

Comparing the IBM eServer xSeries 440 with the xSeries 445

Positioning Information (withdrawn product)

Main

Feature	x440 server	x445 server
IBM chipset	First generation XA-32	Second generation XA-32
SMP scalability	Support configurations: <ul style="list-style-type: none"> Two-way, four-way, and eight-way using one x440 16-way SMP using two x440 chassis 	Support configurations: <ul style="list-style-type: none"> Two-way, four-way, and eight-way using one x445 16-way SMP using two x445 chassis Future 32-way support using four x445 chassis
Intel processors	Supported processors: <ul style="list-style-type: none"> Xeon MP 1.5 GHz, 1 MB L3 Xeon MP 1.9 GHz, 1 MB L3 Xeon MP 2.0 GHz, 2 MB L3 Xeon DP 2.4 GHz, 512 MB L2 (up to four-way SMP only) 	Supported processors: <ul style="list-style-type: none"> Xeon MP 2.0 GHz, 1 MB L3 Xeon MP 2.5 GHz, 1 MB L3 Xeon MP 2.8 GHz, 2 MB L3 Xeon DP 3.0 GHz, 512 MB L2 (up to four-way SMP only)
Xcel4 Server Accelerator Cache	<ul style="list-style-type: none"> 32 MB Xcel4 per four-way SMP Expansion Module 64 MB Xcel4 cache in eight-way configuration 128 MB Xcel4 cache in 16-way configuration 	<ul style="list-style-type: none"> 64 MB Xcel4 per SMP Expansion Module 128 MB Xcel4 cache in eight-way configuration 256 MB Xcel4 cache in 16-way configuration
Memory capacity	<ul style="list-style-type: none"> 512 MB and 1 GB DIMMs supported; 2 GB DIMMs by special bid only 16 GB RAM max per SMP Expansion Module Up to 32 GB RAM (64 GB in a 16-way) 	<ul style="list-style-type: none"> 512 MB, 1 GB, and 2 GB DIMMs supported 32 GB max per SMP Expansion Module Up to 64 GB (128 GB in a 16-way)
Type of memory used	<ul style="list-style-type: none"> PC133 SDRAM memory Four-way interleaving 	<ul style="list-style-type: none"> 200 MHz DDR Memory Two-way interleaving

Memory features	Active Memory includes: <ul style="list-style-type: none"> • Chipkill memory • Memory mirroring • Memory ProteXion (redundant bit steering) 	Active Memory includes: <ul style="list-style-type: none"> • Hot-add memory • Hot-swap memory • Chipkill memory • Memory mirroring • Memory ProteXion (redundant bit steering)
Internal hard drive capacity	<ul style="list-style-type: none"> • Two Ultra160 hard drive bays • Drives up to 73 GB supported (146 GB total) 	<ul style="list-style-type: none"> • Two Ultra320 hard drive bays • Drives up to 146 GB supported (292 GB total)
SCSI/RAID	<ul style="list-style-type: none"> • Adaptec dual channel Ultra160 SCSI • Optional ServeRAID for internal drives and external drives 	<ul style="list-style-type: none"> • LSI 1030 dual channel Ultra320 SCSI • Integrated RAID-1 (drive mirroring) for internal drive bays • Optional ServeRAID for internal drives and external drives
Gigabit Ethernet	<ul style="list-style-type: none"> • Single port • Broadcom BCM5700 10/100/1000 BASE-T 	<ul style="list-style-type: none"> • Dual port • Broadcom BCM5704 10/100/1000 BASE-T
PCI-X capacity	Six Active PCI-X (hot-swap) adapter slots, all 64-bit <ul style="list-style-type: none"> • Two support 33 or 66 MHz adapters • Two support 33, 66, or 100 MHz adapters, or one 133 MHz adapter and the other slot vacant • Two support 33, 66, 100, or 133 MHz adapters 	Six Active PCI-X (hot-swap) adapter slots, all 64-bit <ul style="list-style-type: none"> • Two support 33 or 66 MHz adapters • Two support 33, 66, or 100 MHz adapters, or one 133 MHz adapter and the other slot vacant • Two support 33, 66, 100, or 133 MHz adapters
RXE-100 support	Adds six or 12 PCI-X slots to the server: <ul style="list-style-type: none"> • Supported attachment to one x440 only • Sharing an RXE among two x440 servers not supported 	Adds six or 12 PCI-X slots to the server: <ul style="list-style-type: none"> • Supported sharing between two x445s • Can be shared between 2x four-way, 2x eight-way, and 2x 16-way x445 servers • Maximum one RXE-100 for each x445 server
CD-ROM	<ul style="list-style-type: none"> • 24x CD-ROM 	<ul style="list-style-type: none"> • 8x DVD-ROM
Service processor	<ul style="list-style-type: none"> • Remote Supervisor Adapter standard 	<ul style="list-style-type: none"> • Remote Supervisor Adapter standard • Future support for Remote Supervisor Adapter II
Video controller	<ul style="list-style-type: none"> • S3 Savage 4, 8 MB 	<ul style="list-style-type: none"> • ATI Rage XL, 8 MB
Serial port	<ul style="list-style-type: none"> • No stand-alone serial port includes • Can use the serial port of the Remote Supervisor Adapter 	<ul style="list-style-type: none"> • Includes a cable to route a serial port to the rear of the server, occupying a PCI slot • Can also use the serial port of the Remote Supervisor Adapter

Rack size	<ul style="list-style-type: none"> • 4U rack optimized 	<ul style="list-style-type: none"> • 4U rack optimized
Warranty	<ul style="list-style-type: none"> • 1 year, 24x7, same business day response, parts & labor 	<ul style="list-style-type: none"> • 3 year, 9x5, next business day response, parts & labor
Operating system support	<p>Supported:</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 (Standard, Enterprise, Datacenter) • Microsoft Windows 2000 (Server, Advanced, Datacenter) • Microsoft Windows NT 4.0, Enterprise Edition • Novell NetWare 6.0 • Red Hat Enterprise Linux AS 2.1 • SuSE Linux Enterprise Server 8.0 • VMware ESX Server 1.5.2 (plans to support 2.x) • SCO UnixWare 7.1.3 	<p>Supported:</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 (Standard, Enterprise, Datacenter) • Microsoft Windows 2000 (Server, Advanced, Datacenter) • Microsoft Windows NT 4.0, Enterprise Edition • Novell NetWare 6.0 • Red Hat Enterprise Linux AS 2.1 • SuSE Linux Enterprise Server 8.0 • VMware ESX Server 2.0 (1.5x not supported) • SCO UnixWare 7.1.3

Related product families

Product families related to this document are the following:

- [4-Socket Rack Servers](#)
- [Large Memory Capacity Servers](#)

Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service. Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

Lenovo (United States), Inc.
8001 Development Drive
Morrisville, NC 27560
U.S.A.
Attention: Lenovo Director of Licensing

LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. Lenovo may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary. Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk. Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

© Copyright Lenovo 2025. All rights reserved.

This document, TIPS0267, was created or updated on August 22, 2003.

Send us your comments in one of the following ways:

- Use the online Contact us review form found at:
<https://lenovopress.lenovo.com/TIPS0267>
- Send your comments in an e-mail to:
comments@lenovopress.com

This document is available online at <https://lenovopress.lenovo.com/TIPS0267>.

Trademarks

Lenovo and the Lenovo logo are trademarks or registered trademarks of Lenovo in the United States, other countries, or both. A current list of Lenovo trademarks is available on the Web at <https://www.lenovo.com/us/en/legal/copytrade/>.

The following terms are trademarks of Lenovo in the United States, other countries, or both:

Lenovo®

xSeries®

The following terms are trademarks of other companies:

ATI™ is a trademark of Advanced Micro Devices, Inc.

Intel® and Xeon® are trademarks of Intel Corporation or its subsidiaries.

Linux® is the trademark of Linus Torvalds in the U.S. and other countries.

Microsoft®, Windows Server®, and Windows® are trademarks of Microsoft Corporation in the United States, other countries, or both.

IBM® is a trademark of IBM in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.