

Roealsen6® R6 Series •

E1.S | DapuStor Enterprise NVMe SSD

PCIe 5.0



DapuStor R6x01 series is powered by the PCIe Gen5 DP800 controller and 3D eTLC NAND, available in multiple form factors with full NVMe 2.0 support. Built on a high-bandwidth PCIe 5.0 architecture, it delivers class-leading performance and superior power efficiency to address the stringent demands of AI, cloud and high-density data centers.

| Built for AI KV Cache Acceleration

Tailored for latency-sensitive AI inference pipelines, DapuStor R6x01 E1.S TLC SSD leverages full PCIe 5.0 bandwidth to deliver fast, consistent access for KV cache workloads. Its premium TLC NAND architecture supports low-latency random reads and high sustained throughput, enabling efficient caching of large model parameters to boost inference speed and scale seamlessly for enterprise AI serving.

14/6 GB/s

SR/SW

2500/610 K

RR/RW (IOPS)

48/7 µs

RR/RW Latency



| Cold Plate Liquid Cooling Support

DapuStor R6x01 E1.S natively supports cold plate liquid cooling. It maintains stable thermal performance under sustained high-intensity AI workloads, minimizing thermal throttling for consistent performance and enabling higher rack density in next-generation data center deployments.

| Advanced TLC NAND Optimization

DapuStor R6x01 series employs advanced 3D eTLC NAND for high efficiency and robust endurance. Powered by innovative machine learning, it minimizes system-level NAND retries and intelligently predicts complex workload patterns to proactively prevent failures, ensuring sustained performance and enterprise-grade reliability.

| Advanced Features

NVMe 2.0

- Online Upgrade, 128 Namespaces, Multi-Stream, Atomic Write, Sanitize, Copy, Verify, Compare.

OCP 2.5 Compliant

- Features Telemetry, Latency Monitor, and Thermal Throttling.

FDP Support

- Boosts random write speed, reduces WAF (achieves WAF=1 in specific scenarios).

NVMe-MI 1.2

- Supports MCTP Over I2C/SMBus, Over PCIe VDM, OOB upgrade, and Send/Receive.

End-to-End Protection

- Supports T10 DIF/DIX, 5 sector formats (including Type 1/2/3), and detailed logging.

Enterprise Security

- Includes Secure Boot, Firmware Verification, Format and Sanitize.

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| Specifications

PCN	R6101		R6301	
Capacity (TB)	3.84	7.68	3.2	6.4
Form Factor	E1.S 9.5mm			
Interface	PCIe Gen5 x4, NVMe 2.0			
128K Seq. Read (MB/s)	14000	12000	14000	12000
128K Seq. Write (MB/s)	6000	8000	6000	8000
4K Rand. Read KIOPS	2500	2100	2500	2100
4K Rand. Write KIOPS	350	320	610	680
Rand. 4K Latency (μs)	48/7			
Seq. 4K Latency (μs)	7/7			
Active Power (W)	16	17	16	17
Idle Power (W)	5			
Flash Type	3D eTLC NAND Flash			
PN (Model Number)	DPRE5504T0TL03T8000	DPRE5508T0TL07T6000	DPRE5504T0TL03T2000	DPRE5508T0TL06T4000
Endurance	1 DWPD		3 DWPD	
MTBF	2.5 million hours			
UBER	1 sector per 10^18 bits read			
Warranty	5 years			

*Differences in hardware, software, or configuration will affect actual test results.

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