

# The new ThinkStation D10 with high-powered graphics support delivers the ultimate performance workstation

Description .....	2
Warranty information .....	3
Services .....	4
Technical information .....	4
Terms and conditions .....	8
Prices .....	9



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## At a glance

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Benefits of the ThinkStation D10 systems include:

- Microsoft Windows Vista Business 64
- Outstanding performance and excellent room for growth:
  - High-performance Intel processors (dual processor support)
  - ECC system memory
  - Outstanding high-performance video graphics adapters
  - Serial ATA and SAS device support
- Innovative mechanical design for easy upgrades and service support
- ThinkVantage technologies that can help:
  - Make computing simpler
  - Lower your total cost
  - Increase PC availability and control

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## Overview

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The new ThinkStation™ D10 series from Lenovo™ include feature improvements in security, systems, recovery, and location. These new models offer a blend of essential features and technology, including:

- Microsoft® Windows Vista® Business 64
- Enhanced ECC memory
- Integrated dual Gigabit Ethernet
- High-performance Intel® processor technology with dual processor support
- High-performance video graphics adapters
- Numerous data protection tools

### Leadership design

- Systems include a fully integrated recovery environment that works when your operating system is not working
- Innovative mechanical design for easy upgrades and service support

### Easy to use and manage

- ThinkVantage™ Rescue and Recovery™ software: One-button recovery and restore solution that includes a set of self-recovery tools to help users diagnose, get help, and recover from system crashes

quickly, even if the primary operating system will not boot

- ThinkVantage Productivity Center: Guides you to a host of information and tools to help you set up, understand, maintain, and enhance your computer
- System Migration Assistant™: Enables system administrators and individual users to migrate a work environment (operating system preferences, files and folders, customized application settings, and user accounts) from one computer to another
- System Update: Software program that helps you keep the software on your system current by downloading and installing software packages<sup>1</sup> (applications, device drivers, BIOS flashes, and other updates)
- Easy-to-service chassis design helps maximize uptime Productivity Center program
- Easy-to-access high-speed USB 2.0 ports

### **Optimized for connectivity**

Integrated dual Gigabit Ethernet

### **IBM service and support**

Worldwide service and support<sup>2</sup>

For up-to-date marketing and technical information, visit

<http://www.lenovo.com>

<sup>1</sup> Requires Internet access account, not included. Support is available during the limited warranty period.

<sup>2</sup> International Warranty Service (IWS) is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

### **Planned availability**

March 2008

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## **Description**

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New ThinkStation D10 systems offer industry-leading technologies, excellent management capabilities, and IBM service and support.

### **Industry-leading technologies**

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- New ThinkStation tower form factor with seven slots and nine bays
- Intel high-performance processor technology (dual processor support)
- ECC memory standard with up to 32 GB maximum system memory supported
- Integrated dual Gigabit Ethernet
- Innovative toolless mechanical design for easy upgrades and service support

### **Leading business tools and data protection software**

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- Lenovo password management is easy to use. It enables secure access to your entire system and Web pages.
- Lenovo systems include a fully integrated recovery environment that works when your operating system is not working.
- Lenovo systems manage everything that changes when your location changes, not just your Internet connection.
- Norton Client Security, with 90 days of virus definition updates, is a comprehensive antivirus product for Microsoft Windows® operating systems that can simply and reliably detect and remove viruses from your computer.

## Diagnostics

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PC-Doctor diagnoses common problems on major system components. Diagnostic tests are run either locally or remotely through the Internet or an intranet.

## Hardware

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- Support for up to 32 GB of ECC DDR2 SDRAM system memory
- Integrated dual Gigabit Ethernet
- DVD Recordable (select models)
- Standard audio onboard
- Serial ATA HDD and SAS HDD support
- Advanced Configuration and Power Interface (ACPI) support
- Six USB 2.0 ports — two front and four rear for easy connection of peripherals
- Mouse, keyboard, and VGA monitor ports
- Line-out, line-in, microphone audio jack-in, and headphone-out ports

## (7 x 9) Tower models

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- Two full-length PCI Express x16
- One full-length PCI Express x4
- One half-length PCI Express x4
- Two full-length PCI-X
- One full-length PCI v2.3
- Five 3.5-inch slim internal hidden bays (HDD)
- One 3.5-inch slim external accessible bay (FDD or card reader)
- Three 5.25-inch external half-high bays (optical drives)

## Other software tools

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The ThinkStation D10 includes a unique set of software tools to help you manage your desktop computing assets.

**Backup copies of your software:** The ThinkStation D10 has a product recovery program resident on the system HDD. The ThinkVantage Rescue and Recovery program can back up your system and restore it to its previously saved level.

A hidden service partition will provide preload recovery.

For up-to-date marketing and technical information on your ThinkStation D10 systems, visit

<http://www.lenovo.com/support>

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## Warranty information

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For a copy of applicable product warranties, contact your authorized Lenovo Reseller or Lenovo representative.

Lenovo makes no representation or warranty regarding third-party products or services.

Telephone support may be subject to additional charges, even during the limited warranty period. For Lenovo machines with on-site labor, your service provider will attempt to diagnose and resolve the problem remotely before sending a technician.

All offers are subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time without notice. Lenovo is not responsible for photographic or

typographic errors.

### **Accessibility by people with disabilities**

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A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

<http://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/lenovo-bidx?OpenForm>

### **Trademarks**

Intel is a registered trademark of Intel Corporation.

Microsoft, Windows Vista, and Windows are registered trademarks of Microsoft Corporation.

Lenovo, ThinkStation, ThinkVantage, Rescue and Recovery, and System Migration Assistant are trademarks of Lenovo in the United States, other countries, or both

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

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## **Services**

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### **Global Technology Services**

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IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an On Demand Business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for Lenovo™ and many non-Lenovo offerings.

For details on available services, contact your IBM representative or visit

<http://www.ibm.com/services/>

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

<http://www.ibm.com/services/continuity>

For details on education offerings related to specific products, visit

<http://www.ibm.com/services/learning/index.html>

Select your country, and then select the product as the category.

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## **Technical information**

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### **HDD specifications**

Formatted capacity(3)	160 GB	250 GB	146 GB
Interface	Serial ATA	Serial ATA	SAS
Rotational Speed	7200 rpm	7200 rpm	15000 rpm
Read/write cache	Yes	Yes	Yes

(3) GB equals 1,000,000,000 bytes when referring to storage capacity. Accessible capacity is less; up to 4 GB is used in service partition.

### **Mechanical specifications**

- Width: 210 mm (8.0 in)

- Height: 485 mm (19.1 in)
- Depth: 579 mm (22.8 in)

#### **Electrical power specifications**

- Low Range Minimum 100 V ac
- Low Range Maximum 127 V ac
- Input frequency range 50/60 Hz
- Voltage switch auto-sensing
- High Range Minimum 200 V ac
- High Range Maximum 240 V ac
- Input frequency range 50/60 Hz
- Voltage switch auto-sensing

**Note:** Power consumption and heat output vary depending on the number and type of optional features installed and the power-management optional features in use.

#### **Air temperature specifications:**

- System on at 3000 ft: 10 to 35°C (50 to 95°F)
- System on at 3000 ft — 7000ft: 10 to 32°C (50 to 89.6°F)
- System off: 10 to 43°C (50 to 110°F)

#### **Noise level specifications:** Declared acoustical noise emissions

- Declared (upper-limit) acoustics for SATA systems
  - Idle: 4.1 bels
  - Operating: 4.2 bels
- Declared (upper-limit) acoustics for SAS systems
  - Idle: 4.2 bels
  - Operating: 4.7 bels

**Note:** These levels were measured in controlled acoustical environments according to the procedures specified by the American National Standards Institute (ANSI) S12.10 and ISO 7779 and are reported in accordance with ISO 9296. Actual sound-pressure levels in a given location might exceed the average values stated because of room reflections and other nearby noise sources. The declared sound-power levels indicate an upper limit, below which a large number of computers will operate.

Selected models of the ThinkStation™ D10 systems are designed to meet the EPA ENERGY STAR requirements.

**Note:** As an ENERGY STAR partner, Lenovo has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

#### **Industry standards:** ThinkStation D10 systems conform to the following industry standards:

- ATAPI
- DMI v2.0
- IEEE 802.3 (Ethernet)
- JEDEC 240-pin DIMM memory
- PC 2001
- USB v2.0

**Certifications:** ThinkStation D10 systems carry the following certifications:

- EMC
  - FCC — Part 15, Class B (US, Canada)
  - CE Mark (Europe)
  - VCCI V-3/V-4, Class B (Japan, radiated)
  - JEITA (Japan, harmonic)
  - ACA C-Tick (Australia, New Zealand)
  - BMSI — CNS13438, Class B (Taiwan)
  - MCI (Korea)
- Safety
  - UL (US)
  - CUL (Canada)
  - CB Certificate (Worldwide)
  - TUV-GS (Europe)
  - NOM (Mexico)
  - SABS (South Africa)
  - PST (Singapore)
  - IRAM (Argentina)
- EMC and Safety
  - GOST (Russia)
  - SASO (Saudi Arabia)
- Other
  - ENERGY STAR (US)
  - PC Green Label (Japan)
  - ISO 9241-3 capable (full compliance requires a certified monitor and fonts)

ThinkStation D10 systems may carry other certifications that are not listed above.

## **Operating environment**

### **ThinkStation D10 tower systems**

- Relative humidity
  - System on: 10% to 80%
  - System off: 10% to 90%
  - Transit: 10% to 90%
  - Max altitude: 7000 ft (2133.6 m)

## **Software requirements**

**Operating system support:** ThinkStation D10 systems are either preloaded or tested for compatibility with the following operating systems. Lenovo will provide problem determination for this operating system and device driver support for the hardware installed from the factory.

Preloaded: Microsoft® Windows Vista® Business 64

Tested software:

- Microsoft Windows Vista Business 32 and 64

- Microsoft Windows® XP Professional
- Linux™
- PC DOS (limited)

Operating system video graphics driver support is required for graphics capabilities. Although these systems have been compatibility tested with the above operating systems, additional video driver support may be required from the operating system vendor.

Other operating systems have not been tested and Lenovo does not provide problem determination or device driver support.

**BIOS:** Flash ROM supports Compatibility BIOS (CBIOS) and POST.

**Plug-and-play support:** Systems support the plug-and-play specifications that make it easier for you to install, upgrade, and make changes to the PC. Plug-and-play systems that use plug-and-play adapter cards are self-configuring.

**ACPI:** ACPI provides an industry-standard method to control system-level resources via the operating system.

**BIOS setup utility:** The BIOS setup utility program implements power-saving functions.

### **Planning information**

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**Customer responsibilities:** Systems are designated as customer setup (CSU). CSU allowance is one day.

**Cable orders:** Except for system power, keyboard, and mouse connections, there are no cabling requirements. All cables are provided with the system unit. Instructions are provided as part of initial setup.

**Installability:** Following the set up instructions, attach the keyboard and peripherals then turn on the power. Setup is run after the computer has successfully completed its initial self tests.

The setup utility resides in flash ROM. In some instances, you are prompted to run this utility, or you can invoke it by pressing the F1 key when prompted during system startup.

**Packaging** ThinkStation D10 systems: System unit carton

- System unit
- Hardware assembly package
  - Power cord
  - Keyboard
  - Mouse
  - Publications

### **Security, auditability, and control**

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The ThinkStation D10 systems support the following security features:

- User and administrator passwords for BIOS access
- Support for the addition of an integrated cable lock (Kensington lock)
- Startup sequence control
- Startup without keyboard, mouse, diskette drive
- Unattended start mode
- Diskette and hard disk I/O control
- Serial and parallel port I/O control

- Security profile by device

The following is also visible on the outside of the system unit:

- Machine type and model
- System serial number

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

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## Terms and conditions

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### **IBM credit corporation financing:** Yes

To obtain copies of the Lenovo Statement of Limited Warranty, contact your reseller or Lenovo. In the United States, call 800-426-7378 or write to:

Warranty Information  
500 Park Offices Drive  
Research Triangle Park, NC 27709  
Attn: Dept ZPYA/B500

### **Warranty period for machine type 6493**

- System hardware — Three years on parts and labor

Optional Lenovo features initially installed in a Lenovo system carry the same warranty period as the system. If installed after the initial system installation, they carry the balance of the system warranty or the optional feature warranty, whichever is greater.

**Warranty service:** If required, your service provider provides repair or exchange service depending on the type of warranty service specified below for the machine. A service technician will attempt to resolve your problem over the telephone, you must follow the problem determination and resolution procedures. Scheduling of service will depend upon the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations, additional charges may apply outside your service provider's normal service area, contact your local service provider representative or your reseller for country and location specific information.

**Customer Replaceable Unit (CRU) service:** Lenovo will ship CRUs to you for you to install, Tier 1 CRUs are easy to install whereas Tier 2 CRUs require some technical skill and tools. CRU information and replacement instructions are shipped with your machine and are available from Lenovo at any time on your request. You may request that a service provider install CRUs, at no additional charge, under the type of warranty service designated for your machine. Lenovo specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned. When return is required, return instructions and a container are shipped with the replacement CRU, and you may be charged for the replacement CRU if Lenovo does not receive the defective CRU within 30 days of your receipt of the replacement.

**On-site Service:** Your service provider will either repair or exchange the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the machine. The area must be clean, well-lit, and suitable for the purpose. For some machines, certain repairs may require sending the machine to a designated service center.

Call 800-426-7378 to assist with problem isolation for hardware to determine if warranty service is required. Telephone support may be subject to additional charges, even during the limited warranty period.

**International Warranty Service (IWS):** IWS is available during the warranty period to



customers who travel or relocate to countries where their computer is sold and serviced by a Service Provider authorized to perform warranty service. Eligible Lenovo computers are identified by their four-digit machine type

You can obtain IWS through the method of service, such as CRU, depot, carry-in or on-site, provided in the servicing country. Service methods and procedures vary by country, and some service or parts may not be available in all countries. Service centers in certain countries may not be able to service all models of a particular machine type. In addition some countries may have fees and restrictions that apply at the time of service.

**Note:** Due to the earth's magnetic field, CRT monitors are manufactured to work in northern, southern, and equatorial regions of the earth and may not produce a satisfactory image when moved between them. Any required adjustment (if possible) is not covered under IWS and may be subject to a chargeable action. The magnetic field does not affect flat-panel LCD monitors and ThinkPad® LCD displays.

**Licensing:** Programs included with this product are licensed under the terms and conditions of the license agreements that are shipped with the system.

### **ThinkPlus™ and Lenovo Care maintenance services**

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**Warranty and maintenance options:** The announced products may be eligible for ThinkPlus and Lenovo Care maintenance services, convenient prepackaged offerings for warranty service upgrades and maintenance services.

Refer to the Prices section for information on the availability of ThinkPlus and Lenovo Care maintenance services.

**Field-installable features:** Yes

**Model conversions:** No

**Machine installation:** Customer setup. Customers are responsible for installation according to the instructions Lenovo provides with the machine.

**Graduated program license charges apply:** No. These products do not contain Licensed Internal Code or Licensed Machine Code.

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## Prices

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	Order number	Machine type/ model	List price(4)
ThinkStation D10 (7 x 9 Tower Form Factor)			
Intel (R) Xeon Quad Core E5430			
1-2.66 GHz, 12 MB cache, 2048 MB memory (2 DIMMs), 2-250 GB HDDs(5), Windows Vista Business 64(6), Memory Card Reader, DVD Recordable, 512 MB nVidia Quadro FX-1700 Graphics Adapter	649319U	6493-19U	\$3,076
1-2.66 GHz, 12 MB cache, 4096 MB memory (4 DIMMs), 2-250 GB HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 512 MB nVidia Quadro FX-1700 Graphics Adapter, Creative Labs X-Fi Sound Adapter	649323U	6493-23U	3,534
Intel Xeon Quad Core E5440			
1-2.83 GHz, 12 MB cache, 4096 MB memory (2 DIMMs),	649321U	6493-21U	5,376

2-146 GB SAS HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 768 MB nVidia Quadro FX-4600 Graphics Adapter			
2-2.83 GHz, 12 MB cache, 4096 MB memory (2 DIMMs), 2-146 GB SAS HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 768 MB nVidia Quadro FX-4600 Graphics Adapter, Creative Labs X-Fi Sound Adapter	649331U	6493-31U	6,899
2-2.83 GHz, 12 MB cache, 4096 MB memory (2 DIMMs), 3-146 GB SAS HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 768 MB nVidia Quadro FX-4600 Graphics Adapter, Creative Labs X-Fi Sound Adapter	649332U	6493-32U	7,279
Intel Xeon Quad Core X5460			
2-3.16 GHz, 12 MB cache, 4096 MB memory (2 DIMMs), 2-146 GB SAS HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 768 MB nVidia Quadro FX-4600 Graphics Adapter	649322U	6493-22U	7,586
2-3.16 GHz, 12 MB cache, 8192 MB memory (4 DIMMs), 2-146 GB SAS HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 768 MB nVidia Quadro FX-4600 Graphics Adapter	649326U	6493-26U	8,301
2-3.16 GHz, 12 MB cache, 16384 MB memory (8 DIMMs), 3-146 GB SAS HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 768 MB nVidia Quadro FX-4600 Graphics Adapter	649333U	6493-33U	9,931
2-3.16 GHz, 12 MB cache, 2048 MB memory (2 DIMMs), 2-250 GB HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 2-256 MB nVidia Quadro NVS-290 Graphics Adapters	649327U	6493-27U	5,301
Intel Xeon Quad Core E5420			
1-2.50 GHz, 12 MB cache, 2048 MB memory (2 DIMMs), 2-250 GB HDDs, Windows Vista Business 64, Memory Card Reader, DVD Recordable, 512 MB nVidia Quadro FX-1700 Graphics Adapter	649325U	6493-25U	2,856
Intel Xeon Quad Core E5405			
2-2.00 GHz, 12 MB cache, 4096 MB memory (4 DIMMs), 2-500 GB HDDs, Windows Vista Business 64, DVD Recordable, Memory Card Reader, 512 MB nVidia Quadro FX-1700 Graphics Adapter	649317U	6493-17U	3,276
Intel Xeon Quad Core E5440			
2-2.83 GHz, 12 MB cache, 16384 MB memory (8 DIMMs),	649318U	6493-18U	11,700

4- 146 GB SAS HDDs, Windows Vista Business 64, Blu-ray, Memory Card Reader, 2- 768 MB nVidia Quadro FX-4600 Graphics Adapters, Creative Labs X-Fi Sound Adapter, Fingerprint reader keyboard

- (4) List price does not include tax or shipping and is subject to change without notice. Reseller prices may vary.
- (5) GB equals 1,000,000,000 bytes when referring to storage capacity. Accessible capacity is less; up to 4 GB is used in service partition.
- (6) Some software may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

### **ThinkPlus Services for warranty and maintenance**

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The following offerings apply to all models of machine type 6493. The models are 19U, 21U, 22U, 23U, 25U, 26U, 33U, 27U, 31U, 32U, 17U, 18U, and CTO.

Description	Part number
4-Year Onsite 9x5 NBD Upgrade	43R8983
5-Year Onsite 9x5 NBD Upgrade	43R8987

For ServiceELECT (ESA) maintenance service charges, contact IBM Global Services at 888-426-4343.

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<http://www.ibm.com/financing>

IBM Global Financing offerings are provided through IBM Credit LLC in the United States, and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Rates are based on a customer's credit rating, financing terms, offering type, equipment type, and options, and may vary by country. Other restrictions may apply. Rates and offerings are subject to change, extension, or withdrawal without notice.

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