

DATA SHEET



Pure Storage® DirectMemory Cache

Accelerate application performance
with storage-class memory.

Performance

- Up to 50% improved read latency (as low as 150 µs)
- Improved array throughput

Capacity

- 3TB option, with four 750GB DirectMemory Modules
- 6TB option, with eight 750GB DirectMemory Modules

Array Support

- FlashArray//X70R2
- FlashArray//X90R2

Organizations continue to expect more from their data. The first step in this endeavor was the transition from spinning media to SAS solid-state drives. Enterprise storage has since continued the evolution to [NVMe](#), a new type of storage access. Still, applications are demanding quicker response times. With a large gap in performance between traditional NAND and local memory (DRAM), along with a similar gap in cost, the next evolution is storage-class memory (SCM). Within Purity Optimize, DirectMemory Cache effortlessly delivers improved database, analytics, and reporting performance.

DirectMemory Cache Software

Part of the core operating system, [Purity for FlashArray™](#), DirectMemory Cache introduces software integration of new SCM technology. Purity Optimize automatically refers reads from flash media in the array to onboard DirectMemory Modules with Intel Optane. Once the DirectMemory Modules are non-disruptively added to a new or existing FlashArray//X70R2 or //X90R2, DirectMemory Cache immediately begins working without the hassle of configurations or tuning. You can expect the array to commence providing latency improvements, along with additional throughput, for FlashArray workloads—notably online transaction processing (OLTP) and in-memory databases.

Effortless Performance

DirectMemory Cache provides a significant performance boost to FlashArray//X, which currently achieves 250us latency via [100% NVMe DirectFlash™ and DirectFlash Fabrics with NVMe-oF](#). Leveraging DirectMemory Cache, you can expect read-latency improvements of up to 50%, increased throughput capability, and the benefit of system resource offload.

DirectMemory Modules

DirectMemory Modules fit into the [FlashArray//X](#) array chassis with plug-and-play ease, and you can add them non-disruptively to an in-production FlashArray. DirectMemory Cache uses Intel Optane technology to achieve latency speeds nearly that of DRAM memory. It has the added benefit of being persistent, compared to traditional DRAM memory, and capable of ultra-high wear endurance. You can add the SCM capacity in either 3TB or 6TB packs of 750GB DirectMemory Modules to cover a full range of requirements.

Additional Resources

- [FlashArray//X](#)
- [Pure Storage - What is Storage Class Memory?](#)
- [FlashArray//X Data Sheet](#)
- [Purity for FlashArray Data Sheet](#)

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