Lenovo System x3850 X6

Innovation for business advantage

Better Results

As businesses continue to expand into mobile and cloud arenas, mission-critical applications—and data center infrastructure—must do more. Superior IT solutions must easily scale-up for better performance, manage large masses of data, and make that crucial actionable insight available in real-time. It's a given that the volume of data you manage continues to grow, yet you remain constrained by a finite set of capital and operational resources. The Lenovo System x3850 X6, based on the sixth generation of Enterprise X-Architecture technology, helps you efficiently deliver better, more timely business results.

X6 platforms, with Intel® Xeon® processors E7-4800/8800 v4 series, can produce up to 26 percent faster compute performance than the last -generation of X6 systems with last-generation processors.* The X6 portfolio delivers large application virtualization and decreases infrastructure costs and complexity. Now you can design faster analytics engines, rein in IT sprawl and deliver information with high reliability. X6 mission-critical servers are fast, agile and resilient.

Fast Performance

The Lenovo System x3850 X6 delivers exceptionally fast application performance thanks to a combination of storage and memory technologies. The storage technologies include:

- NVMe PCIe SSDs that provide a high performance SSD form factor storage alternative that delivers lower latency and higher IOPs than traditional flash drives.
- Up to 6.0TB of DDR4 system memory for hosting essential mission-critical applications, implementing large virtual machines or running sizeable in-memory databases without compromise.
- io3 Enterprise Mainstream Flash Adapters, with up to 6.4TB capacity and a write latency of 15µs, offer application acceleration with analytics, database, VDI, cloud, hyperscale and big data applications.

Equipped with Intel® Xeon® processors E7-4800/8800 v4 series, the x3850 X6 can deliver up to 6.0TB of memory and 96 cores of processing power. You can host essential mission-critical applications, implement large virtual machines or run sizeable in-memory databases without compromise.

Server-integrated flash storage solutions such as PCIe flash storage adapters or NVMe PCIe SSDs address storage bottlenecks at the server to help reduce the need for investment in expensive SAN/NAS storage. Less dependency on SAN/NAS hardware and software results in reduced storage costs, and lower software licensing costs.

Agile Design

Change is inevitable and managing it is a must in order to achieve or maintain market leadership. Changes in IT infrastructure typically drive complexity and cost. Managing evolving technology, divergent customer needs and fluctuating costs requires an agile approach to platform design. The agility and adaptability of the X6 modular rack design enables you to design a fit-for-purpose solution that meets your needs. Also, you can realize infrastructure cost savings by hosting multiple generations of technology in a single platform—without compromising performance or capacity.† With X6 platforms:

- You can configure servers to fit the unique requirements of your applications and workloads; you can add, modify or upgrade X6 platforms easily with selectable modular "book" components. There are three types of X6 books—Storage Book, Compute Book and I/O Book.
- Instead of creating IT sprawl, you can scale capacity and performance from 4-socket to 8-socket to deliver twice the performance.
- You can realize significantly-faster time-to-value by using FastSetUp software for automated provisioning of a cluster of servers.

Resilient Platforms

The growth of new applications has ratcheted database processing and business analytics to the top of the list of prevalent x86 workloads. These workloads demand high velocity data delivery and continuous availability from the enterprise platforms on which they run. X6 servers feature advanced reliability, availability and serviceability (RAS) features. Differentiated X6 self-healing technology, proactively identifies potential failures and transparently takes necessary corrective actions:

- Advanced Page Retire—proactively protects applications from corrupt pages in memory, crucial for scaling memory to terabytes
- Processor High Availability—allows the platform to maintain access to networking, storage and server management during a processor failure
- Rolling Firmware Update Upward Integration Module—enables concurrent updating of the system firmware with no impact on application performance or availability
- RAS Upward Integration Module—enables the creation and management of policies to maintain high availability of virtual machines
- x3850 X6 modular design—reduces service time by enabling quick easy replacement of upgradeable or failed components.

These built-in technologies drive the outstanding system availability and uninterrupted application performance needed to host mission-critical applications.

Fast. Agile. Resilient.

Fast, agile and resilient, Lenovo System x X6 platforms not only help reduce costs and complexity, but also deliver the breakthrough performance and capacity that today's applications demand. X6 systems are the result of more than 15 years of X-Architecture investment and innovation aimed at surpassing industry standards.

Why Lenovo

Lenovo 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. Lenovo also offers a full range of networking, storage, software and solutions, and comprehensive services supporting business needs throughout the IT lifecycle.

Specifications

Form Factor/Height	Rack/4U
Processor (Max)	Up to four Intel® Xeon® processors E7-4800/8800 v4 series, up to 3.2GHz, up to 1866MHz DDR4 memory access, 24 cores per processor
Memory (Max)	Up to 6TB, 96 DIMM slots supporting 64GB LRDIMMs
Expansion Slots	Up to 11 PCIe; Gen3 (up to 11), Gen 2 (up to 2), up to five x16 slots; up to six full-length, full-height
Disk Bays (Total/Hot-swap)	Up to eight 2.5-inch Serial Attached SCSI (SAS) hard disk drives (HDDs) or SAS solid state drives (SSDs); or up to sixteen 1.8-inch eXFlash SSDs or up to 4 NVMe PCIe SSDs
Maximum Internal Storage	Up to 8 x 2.5-inch SAS/SATA HDDs or up to 8 x 2.5-inch SSDs or up to 16 x 1.8-inch eXFlash SSDs or up to four x 2.5-inch NVMe PCIe SSDs
Network Interface	One ML2 socket; ML2 card choices include: 4 x 1GbE copper or 2 x 10GbE SFP+ or 2 x 10GbE 10BaseT; 4 x 10GbE; 2 x 40GbE/FDR VPI adapter; Dedicated 1GbE on-board management port
Power Supply (Std/Max)	Up to four common 1400W or 900W AC or 4 x 750W DC
Hot-Swap Components	Half-length I/O Books, Full-length I/O Books, power supplies, fans, hard disk drives, SSDs
Raid Support	RAID 0, 1, 10 standard; optional RAID 5, 6, 50, 60
Systems Management	Lenovo XClarity, Alert on LAN 2, automatic server restart, ServerGuide, IMM2, light path diagnostics (independently powered), Wake on LAN, Dynamic System Analysis, Predictive Failure Analysis on storage, processors, adapter slots, VRMs, fans, power supplies and memory
Operating Systems Supported	Microsoft Windows Server, Red Hat Enterprise Linux Server, SUSE Linux Enterprise Server, VMware vSphere Hypervisor
Limited Warranty	3-year customer replaceable unit and onsite service, next business day 9×5, service upgrades available

* 26 percent improvement based on Intel preliminary projections in confidential documents.

† When a newer generation of processor and memory technology becomes available, Compute Books can be replaced with newer ones. (All Compute Books must use matching technology.)

Options

2.0TB NVMe	32GB RDIMM	2x40GbE ML2 Mezz LOM Adapter
90Y3236	**46W0833**	**00FP650**
NVMe flash drives deliver lower latency and higher throughput than SAS or SATA.	Mission-critical memory increases reliability for critical workloads.	Ideally suited for High Performance Computing (HPC), this adapter delivers high bandwidth, low latency, and excellent interconnect efficiencies.

For More Information

To learn more about the Lenovo System x3850 X6, contact your Lenovo representative or Business Partner or visit: **lenovo**.com/systems/servers

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