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THINKSTATION  
E SERIES

# TRUE WORKSTATION PERFORMANCE AT AN UNBEATABLE PRICE

## THINKSTATION® E20—TOP REASONS TO OWN

- BETTER VALUE
- HIGHER RELIABILITY
- STRONGER PERFORMANCE
- EASIER ON THE ENVIRONMENT



## THE LENOVO® THINKSTATION® E20

Meet the new Lenovo ThinkStation E20, a power-packed workstation with beyond-desktop attributes in reliability and performance. The E20 is equipped to meet specialized needs such as coding and compiling business applications, designing graphics, 3D modeling and producing engineering designs. The ThinkStation E20 packs true workstation performance at an unbelievably affordable price.

Enhance your workstation performance with a new family of Intel processors that support unparalleled professional-grade integrated graphics, or enjoy eye-popping visuals with the latest discrete graphics from NVIDIA®. Take advantage of the ThinkStation's full potential in 2D / 3D imaging capabilities with Digital Content Creation (DCC) and Computer Aided Design (CAD) applications and begin raising the bar on productivity today.

The ThinkStation E20 is the ultimate tool for quickly boosting ROI. Certification of your specialized applications from independent software vendors yields an extra layer of reliability on your mission-critical projects. Achieve greater reliability and protection against memory-related errors with DDR3 ECC memory, thereby improving system uptime and maximizing your productivity. The E20 is also equipped with stronger storage capabilities, offering up to two hard disk drives with capacity up to 2TB and RAID standard, resulting in blazing fast, yet reliable performance. The small-form factor design with front and rear handles makes it convenient for you to move the E20 with ease, thus providing excellent portability should the need arise.

The ThinkStation E20 is the environmental champion of its class, designed to provide you with improved performance and at the same time warranting adherence to environmental safety norms. It is GREENGAURD® certified for preserving indoor air quality and features many Energy Star® 5.0 models. The E20 is certified Gold by the EPEAT® organization and complies with REACH for meeting the required environmental performance criteria and ensuring prudent use of energy. Built with over 65% recycled plastic, the ThinkStation E20 re-affirms Lenovo's strong commitment to environmental protection.

The ThinkStation E20 is designed to cater to your specialized needs, at the same time providing superior reliability and support to your applications.

The ThinkStation E20's exceptional performance, cutting-edge technology, price-affordability and environment friendliness coupled with Lenovo's outstanding services, make it the right choice for your business's design and computational needs.

### LENOVO ENHANCED EXPERIENCE FOR WINDOWS® 7. FAST. SECURE. BUILT FOR BUSINESS.

Discover a better way of doing business with the new Lenovo Enhanced Experience for Windows® 7 on Think PCs. Faster, more durable and greener Think PCs are optimized for Windows® 7 to deliver improved ease of use. It enhances productivity and foolproof security that your business cannot do without.

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### HIGH-PERFORMANCE FEATURES

The ThinkStation E20:

- Supports NVIDIA® Quadro® professional discreet graphics up to the FX1800 for serious 3D modeling horsepower
- Equipped with the latest Intel® technology with professional-grade integrated graphics to allow customers to save on cost, while maintaining performance on entry-class applications
- ISV certified for extra application stability, reliability and support
- Higher clock-speed Dual Core CPUs allow better value on single/dual-threaded applications

### CONVENIENCE FEATURES

The ThinkStation E20:

- Pre-loaded with Genuine Windows® 7 Professional Lenovo Enhanced Experience, resulting in faster boot up and shut-down times and convenient back-up and diagnostic features, maximizing system uptime while minimizing maintenance time and cost
- Equipped with a tool-less chassis for easy serviceability
- Offers excellent mobility with front and rear handles

### GREEN ECO-FRIENDLY FEATURES

The ThinkStation E20:

- Features more Energy Star® 5.0 and EPEAT® Gold compliant models
- Preserves indoor air quality through GREENGUARD® certification
- Built with 65% recycled plastics
- Cool and Quiet

## SERVICE OFFERINGS

### BASE WARRANTY

- 3 years

### UPGRADE OPTIONS

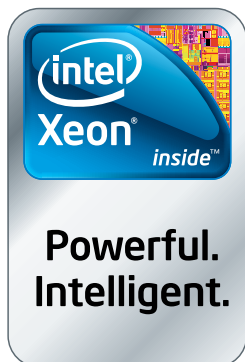
- 3-year onsite service 9 x 5 with 4-hour average response<sup>1</sup>
- 3-year onsite service 24 x 7 with 4-hour average response<sup>1</sup>
- 4-year onsite service 9 x 5 NBD<sup>1</sup>
- 4-year onsite service 9 x 5 with 4-hour average response<sup>1</sup>
- 4-year onsite service 24 x 7 with 4-hour average response<sup>1</sup>

### POST WARRANTY

- 1-year onsite service 9 x 5 NBD<sup>2</sup>
- 2-year onsite service 9 x 5 NBD<sup>2</sup>
- 1-year onsite service 9 x 5 with 4-hour average response<sup>1</sup>
- 2-year onsite service 9 x 5 with 4-hour average response<sup>1</sup>
- 1-year onsite service 24 x 7
- 2-year onsite service 24 x 7

### VALUE-ADDED SERVICES

- Online Data Backup (OLDB)
- ThinkPlus™ Priority Support
- Non-Return Hard Drive Service
- 3-year onsite service + Hard Drive Retention



<sup>1</sup> 4-Hour response is available in select countries only: US, Canada, Japan and Singapore. Malaysia, Philippines and Indonesia have 9 x 5 x 4 response.  
<sup>2</sup> Next Business Day

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# LENOVO THINKSTATION® E20 WORKSTATION SPECIFICATIONS

## MODEL NAME – E20

### Processor

- Intel® Xeon® X3430 (2.40GHz / Quad / 8M cache / 1333MHz Memory Support / 95W)
- Intel® Xeon® X3440 (2.53GHz / Quad / 8M cache / 1333MHz Memory Support / 95W)
- Intel® Xeon® X3450 (2.67GHz / Quad / 8MB cache / 1333MHz Memory Support / 95W)
- Intel® Xeon® X3460 (2.80GHz / Quad / 8MB cache / 1333MHz Memory Support / 95W)
- Intel® Xeon® X3470 (2.93GHz / Quad / 8M cache / 1333MHz Memory Support / 95W)
- Intel® Celeron® G1101 (2.26GHz / Dual / 3MB cache / 1066 MHz Memory Support / 73W / Integrated Graphics)
- Intel® Pentium® G6950 (2.80GHz / Dual / 3MB cache / 1066 MHz Memory Support / 73 W / Integrated Graphics)
- Intel® Core™ i3-530 (2.93GHz / Dual / 4MB cache / 1333 MHz Memory Support / 73W / Integrated Graphics)
- Intel® Core™ i3-540 (3.06GHz/ Dual / 4MB cache / 1333 MHz Memory Support / 73 W / Integrated Graphics)
- Intel® Core™ i5-650 (3.20GHz / Dual / 4MB cache / 1333 MHz Memory Support / 73W / Integrated Graphics)
- Intel® Core™ i5-660 (3.33GHz / Dual / 4MB cache / 1333 MHz Memory Support / 73W / Integrated Graphics)
- Intel® Core™ i5-670 (3.46GHz / Dual / 4MB cache / 1333 MHz Memory Support / 73W / Integrated Graphics)

### Preloaded Operating System

- Genuine Windows® 7 Professional 64 downgrade to Genuine Windows® XP Professional
- Genuine Windows® 7 Professional 64  
Lenovo Enhanced Experience

### Supported Operating Systems

- Red Hat® Enterprise Linux® 5

### Chipset

- Intel® 3450

### Form Factor

- Tower

### Machine Type

- 4220, 4222, 4215

### Memory

- DDR3 1333MHz ECC UDIMM capacities: 1GB, 2GB, 4GB,
- DDR3 1333MHz Non-ECC UDIMM capacities: 1GB, 2GB

### Optical Drive

- DVD-ROM Drive - 16x / 48x (SATA)
- DVD Burner/CD-RW Rambo 8 (SATA)
- Blu-ray™ Disc Burner

### Serial ATA Hard Drive

#### SATA - 3.5" - 7200 RPM - 3GB/s

- 250GB SATA - 7200 RPM, 3GB/s, 8MB cache
- 500GB SATA - 7200 RPM, 3GB/s, 16MB cache
- 1TB SATA - 7200 RPM, 3GB/s, 32MB cache

#### SATA - 2.5" - 10K RPM

- 150GB SATA - 10000 RPM, 3GB/s, 16MB cache
- 300GB SATA - 10000 RPM, 3GB/s, 16MB cache

#### SSD - 1.8" - MLC HDD

- 128GB Solid State Drive (SSD) - MLC HDD

### Integrated Communications

- Integrated Intel® Ethernet

### Power Supply

- 280W 80 plus Bronze Power Supply

### System Weight (maximum)

- 11.2 Kgs / 24.7 lbs

### Mouse

- Optical Wheel Mouse (400 DPI), USB - red wheel

### Ports

#### Rear I/O

- PS/2 : 2 (Mouse / Keyboard) – Optional only
- Parallel (LPT) : None
- Serial (COM) : 1
- Ethernet : 1 Gigabit (RJ45)
- USB 2.0 : 6 (Additional 2 optional via PCI slot)
- Analog Audio : 3 ports (line-in, line-out, mic)
- Digital Audio : None
- Video (with Clarkdale only) : 1 VGA  
: 1 Display Port

#### Front I/O

- USB 2.0 : 2
- IEEE 1394 : None
- Audio : Headphone, Microphone

### Dimensions

	mm	inches	notes
• <b>Width</b>	174.8	6.88	
• <b>Height</b>	425.18	16.74	Floor to top of handle
• <b>Height</b>	376.18	14.81	Floor to top without handle
• <b>Depth</b>	430.8	16.96	Without cable

### Graphic Card

#### 2D adapters <sup>2</sup>

- 256MB NVIDIA® NVS295 (2xDP)
- 512MB NVIDIA® NVS450 (4xDP)

#### 3D adapters <sup>2</sup>

- 256MB NVIDIA® FX380 (2xDVI)
- 512MB NVIDIA® FX580 (DVI + DP + DP) <sup>1</sup>
- 768MB NVIDIA® FX1800 (2xDP, 1xDVI) <sup>1</sup>

<sup>1</sup> Only two of three monitor parts are active

<sup>2</sup> DisplayPort to Single-Link DVI-D monitor cables are available that allows attachment of DVI digital monitors



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# LENOVO® THINKSTATION® E20 OPTIONS

## MONITORS AND MONITOR ACCESSORIES



- Lenovo ThinkVision™ L2440p Monitor (4420HB2)**
- 24" Wide with 1920 x 1200 resolution for productivity
  - VGA + DVI-D interfaces and USB Hub for connection flexibility
  - EPEAT® Gold\*, TCO Displays 5.0 certified



- Lenovo ThinkVision L2251p Monitor (2572HD6)**
- 22" Wide with 1680 x 1050 resolution
  - VGA + DisplayPort interfaces for easy dual monitor display
  - Full function ergonomic stand
  - 29% more efficient than ENERGY STAR® 5.0 Standard

## PRODUCTIVITY ACCESSORIES



- NVIDIA® Quadro® NVS 295 Dual DisplayPort Graphics Card (45K1669)**
- Dual DisplayPort supports 2560 x 1600 resolution
  - Fan-less design for quieter operation
  - NVIDIA's NVIEW Display Management software



- NVIDIA® Quadro® NVS 450 Quad DisplayPort, Quad DVI-D Graphics Card (57Y4398)**
- Quad DisplayPort supports 2560 x 1600 resolution
  - Includes four DisplayPort to Single-Link DVI-D Monitor cables that allows attachment of DVI digital monitors
  - NVIDIA's NVIEW Display Management software



- NVIDIA® Quadro® FX 380 16-CUDA Cores Dual DVI-I Graphics Card (45K1670)**
- Dual DVI digital 2560 x 1600 or dual VGA analog 1920 x 1200 maximum resolution
  - Includes two DVI-VGA monitor adapters that allows attachment of VGA analog monitors
  - 256MB memory frame size, 22.4 GB/sec memory bandwidth



- NVIDIA® Quadro® FX 580 32-CUDA Cores DVI-I, Dual DisplayPort Graphics Card (45K1671)**
- Three monitor ports: Two DisplayPort and one DVI-I – use any two of three ports.
  - Dual DVI digital 2560 x 1600 or dual VGA analog 1920 x 1200 maximum resolution
  - Includes one DVI-VGA monitor adapter that allows attachment of VGA analog monitors
  - 512MB memory frame size, 25.6 GB/sec memory bandwidth
  - Support attachment of optional DisplayPort monitor cables



- NVIDIA® Quadro® FX 1800 64-CUDA Cores DVI-I, Dual DisplayPort Graphics Card (45K1672)**
- Three monitor ports: Two DisplayPort and one DVI-I – use any two of three ports.
  - Dual DVI digital 2560 x 1600 or dual VGA analog 1920 x 1200 maximum resolution
  - Includes one DVI-VGA monitor adapter that allows attachment of VGA analog monitors
  - 768MB memory frame size, 38.4 GB/sec memory bandwidth
  - Support attachment of optional DisplayPort monitor cables



- Low-cost method to boost overall system performance using DDR3 Error Correcting Code (ECC) or non-ECC memory**
- **43R2032** 1GB PC3-10600 DDR3-1333 ECC UDIMM
  - **43R2033** 2GB PC3-10600 DDR3-1333 ECC UDIMM
  - **57Y4138** 4GB PC3-10600 DDR3-1333 ECC UDIMM
  - **57Y4389** 1GB PC3-10600 DDR3-1333 UDIMM
  - **57Y4390** 2GB PC3-10600 DDR3-1333 UDIMM

## SECURITY ACCESSORIES



- Lenovo Fingerprint USB Keyboard (73P4730)**
- Replace Windows passwords with fast, secure access using your fingerprint
  - Software configurable for simple fingerprint only log-in or more secure authentication



- Kensington Microsaver Security Cable Lock by Lenovo (73P2582)**
- Secure your ThinkStation or ThinkVision Flat Panel monitor
  - Super-strong, steel composite cable with carbon tempered steel core



- Kensington Twin Head Security Cable Lock by Lenovo (45K1620)**
- Secures two devices: ThinkStation and ThinkVision flat panel monitor
  - 2nd lock moves along the cable for user adjustment and preference

[www.lenovo.com/support/thinkstationaccessories](http://www.lenovo.com/support/thinkstationaccessories)

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