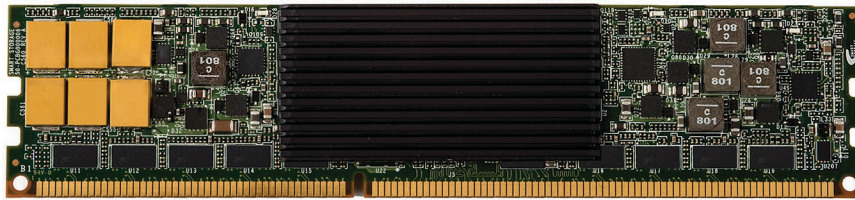# eXFlash memory-channel storage

Provides the lowest write latency of any flash technology while maintaining consistent high IOPS

Enterprise customers are constantly challenged with finding ways to improve performance. This can vary from a need for the lowest possible write latency to improving the overall density of the IT infrastructure.

eXFlash™ DIMMs achieve write latency as low as 3.3 microseconds; the lowest write latency of any flash device.[1] eXFlash DIMMs are ideally suited for large enterprise customers in application environments where high performance is required for high efficiency, with deterministic response rates, ultralow latency, and no performance load spikes. Environments primed for eXFlash DIMM deployment include database/cloud, Big Data/analytics, high-frequency trading and other financial applications, and virtual desktop infrastructure (VDI).

What IT managers need is a high-performance, low-latency and highly scalable storage technology that provides a capacity and price profile comparable to other flash storage, such as PCIe adapters. eXFlash DIMMs close the last performance gap in current storage solutions by placing flash as close as possible to the CPU and applications. The innovative design of eXFlash DIMMs connects flash storage to the memory channel using an industry-standard DIMM form factor. This accelerates current enterprise applications and enables a new generation of software solutions that require ultralow latency access to cost-effective storage devices.

The eXFlash DIMM leverages 19 nm MLC flash, while providing up to 10 Drive Writes Per Day (DWPD) to meet the endurance needs of write-intensive and mixed-used application workloads.

Utilizes existing memory slots

The DIMM form factor allows eXFlash DIMM to be used in memory slots on the motherboard. eXFlash DIMMs are interoperable with RDIMMs, enabling them to be deployed in the System x3850 X6, x3950 X6 and x3650 M4 today, with more server options coming in the future.[2] eXFlash DIMM capacity can be added granularly to available server DIMM slots; allowing you to grow at your pace.

Innovations provide ultralow latency and more

eXFlash DIMMs include innovations such as unique performance-enhancing features only available in the eXFlash DIMM. eXFlash DIMMs with WriteNow technology provide write latency as low as 3.3 µs, closing the gap between storage devices and system memory. RAID mirroring allows any two eXFlash DIMMs in the system domain to be bound together as a mirrored pair.

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Specifications

Part number and description	00FE000 - eXFlash™ 200 GB DDR3 Storage DIMM 00FE005 - eXFlash 400 GB DDR3 Storage DIMM
Form factor	LPDIMM
Storage type	Solid state drives
Performance*	
Interface	DDR3
Write latency	3.3 µs[†]
Capacity	
MLC	200 GB, 400 GB (scalable across multiple memory slots)
Limited warranty	1-year customer replaceable unit and onsite limited warranty, next business day 9x5, service upgrades available

Why System x

System x is the leading provider of x86 systems for the data center. The portfolio includes rack, tower, blade, dense and converged systems, and supports enterprise class performance, reliability and security. System x also offers a full range of networking, storage, software and solutions, and comprehensive services supporting business needs throughout the IT lifecycle.

For more information

To learn more about eXFlash DIMMs visit: **ibm.com**/systems/x/options/storage/solidstate/exflashdimm/ or contact your Lenovo representative or Business Partner.

[1] Performance measured under lab conditions. Actual customer results may vary.

[2] eXFlash DIMMs are incompatible with LRDIMMs.

* Up to stated speed. Based on internal testing; performance may vary depending upon drive capacity, host device, OS and application.

[†] Performance measured under lab conditions. Actual customer results may vary.

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