STORAGE

VORTIQ E51XHYV7 U.2



SPECIFICATIONS

Model Name	VORTIQ E51XHYV7 U.2				
Capacity	1.92TB	3.84TB	7.68TB	15.36TB	30.72TB
Flash Memory	3D NAND				
DRAM Cache	2GB DDR4	4GB DDR4	8GB DDR4	16GB DDR4	32GB DDR4
Form Factor	2.5 inch				
Interface	U.2 PCI Express Gen 5				
Compatibility	PCIe Gen5 / Gen4 / Gen3 / Gen2 / Gen1				
Dimensions	100mm (L) x 69.85mm (W) x 14.7.00mm (H)				
Latency Read	70 µs				
Latency Write	10 µs				
Sequential Read up to (MB/s)	14,800	14,800	14,800	14,800	14,000
Sequential Write up to (MB/s)	4,300	8,600	8,700	8,500	7,400
Random Read 4KB up to (IOPS)	2,400K	3,300K	3,200K	2,800K	2,300K
Random Write 4KB up to (IOPS)	140K	320K	390K	420K	265K
Maximum Operating Power (W)	13	22	23	24	25
Idle Power PS3 (mW)	5				
Operating Temperatures	0°C – 70°C				
Storage Temperatures	-40°C – 85°C				
Terabytes Written (TBW)	3504	7008	14016	28032	56064
Mean Time Between Failure (MTBF)	Up to 2.5 Million Hours				
Limited Warranty	5 Years, or the coverage for the maximum TBW as stated, whichever comes first.				
Advanced Features	Logical Block Address Formats (LBAF): 512 / 512+8 / 4K / 4K+8 / 4K+64 bytes with metadata support Namespaces: Supports up to 64 NVMe namespaces Port Configuration: Single Port ×4 or Dual Port (x2 + x2) operation for high availability Reservation Command Support for multi-host access control Metadata Protection Thermal Throttling Mechanism for temperature control Power Loss Protection (PLP) using integrated tantalum capacitors Hardware AES-XTS 256-bit Encryption for data security compliance SMBus Monitoring Interface				

FEATURES

HIGH ENDURANCE GUARANTEE

Features 1 DWPD (Drive Writes Per Day), specifically engineered for enterprise read/write mixed-use scenarios.

Comprehensive Data Protection

Supports End-to-End Data Path Protection to guarantee data integrity throughout the entire transmission process.

Advanced Security Encryption

Hardware AES-XTS 256-bit Encryption for data security compliance.

Hardware-Level Power Protection

Integrated Power Loss Data Protection (PLDP) prevents data loss during sudden power outages.

Industrial-Grade Vibration Resistance

Tested to withstand up to 1500G (non-operating shock), adapting to the most demanding physical environments.

3D NAND Flash

3D NAND flash technology brings dense storage in a compact design and allows storage capacities up to 960GB.

Security & Reliability

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.

MSI Center

Monitor SSD health status and key performance metrics in real time via MSI Center for stable and reliable system performance.

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	U.2 PCI Express Gen 4
Operating System	Ubuntu 20.04.2 LTS
CPU	AMD Ryzen 7 3700X 8-Core Processor
Motherboard	Gigabyte Technology Co., Ltd. X570 AORUS MASTER
Kernel	Linux version 5.10.32-pim-20211006
RAM	DDR4 3200MHz 16GB

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