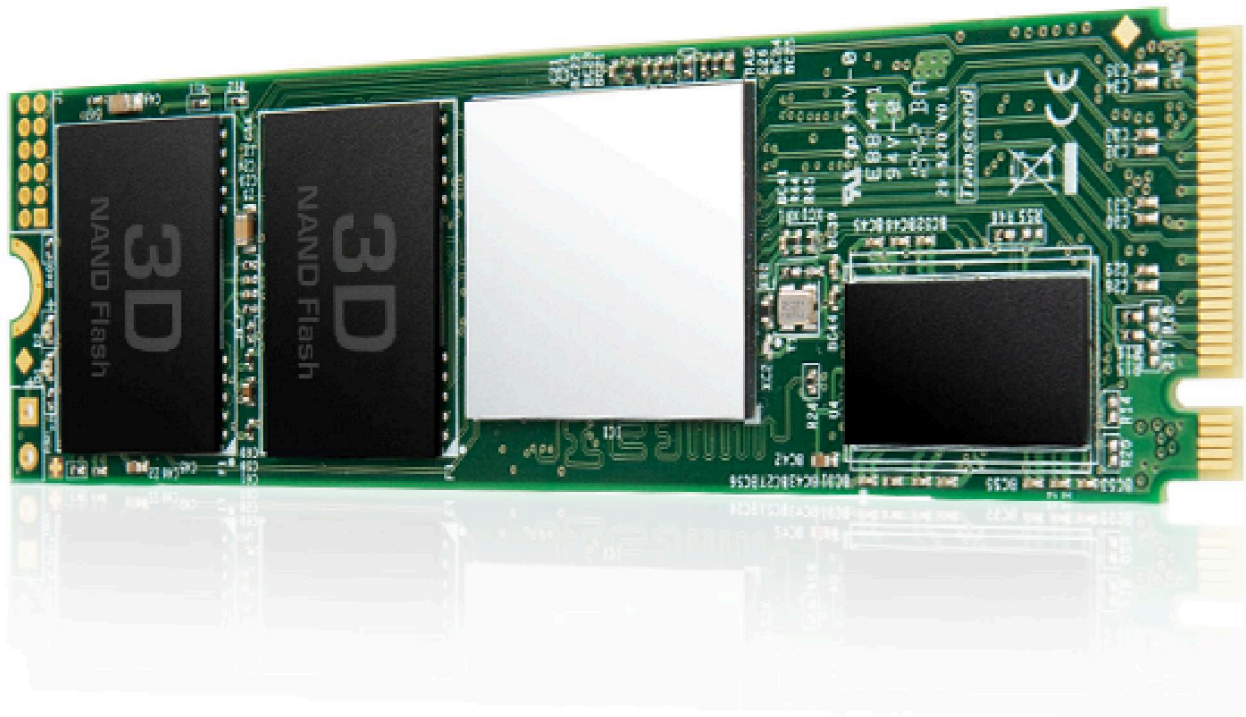
Transcend's PCIe SSD 220S follows NVMe 1.3 and utilizes the PCIe™ Gen3 x4 interface, meaning four lanes are used for transmitting and receiving data simultaneously. Its 8-channel controller supports ultra high data throughput, resulting in compelling performance of up to 3,500MB/s read and 3,200MB/s write.

Note: Performance is based on CrystalDiskMark v5.0.2.



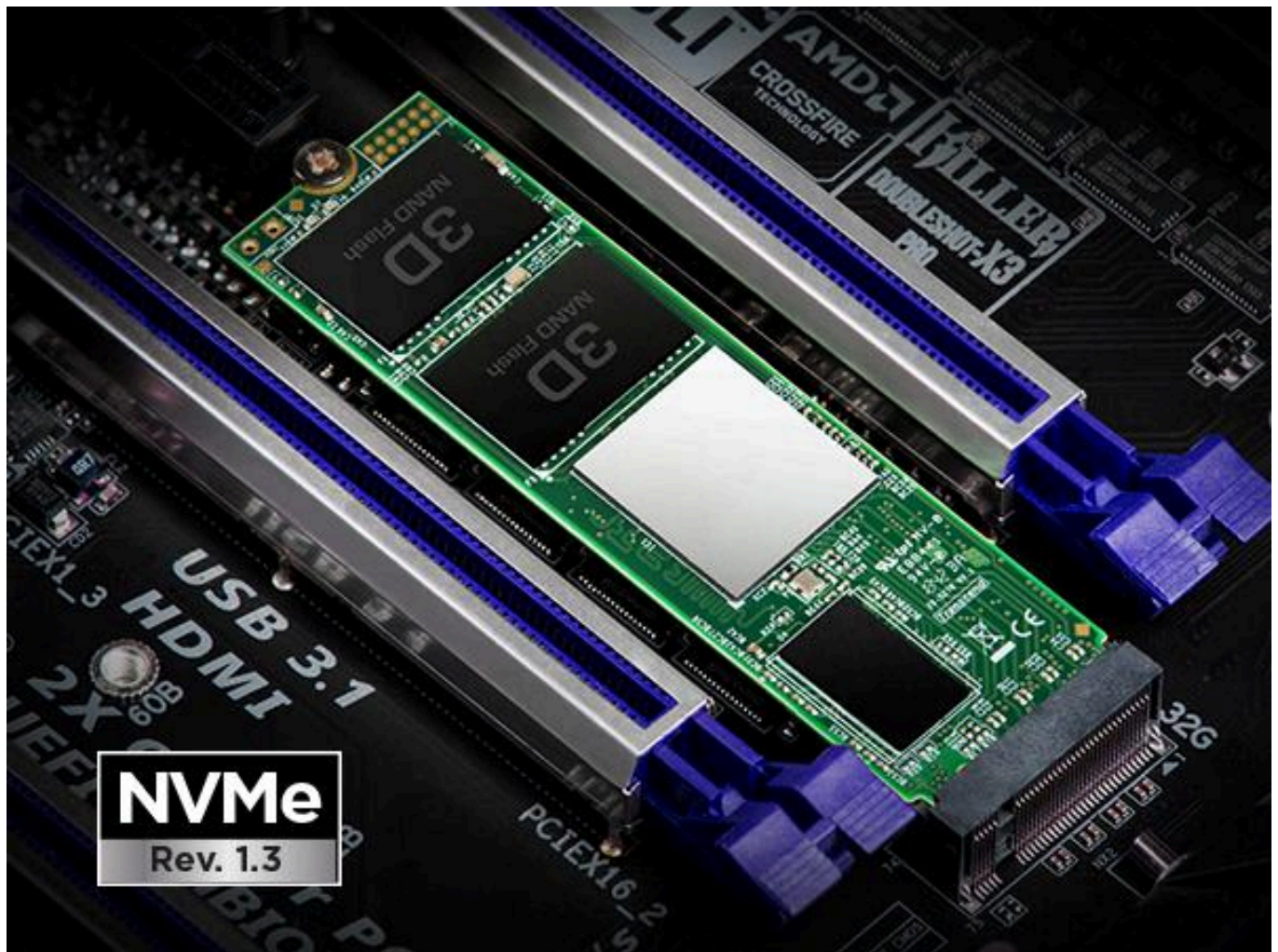
Understanding the PCIe interface

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.



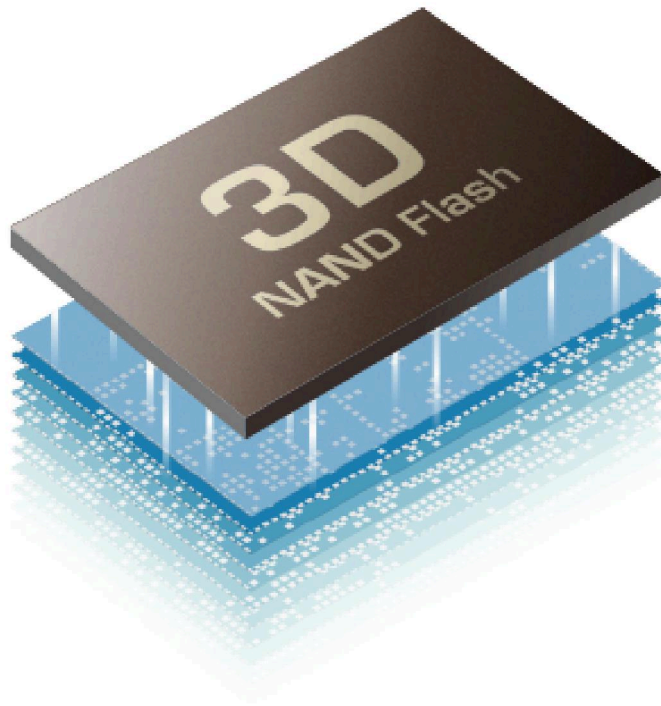
Understanding the NVMe standard

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.



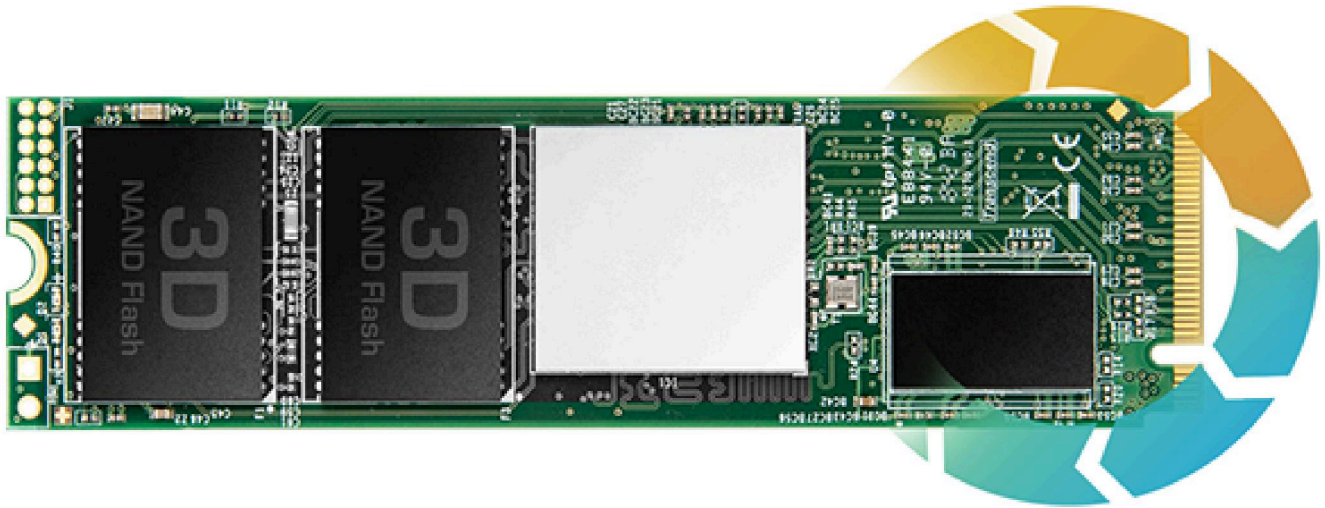
3D expansion to break through limits

Unlike planar NAND memory, 3D NAND flash features memory cells stacked vertically in multiple layers. 3D NAND overcomes density limitations of 2D planar NAND, and delivers a higher level of performance and endurance.



Better endurance, higher reliability

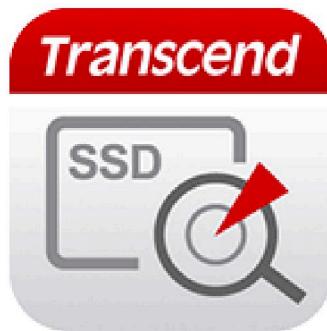
Transcend's PCIe SSD 220S is engineered with LDPC (Low-Density Parity Check) coding, a powerful ECC algorithm, to keep data secure. Manufactured with high-quality 3D NAND flash chips, and engineered dynamic thermal throttling mechanism, the PCIe SSD 220S guarantees superior endurance and stability for high-end applications.



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.

[Learn more \(/support/software/ssd-scope\)](https://support/software/ssd-scope)



Guaranteed quality

To ensure the utmost level of quality, Transcend SSDs undergo rigorous testing at all stages of production, including tests for vibration, temperature and humidity, speed, and functionality.

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
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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)	2 TB	Up to 3,500/2,900 MB/s
	1 TB	Up to 3,500/3,200 MB/s
	512 GB	Up to 3,500/2,500 MB/s
	256 GB	Up to 3,300/1,250 MB/s
4K Random Read/Write (IOMeter)	2 TB	Up to 340,000/360,000 IOPS
	1 TB	Up to 330,000/370,000 IOPS
	512 GB	Up to 190,000/360,000 IOPS
	256 GB	Up to 190,000/300,000 IOPS
Terabytes Written (TBW)	2 TB	4400 TBW
	1 TB	2200 TBW
	512 GB	1100 TBW
	256 GB	550 TBW
Mean Time Between Failures (MTBF)	2,000,000 hour(s)	
Drive Writes Per Day (DWPD)	1.2 (5 yrs)	
Note	<ul style="list-style-type: none">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 / UKCA / FCC / BSMI / KC / RCM
Warranty	Five-year Limited Warranty
Warranty Policy	<ul style="list-style-type: none">Please click here (/Warranty) for more information about the Transcend Warranty Policy.Warranty does not apply when SSD Scope's lifetime indicator displays 0% within the warranty coverage.

System Requirement

Operating System	<ul style="list-style-type: none">Microsoft Windows 7 or laterLinux Kernel 2.6.31 or later
Note	Systems for use with the PCIe M.2 SSD must have an M.2 connector with only an M key. B-key connectors are not compatible. Improper insertion may lead to damage. Please click here (/Support/FAQ-1206) for more information.

Technology

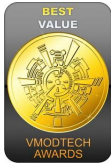
S.M.A.R.T.	✓
Advanced Garbage Collection	✓
RAID Engine	✓
LDPC Coding	✓
DRAM Cache	✓

Awards



(<http://www.transcend-info.com/Goto/5835>)

Approved
Root Nation
Ukraine



(<http://www.vmodtech.com/th/article/transcend-pcie-m2-ssd-220s-2tb-review/page/all>)

Best Value Award
Vmodtech
Thailand



(<http://www.vmodtech.com/th/article/transcend-pcie-m2-ssd-220s-2tb-review/page/all>)

Best Performance Award
Vmodtech
Thailand



(<https://elchapuzasinformatico.com/2019/12/review-transcend-pcie-ssd220s-ssd-m-2-nvme/>)

Galardón de Oro - Gold Award
El chapuzainformartico

Order Information

256GB

TS256GMTE220S

512GB

TS512GMTE220S

1TB

TS1TMTE220S

2TB

TS2TMTE220S



Product Sheet

(<https://CDN.transcend-info.com/products/images/modelpic/991/Transcend-PCIeSSD220S.pdf>)



Support

(</support/product/internal-ssd/mte220s>)



Compatibility

(</support/compatibility/product/internal-ssd/mte220s>)

Consumer Products

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- [Portable SSDs \(/product/portable-ssd\)](/product/portable-ssd)
- [External Hard Drives \(/product/external-hard-drive\)](/product/external-hard-drive)
- [Dashcams \(/product/dashcam\)](/product/dashcam)
- [Body Cameras \(/product/body-camera\)](/product/body-camera)
- [Memory Cards \(/product/memory-card\)](/product/memory-card)
- [USB Flash Drives \(/product/usb\)](/product/usb)
- [DRAM Modules \(/product/dram-module\)](/product/dram-module)
- [Card Readers, DVD Writers & Accessories \(/product/card-reader-accessory\)](/product/card-reader-accessory)
- [Customized Solutions \(/products/oem.aspx\)](/products/oem.aspx)

Embedded Solutions

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- [Embedded Memory Cards \(/Embedded/Product/memory-cards\)](/Embedded/Product/memory-cards)
- [Embedded DRAM Modules \(/Embedded/Product/modules\)](/Embedded/Product/modules)
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- [Applications \(/Embedded/Applications\)](/Embedded/Applications)
- [Software Solutions \(/Embedded/Software\)](/Embedded/Software)
- [Resource Download \(/embedded/download\)](/embedded/download)

Support

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- [Partner Center \(/partnercenter/\)](/partnercenter/)

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