



## SPECIFICATIONS

|                                  |                                                                                                                                                                                                                                                                                                         |       |       |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| Model Name                       | SPATIUM M580 PCIe 5.0 NVMe M.2                                                                                                                                                                                                                                                                          |       |       |
| Capacity                         | 1TB                                                                                                                                                                                                                                                                                                     | 2TB   | 4TB   |
| Controller                       | PHISON E26                                                                                                                                                                                                                                                                                              |       |       |
| Flash Memory                     | 3D NAND                                                                                                                                                                                                                                                                                                 |       |       |
| Form Factor                      | M.2 2280                                                                                                                                                                                                                                                                                                |       |       |
| Interface                        | PCIe Gen5x4, NVMe 2.0                                                                                                                                                                                                                                                                                   |       |       |
| Compatibility                    | PCIe Gen5 / PCIe Gen4 / Gen3 / Gen2 / Gen1                                                                                                                                                                                                                                                              |       |       |
| Dimensions                       | 80.00mm(L) x22.00mm(W) x2.15mm(H)                                                                                                                                                                                                                                                                       |       |       |
| Sequential Read up to (MB/s)     | 13700                                                                                                                                                                                                                                                                                                   | 14600 | 14100 |
| Sequential Write up to (MB/s)    | 10300                                                                                                                                                                                                                                                                                                   | 12700 | 12600 |
| Random Read 4KB up to (IOPS)     | 1400K                                                                                                                                                                                                                                                                                                   |       |       |
| Random Write 4KB up to (IOPS)    | 1400K                                                                                                                                                                                                                                                                                                   |       |       |
| Maximum Operating Power (W)      | 11.5                                                                                                                                                                                                                                                                                                    |       |       |
| Idle Power PS3 (mW)              | 144                                                                                                                                                                                                                                                                                                     |       |       |
| Low Power L1.2 (mW)              | 85                                                                                                                                                                                                                                                                                                      |       |       |
| Operating Temperatures           | 0°C - 70°C                                                                                                                                                                                                                                                                                              |       |       |
| Storage Temperatures             | -40°C - 85°C                                                                                                                                                                                                                                                                                            |       |       |
| Terabytes Written (TBW)          | 700                                                                                                                                                                                                                                                                                                     | 1400  | 3000  |
| Mean Time Between Failure (MTBF) | Up to 1,600,000 Hours                                                                                                                                                                                                                                                                                   |       |       |
| Limited Warranty                 | 5 Years, or the coverage for the maximum TBW as stated, whichever comes first.                                                                                                                                                                                                                          |       |       |
| Advanced Features                | -TRIM (Performance Optimization, OS Support required)<br>-SMART (Self-Monitoring, Analysis and Reporting Technology)<br>-LDPC (Low Density Parity Check) ECC Algorithm<br>-End to End Data Path Protection<br>-APST (Autonomous Power State Transition)<br>-AES256/OPAL 2.0 (Encryption, Data Security) |       |       |

## FEATURES



### Supercharged with Gen 5

The PCIe Gen 5 controller empowers next-level storage transfer rates faster than previous-gen SSDs by up to 1.8 times.



### 3D NAND Flash

3D NAND Flash technology brings dense storage in a compact design and allows storage capacities up to 4TB.



### Multiple Security

Built-in data security and error-correction capabilities extend the longevity of the NAND flash storage.



### Low Latency Gaming

Enjoy minimal latency in smooth gameplay and loading games with optimized high-performance bandwidth and throughput.



### Nonstop Creativity Booster

Keep up nonstop productivity by opening up images, movies, documents, and heavy-duty applications at lightning speeds.



### MSI Center

Migrate data with backup & restore functionality, monitor drive health and performance metrics in real-time in MSI Center.



### Optimal M.2 SSD

Designed in the M.2 2280 form factor, MSI SSDs are easy to install into external enclosures, desktops, or laptops.



### 5 Years Warranty

MSI stands by the quality and reliability of their SSD's with a 5 year limited warranty.

## TEST CONFIGURATION

Sequential and random performance, and power consumption were measured with the system configurations listed below. All performance data was tested with the SSD as a secondary drive.

|                  |                                                                        |
|------------------|------------------------------------------------------------------------|
| Interface        | PCIe GEN5X4                                                            |
| Operating System | Windows 11 Pro 23H2                                                    |
| CPU              | AMD Ryzen 9 7950X 16-Core @4.50 GHz                                    |
| Memory           | Kingston DDR5-4800 16G x2                                              |
| Chipset          | MSI MPG X670E CARBON WIFI                                              |
| Test Program     | Crystal Diskmark 8.0.4, ATTO Disk Benchmark V4.01.0f1, IO Meter v1.1.0 |