

# Lenovo Flex System X6 Compute Node Portfolio

Innovation for business advantage



## Drive Innovation

Today's IT organizations must deliver game-changing cloud, big data and analytics capabilities. But they're also expected to drive innovation with declining budgets. In addition, mission-critical applications are required to do more as businesses increase mobile and cloud deployments. Despite these challenges, IT solutions must be able to scale performance, manage large data and reliably make information available in real-time.

## X6 Computing

The Lenovo Flex System X6 Compute Node family consists of three servers from the Lenovo Flex System portfolio. The Lenovo Flex System x280 X6 is a two-socket scale-out server optimized for workloads that require large memory footprint and virtualization performance. The Lenovo Flex System x480 X6 is scalable to a 4-socket system optimized for applications that require more processor cores and memory for larger virtual machines and databases. The Lenovo Flex System x880 X6, the first scalable 8-socket blade server featuring powerful Intel® Xeon® processors E7-8800 v3 series, is ideal for workloads that demand the highest levels of capacity, performance, and resiliency, such as analytics and large databases.

## Investment Protection

With the Flex System x480 X6 and x880 X6 Compute Nodes, adding more x86 compute horsepower is fast and simple. Thanks to scalability connectors in the Flex System x480 X6 Compute Node, you can easily go from two sockets to four by adding another 2-socket x480 X6 compute node and connecting them using the front scalability connector. For even more demanding workloads, customers can scale with the Flex System x880 X6 Compute Node from a 2-socket compute node to a 4-socket compute node then to an 8-socket compute node. This turns the x880 X6 into an x86 powerhouse that can access up to 12 TB of memory.



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Add to this the modular blade design of the Lenovo Flex System chassis—designed for multiple generations of compute and networking technology over the next decade—and you can quickly see how the Flex System X6 Compute Nodes, featuring powerful Intel® Xeon® processors E7 series, enable you to build a system that is fast, agile and resilient.

## Enterprise Platforms

The growth of new applications has moved database processing and business analytics to the top of the list of crucial x86 workloads. These environments demand continuous uptime in order to rapidly handle the most valuable result—usable information based on massive amounts of business-critical data. The enterprise platforms that host these workloads must process and deliver data at a high velocity—with continuous availability.

The Flex System X6 compute node maximizes uptime by proactively identifying potential failures and taking necessary corrective actions. These unique System x features include:

- **Advanced Page Retire:** Protects applications from corrupt pages in memory, crucial for scaling memory to terabytes.
- **Processor high availability:** 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.

## 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

	Flex System x280 X6	Flex System x480 X6	Flex System x880 X6
<b>Processor</b>	Two Intel® Xeon® processors E7-2800 v2 series up to 2.8 GHz, up to 1600 MHz memory access, 15 cores per processor	Four Intel® Xeon® processors E7-4800 v3 series up to 2.2 GHz, up to 1600 MHz memory access, 14 cores per processor	Eight Intel® Xeon® processors E7-8800 v3 series up to 3.2 GHz, up to 1600 MHz memory access, 18 cores per processor
<b>Scalability</b>	Two processors max	Scalable to four processors max	Scalable to eight processors max
<b>L3 Cache (Max)</b>	Up to 37.5 MB		
<b>Memory (Max)</b>	Up to 3 TB, 48 DIMM slots supporting 64 GB LRDIMMs	Up to 6 TB, 96 DIMM slots supporting 64 GB LRDIMMs	Up to 12 TB, 192 DIMM slots supporting 64 GB LRDIMMs
<b>Ultra-Low Latency Flash Storage</b>	Up to 4.7 TB, 12 x 400 GB eXFlash DIMMs	Up to 9.4 TB, 24 x 400 GB eXFlash DIMMs	Up to 9.4 TB, 24 x 400 GB eXFlash DIMMs
<b>Expansion Slots</b>	Up to 4 PCIe Gen 3; up to 2 x16 slots; up to 2 x8 slots	Up to 8 PCIe Gen 3; up to 4 x16 slots; up to 4 x8 slots	Up to 16 PCIe Gen 3; up to 8 x16 slots; up to 8 x8 slots
<b>Disk Bays (Total/Hot-Swap)</b>	Up to two 2.5-inch Serial Attached SCSI (SAS) hard disk drives (HDDs) or SAS solid-state drives (SSDs)	Up to four 2.5-inch Serial Attached SCSI (SAS) hard disk drives (HDDs) or SAS solid-state drives (SSDs)	Up to eight 2.5-inch Serial Attached SCSI (SAS) hard disk drives (HDDs) or SAS solid-state drives (SSDs)



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<b>Maximum Internal Storage</b>	Up to 2.4 TB (2 x 2.5-inch SAS/SATA HDDs) or up to 3.2 TB (2 x 2.5-inch SSDs) or 6.25 TB (8 x 1.8-inch eXFlash SSDs); Plus up to 4.7 TB (12 eXFlash DIMMs)	Up to 4.8 TB (4 x 2.5-inch SAS/SATA HDDs) or up to 6.4 TB (4 x 2.5-inch SSDs) or 12.5 TB (16 x 1.8-inch eXFlash SSDs); Plus up to 9.4 TB (24 eXFlash DIMMs)	Up to 9.6 TB (8 x 2.5-inch SAS/SATA HDDs) or up to 12.8 TB (8 x 2.5-inch SSDs) or 25 TB (32 x 1.8-inch eXFlash SSDs); Plus up to 9.4 TB (24 eXFlash DIMMs)
<b>Network Interface</b>	Integrated 4 x10 GbE ports, optional 1/10/40 GbE, Fibre Channel and Infiniband adapters	Integrated 4 x10 GbE per compute node (up to 8 ports total), optional 1/10/40 GbE, Fibre Channel and Infiniband adapters	Integrated 4 x10 GbE per compute node (up to 16 ports total), optional 1/10/40 GbE, Fibre Channel and Infiniband adapters
<b>Hot-Swap Components</b>	HDDs, SSDs		
<b>Raid Support</b>	RAID 0, RAID 1; optional RAID 5		
<b>Systems Management</b>	IMM2, next-generation light path diagnostics, Predictive Failure Analysis (PFA), Lenovo XClarity		
<b>Operating Systems Supported</b>	Microsoft Windows Server, Red Hat Enterprise Linux Server, SUSE Linux Enterprise Server, VMware vSphere		
<b>Limited Warranty</b>	3-year customer replaceable unit and onsite service, next business day 9 x 5, service upgrades available		

## Options

<b>800 GB SATA 2.5-inch MLC G3HS Enterprise Value SSD</b> <b>00AJ410</b> High-performance, dense flash to accelerate applications	<b>1.8 TB 10K 12Gbps SAS 2.5-inch G3HS 512e HDD</b> <b>00NA441</b> Optimize density and performance with the latest 2.5-inch HDDs	<b>64 GB (1x64 GB, 8Rx4, 1.35V) PC3L-10600 CL9 ECC DDR3 1333 MHz LP LRDIMM</b> <b>46W0740</b> Add more memory to help improve the performance of all your workloads
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# Lenovo Flex System X6 Compute Node Portfolio

## For More Information

To learn more about the Flex System X6 Compute Node Portfolio, contact your Lenovo Business Partner or visit: [lenovo.com/systems/servers](http://lenovo.com/systems/servers)

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