

Roealsen5 Series

DapuStor Enterprise NVMe SSD



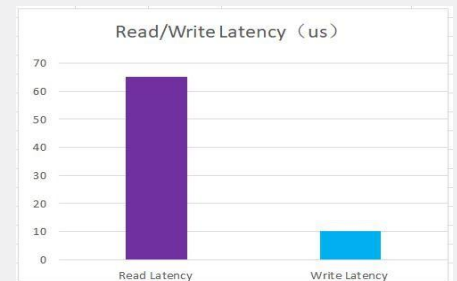
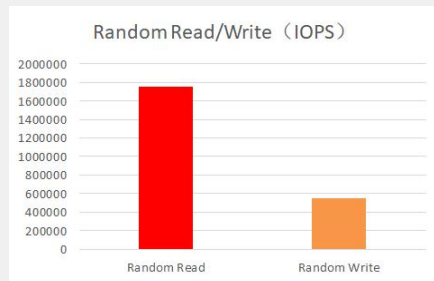
The DapuStor R5 Series is designed and built on DapuStor DPU600 controller firmware with the latest 3D enterprise TLC NAND from KIOXIA. Such a unique combination creates industry-leading SSDs with high speed, superior reliability, low latency, and excellent power efficiency, bringing optimised TCO to enterprise IT and cloud facilities. DapuStor R5 series is an ideal solution for core data storage scenarios in different fields, such as enterprise IT, logistics, Internet, finance, intelligent manufacturing, and AI.

Advanced Features

- Flash Raid 2.0 tolerating multiple flash die failures without affecting service and performance
- Latest NVMe 1.4a key features
- Data encryption: supporting a variety of encryption algorithms, as well as TCG2.0 enterprise specifications.
- Advanced power loss protection that protects user data against power failure in various scenarios.
- Nine levels of adjustable power consumption: more convenient operation, maintenance, and better TCO.

Superior Performance

DapuStor R5 series PCIe Gen4 SSD offers a 100% improvement in bandwidth and IOPS performance compared with the Haishen3 series. In terms of latency, thanks to the new DPU600 controller having carried out many optimisations on the IO path, the Roealsen5 series has significantly improved latency and QoS under mixed read-write scenarios.



Industry Mainstream NAND Flash

DapuStor R5 Series is equipped with the latest 112L 3D NAND Flash from KIOXIA, realising an extremely high-power efficiency. It reduces NAND Retry at the system level through innovative machine learning technologies that predict the NAND workload in complex scenarios to prevent systemic failures.

Computing And Storage Converged Platform

The DapuStor DPU600 controller for PCIe 4.0 SSD has a built-in APPLICATION processor and the DPU-Link heterogeneous computing interface. It delivers faster speed when running Linux, conveniently transplants applications and algorithms, and improves system efficiency for database, AI, and big data applications.

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Feature

| PCN (Product Code Name) | R5101 | | R5301 | | R5100 | | R5300 | |
|--|---|---------|--------|--------|---|---------|--------|--------|
| Capacity | 1.92 TB | 3.84 TB | 1.6 TB | 3.2 TB | 7.68 TB | 15.36TB | 6.4TB | 12.8TB |
| Form Factor | U.2 15mm | | | | | | | |
| Interface | PCIe 4.0 x4, NVMe 1.4a | | | | | | | |
| Read Bandwidth (128KB) MB/s | 6200 | 7400 | 6200 | 7400 | 7400 | 7400 | 7400 | 7400 |
| Write Bandwidth (128KB) MB/s | 2600 | 5350 | 2600 | 5350 | 5700 | 7000 | 5700 | 7000 |
| Random Read (4KB) KIOPS | 1000 | 1750 | 1000 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Random Write (4KB) KIOPS | 120 | 240 | 240 | 540 | 280 | 300 | 550 | 540 |
| 4K Random Latency (Typ.) R/W μ s | 65/10 | | | | | | | |
| 4K Sequential Latency (Typ.) R/W μ s | 8/10 | | | | | | | |
| Power | Active: \leq 12 W, Idle: \leq 6.5 W | | | | Active: \leq 22 W, Idle: \leq 7 W | | | |
| Flash Type | KIOXIA 3D NAND, 112 layer, 4 plane eTLC | | | | KIOXIA 3D NAND, 112 layer, 2 plane eTLC | | | |
| Endurance | 1 DWPD | | 3 DWPD | | 1 DWPD | | 3 DWPD | |
| MTBF | 2 million hours | | | | | | | |
| UBER | 1 sector per 10^{17} bits read | | | | | | | |
| Warranty | 5yrs | | | | | | | |

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



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