



## PCIe M.2 SSDs

# PCIe SSD 220S

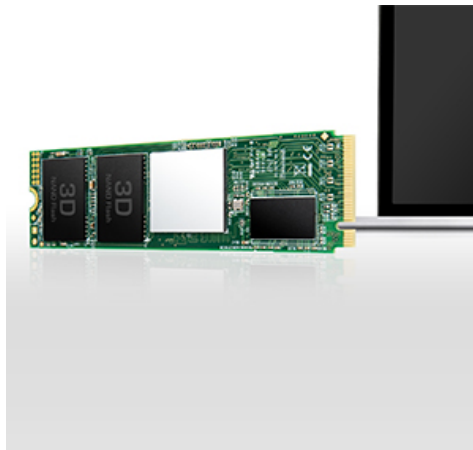
Transcend's PCIe SSD 220S aims at high-end applications, such as digital audio/video production, gaming, and enterprise use, which require constant processing heavy workloads with no system lags or slowdowns of any kind. Utilizing the PCI Express® Gen3 x4 interface supported by the latest NVMe™ standard, 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

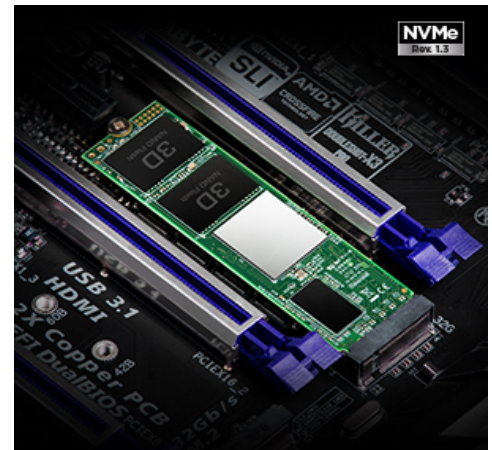
Transcend's PCIe SSD 220S follows NVMe 1.3 and utilizes the PCIe™ Gen3 x4 interface, meaning four lanes are used for transmitting and receiving data simultaneously. Its 8-channel controller supports ultra high data throughput, resulting in compelling performance of up to 3,500MB/s read and 3,200MB/s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

## 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



### 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<br>Write: up to 3,200 MB/s                                                                                                                                                                                                                                                                                                                                                                                              |
| 4K Random Read/Write (IOMeter)          | Read: up to 340,000 IOPS<br>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.<br>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.<br>Terabytes Written (TBW) expresses the endurance under the highest capacity.<br>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   |

