

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.

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.



SPECIFICATIONS

	Flex System™ x280 X6	Flex System x480 X6	Flex System x880 X6
PROCESSORS (MAX)	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
L3 CACHE (MAX)	Up to 37.5 MB		
MEMORY (MAX)	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
SCALABILITY	Two processors max	Scalable to four processors max	Scalable to eight processors max
ULTRA-LOW LATENCY FLASH STORAGE	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
EXPANSION SLOTS	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
DRIVE BAYS (TOTAL/HOT-SWAP)	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)
MAXIMUM INTERNAL STORAGE	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)
NETWORK INTERFACE	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
HOT-SWAP COMPONENTS	HDDs, SSDs		
RAID SUPPORT	RAID-0, RAID-1; optional RAID-5		
SYSTEMS MANAGEMENT	IMM2, next-generation light path diagnostics, Predictive Failure Analysis (PFA), Lenovo XClarity™		
OPERATING SYSTEMS SUPPORTED	Microsoft Windows Server, Red Hat Enterprise Linux Server, SUSE Linux Enterprise Server, VMware vSphere		
LIMITED WARRANTY	3-year customer replaceable unit and onsite service, next business day 9 x 5, service upgrades available		



OPTIONS

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

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.

FOR MORE INFORMATION

About Lenovo, the Flex System X6 Compute Node Portfolio, or to contact your Lenovo representative or Business Partner, visit lenovo.com/servers

<p>NEED STORAGE?</p>	<p>Learn more about Lenovo Storage lenovo.com/systems/storage</p>
<p>NEED SERVICES?</p>	<p>Learn more about Lenovo Services lenovo.com/services</p>



© 2015 Lenovo. All rights reserved.

Availability: Offers, prices, specifications and availability may change without notice. Lenovo is not responsible for photographic or typographic errors. **Warranty:** For a copy of applicable warranties, write to: Warranty Information, 500 Park Offices Drive, RTP, NC, 27709, Attn: Dept. ZPYA/B600. Lenovo makes no representation or warranty regarding third-party products or services. **Trademarks:** Lenovo, the Lenovo logo, Flex System, ThinkServer, and VMready are trademarks or registered trademarks of Lenovo. Microsoft and Windows are registered trademarks of Microsoft Corporation. Intel, the Intel logo, Xeon and Xeon Inside are registered trademarks of Intel Corporation in the U.S. and other countries. Other company, product, and service names may be trademarks or service marks of others. Visit www.lenovo.com/lenovo/us/en/safecomp.html periodically for the latest information on safe and effective computing.

IBM x86 products are now products of Lenovo in the U.S. and other countries. Learn more at ibm.com/lenovo-acquisition