



FEATURES



Superior Cooling

The GPU is kept cool by closed loop liquid cooler while the memory and VRM's are cooled by a radial fan.



Micro-Fin Copper Base

A copper base with fine micro-fins immersed in the liquid stream effectively transfers heat away from the VRAM and GPU.



Quick And Easy Installation

Upgrade to the power of liquid-cooled graphics in one minute or less.



Zero Frozr

Zero Frozr is the calm before the storm, keeping fans still and maintaining silence until cooling is needed.

SPECIFICATIONS

Model Name	SPATIUM M450 PCIe 4.0 NVMe M.2 V1	
Capacity	1TB	2TB
Controller	PHISON E19T	
Flash Memory	3D NAND	
Form Factor	M.2 2280	
Interface	PCIe Gen4x4, NVMe 1.4	
Compatibility	PCIe Gen4 / Gen3 / Gen2 / Gen1	
Dimensions	80.00mm (L) x 22.00mm (W) x 2.15mm (H)	
Sequential Read up to (MB/s)	3400	3300
Sequential Write up to (MB/s)	2400	2500
Random Read 4KB up to (IOPS)	500,000	440,000
Random Write 4KB up to (IOPS)	550,000	560,000
Maximum Operating Power (W)	3.7	3.8
Idle Power PS3 (mW)	35	
Low Power L1.2 (mW)	5	
Operating Temperatures	0°C - 70°C	
Storage Temperatures	-40°C - 85°C	
Terabytes Written (TBW)	350	700
Mean Time Between Failure (MTBF)	Up to 1,500,000 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) SMART (Self-Monitoring, Analysis and Reporting Technology) LDPC (Low Density Parity Check) ECC Algorithm End to End Data Path Protection APST (Autonomous Power State Transition) Pyrite (Encryption, Data Security)	

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 Gen4x4
Operating System	Windows 11 Pro 21H2 OS Build 22000.258
CPU	11 th Gen Intel Core i7-11700KF @3.6GHz
Memory	Crucial DDR4-2400 8G x2
Chipset	MSI MPG Z590 GAMING CARBON WIFI
Test Program	Crystal Diskmark 8.01, ATTO Disk Benchmark V4.01.0f1, IO Meter v1.1.0