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## BRILLIANT BUSINESS DESKTOPS — POWERFUL. STABLE. SECURE.

### THE LENOVO® THINKCENTRE® M90 / M90p DESKTOP

The Lenovo ThinkCentre M90 / M90p desktop is designed for Large Enterprises and Mid-market Businesses seeking optimum performance with maximum investment returns. This best-in-class desktop, meets your sophisticated computing needs, with industry-leading performance. The ThinkCentre M90 / M90p desktop is available in three standard form factors—Tower, Small Form Factor (SFF) and Eco Ultra Small Form Factor (USFF).

Experience ultimate performance and multi-tasking of applications with the latest family of Intel® Core™ i series processors, offering Intel® Turbo Boost and Intel® Hyper-Threading technologies. The ThinkCentre M90 / M90p gives excellent graphics experience and has a clear edge over existing desktops. Productivity gets a real boost with the preloaded new Windows® 7 Lenovo Enhanced Experience which has a very fast boot-up and shutdown times with multi-touch support.

Get a full PC experience, data security, remote data management and worry-free storage with the latest Secure Managed Client (SMC) 2.0 and Intel® vPro™ technologies. These in turn drive down costs, downtime and desk-side visits. The Active Management Tool, a part of Intel® vPro™ technology is designed to work independently of the operating system.

Data security is of prime importance for all leading businesses. ThinkCentre M90 / M90p with the Hardware Password Manager tool reduces password-reset time of the hard drive significantly. The chassis intrusion switch prevents data-theft and relieves you of any related worries. Additionally, PS/2® ports avoid unauthorized data access and virus attacks through USB peripheral devices.

Save on power with the Energy Star® compliant Power Supply Unit and the Lenovo Power Manager tool. The ThinkCentre® M90 / M90p re-affirms its commitment towards a green environment. The desktop is now built with up to 42% Post Consumed Content<sup>1</sup> (PCC), which is the industry's highest, with the minimum use of plastic.

Ergonomically designed ThinkCentre M90 / M90p offers the Power button on top, thus avoiding the need to bend over to turn your PC on. The tilted front design of I/O ports allows to plug-and-play devices easily and the top carry handle offers easy portability. Also enjoy peace of mind at work, with the cat-foot cushion that reduces table vibrations considerably.

The amazing ThinkCentre M90 / M90p is a smart choice for all businesses requiring High-performance, excellent data security and quick returns on investment.

### THINKCENTRE M90 / M90p—TOP REASONS TO OWN

- INCREDIBLE PERFORMANCE WITH INTEL® CORE™ PROCESSORS
- NEW WINDOWS® 7 LENOVO ENHANCED EXPERIENCE PRELOAD
- COST-SAVING REMOTE PC MANAGEMENT TOOLS
- NO-COMPROMISE SECURITY
- BOOSTS PRODUCTIVITY
- GREEN FEATURES—HEALTHY ENVIRONMENT
- ENERGY-EFFICIENT DESKTOPS
- ERGONOMIC INDUSTRIAL DESIGN



### 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.

<sup>1</sup> Recycled plastic percentage varies on form factors (including optional Fingerprint Keyboard): Tower - 42.10%, SFF - 39.63%, Eco USFF - 36.45%. Calculation based on EPEAT standard as reference.



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### HIGH-PERFORMANCE FEATURES

- 81%<sup>2</sup> better performance with Intel® Core™ i series processors
- 35 Second Boot Up with Lenovo Windows® 7 Enhanced Experience
- ThinkVision™ L2461x Monitor with Multi-touch

### ENVIRONMENT-FRIENDLY FEATURES

- Uses up to 42% Post Consumed Content<sup>1</sup> (PCC) for the system (industry's highest) and 65% for the monitor
- Saves up to \$43<sup>3</sup> on energy costs
- Energy Star® 5.0, EPEAT® Gold and GREENGUARD® compliant form factors
- Packed in a reusable bag (Eco USFF only)
- Reduces noise with the cat-foot cushion (Tower only)

### LATEST MANAGEABILITY AND SECURITY FEATURES

- Supports the latest SMC 2.0 and Intel® vPro™ technologies
- Reduces password-reset time of hard drives—Hardware Password Manager tool
- Preloaded ThinkVantage® Technology (TVT) tools
- Prevents data theft—USB individual disable, PS/2® ports and Intrusion switch

### ERGONOMIC-INDUSTRIAL DESIGN

- Easy-to-carry top handle
- Power button on top of chassis
- Tilted front I/O ports design

## SERVICE OFFERINGS

### BASE WARRANTY

- 3 years

### UPGRADE OPTIONS

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

### POST WARRANTY

- 1-year onsite service 9 x 5 NBD<sup>5</sup>
- 2-year onsite service 9 x 5 NBD<sup>5</sup>
- 1-year onsite service 9 x 5 with 4-hour average response<sup>4</sup>
- 2-year onsite service 9 x 5 with 4-hour average response<sup>4</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> Recycled plastic percentage varies on form factors (including optional Fingerprint Keyboard): Tower - 42.10%, SFF - 39.63%, Eco USFF - 36.45%. Calculation based on EPEAT standard as reference.

<sup>2</sup> Comparing ThinkCentre M90p with a typical 3-year-old PC (ThinkCentre M55p) in PC Mark Vantage - Productivity

<sup>3</sup> Comparing a ThinkCentre M90p with ThinkVision L2251x versus a ThinkCentre M52 and ThinkVision E74 without Power Manager deployed and idle screen on. Based on energy cost of \$0.103 kWh, Energy Information Administration, Annual Energy Outlook 2009 (early release edition)

<sup>4</sup> 4-Hour response is available in select countries only: US, Canada, Japan and Singapore. Malaysia, Philippines and Indonesia have 9x5x4 response.

<sup>5</sup> Next Business Day



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# LENOVO® THINKCENTRE® M90 / M90p DESKTOP SPECIFICATIONS

## MODEL NAME – THINKCENTRE M90 / M90p

### Processors

- Intel® Quad Core™ i7-8x0<sup>1</sup>  
1333MHz 8T \ 4 Core™ \ 8M \ 95W \ Turbo LGA 1156
- Intel® Quad Core™ i5-7x0<sup>1</sup>  
1333MHz 8T \ 4 Core™ \ 8M \ 95W \ Turbo LGA 1156
- Intel® Core™ i5-6x0  
1333MHz 4T \ Dual Core™ \ 4M \ 73W \ Turbo LGA 1156
- Intel® Core™ i3-5x0  
1333MHz 4T \ Dual Core™ \ 4M \ 73W LGA 1156
- Intel® Pentium® G6950  
1066MHz Dual Core™ \ 3M \ 73W LGA 1156

### Preloaded Operating System

- Genuine Windows® 7 Professional 32 bit
- Genuine Windows® 7 Professional 64 bit
- Genuine Windows® 7 Home Premium 32 bit
- Genuine Windows® 7 Home Basic 32 bit<sup>2</sup>
- Genuine Windows Vista® Business 32 bit<sup>3</sup>
- Genuine Windows Vista® Home Basic 32 bit<sup>3</sup>
- Genuine Windows® XP Professional preinstalled through downgrade rights from Genuine Windows® 7

### Chipset

- Intel® Q57 Chipset

### Machine Type

#### M90p

- TWR: 3282, 3652, 5498, 5852
- SFF: 3269, 3627, 5536, 5864
- Eco USFF: 3257, 3557, 3853, 5296

#### M90:

- TWR: 3246, 3544, 5474
- SFF: 3245, 3491, 5485
- Eco USFF: 3244, 3467, 3692

### Serial ATA Hard Drive

- 160GB, 250GB, 320GB, 500GB 7200RPM SATA
- 1TB<sup>3</sup> 7200RPM SATA
- 80 GB Flash Solid State Drive<sup>2</sup>
- 150 GB 10k PRM<sup>2,3</sup>

### Memory

#### TWR / SFF:

- 1GB / 2GB DDR3 1066MHz / 1333MHz (4 DIMM slots)

#### Eco USFF:

- 1GB / 2GB DDR3 1066MHz / 1333MHz (2 SoDIMM slots)

### Optical Drive

- DVD-ROM, DVD Recordable

### Integrated Communications

- Intel® 82578DM, 10M / 100M / 1000M Gigabit Ethernet

### Dimensions (DxWxH)

- TWR: 442 x 175 x 414 (mm)
- SFF: 355 x 317 x 99 (mm)
- Eco USFF: 238 x 275 x 79 (mm)

### Keyboard

- Lenovo Preferred Pro Full Size Keyboard
- Preferred Pro Fingerprint Keyboard

### Mouse

- USB Optical Wheel Mouse

### Ports

#### TWR

- (10) USB Ports (2 front, 6 rear, 2, internal)
- (1) Parallel (optional by cable)
- (2) Serial (1 standard, 1 optional via punching out)
- (2) PS/2 (optional via punching out)
- (1) eSATA (optional)
- (1) VGA
- (1) Display Port
- (1) RJ45
- (2) Front audio ports: headphone and microphone
- (3) Rear audio ports: line in, line out and microphone

#### SFF

- (10) USB Ports (2 front, 6 rear, 2, internal)
- (1) Parallel (optional by parallel card)
- (2) Serial (1 standard, 1 optional via punching out)
- (2) PS/2 (optional via punching out)
- (1) eSATA (optional)
- (1) VGA
- (1) Display Port
- (1) RJ45
- (2) Front audio ports: headphone and microphone
- (3) Rear audio ports: line in, line out and microphone

#### Eco USFF

- (10) USB Ports (2 front, 6 rear, 2, internal)
- (1) Parallel (optional by parallel card)
- (1) Serial (optional via punching out)
- (2) PS/2 (optional via punching out)
- (1) eSATA (optional)
- (1) VGA
- (1) Display Port
- (1) RJ45
- (2) Front audio ports: headphone and microphone
- (3) Rear audio ports: line in, line out and microphone

### Slots

#### TWR

- (2) PCI slots (Full Height)
- (1) PCI-e x1 slot (Full Height)
- (1) PCI-e x16 slot (Full Height)

#### SFF

- (1) PCI slot (Low Profile)
- (1) PCI-e x16 slot (Low Profile)

#### Eco USFF

- (1) PCI slot (Low Profile)

### Bay(s)

#### TWR

- Internal (2) 3.5"
- External (1) 3.5" and (2) 5.25"

#### SFF

- Internal: (1) 3.5"
- External: (1) 3.5" and (1) 5.25"

#### Eco USFF

- Internal: (1) 3.5"
- External: (0) 3.5" and (1) 5.25"

### Power Supply

#### TWR

- 320W 88% Efficiency Active PFC<sup>3</sup>
- 280W 85% Efficiency Active PFC<sup>3</sup>

#### SFF

- 240W 85% Efficiency Active PFC

#### Eco USFF

- 130W 87% Efficiency Active PFC

### Graphic Card

#### Integrated

- Intel® HD Graphics

#### Discrete

- NVIDIA® GeForce 310 512MB DDR3 (VGA + DP)
- NVIDIA® Quadro® FX380 (DVI + DP)<sup>3</sup>

### Security

- Raid 0, 1
- TPM 1.2 chip
- USB Individual Disable/Enable
- eSATA port disablement
- Kensington Slot
- Computrace Support

### Limited Warranty

- Up to 3 years

### Preloaded Software (in Windows® 7)

- Adobe® Acrobat® Reader®
- Acrobat® Flash Player
- Skype® voice and video calling
- PC-Doctor for WinPE
- SUN™ JRE™
- Corel Burn. Now SE Lenovo Edition
- Corel DVD MovieFactory 7 Lenovo Edition
- Intervideo WinDVD® (Home Basic only)
- Microsoft® Office Professional 2007 60-Day Trial Version
- Norton® Internet Security 2009 with 30 days of virus definitions
- ThinkVantage® Rescue and Recovery®
- ThinkVantage Product Recovery
- ThinkVantage Password Manager
- ThinkVantage Power Manager
- Lenovo Message Center Plus
- Lenovo ThinkVantage Toolbox
- ThinkVantage System Update

1. For Tower & SFF Only

2. For Select Countries

3. For Special Bid Only



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# LENOVO® THINKCENTRE® M90 / M90p DESKTOP 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



- Lenovo ThinkVision L1951p Monitor (2248HB6)**
- 19" Wide with 1440 x 900 resolution
  - VGA + DVI-D interfaces
  - Lift and Tilt stand
  - 16% more efficient than ENERGY STAR® 5.0 Standard



- ThinkVision Soundbar (45K1263)**
- Add stereo audio sound without sacrificing valuable desk space
  - Dual Speaker support with 3+3 total watts of output
  - Integrated headphone, microphone jacks
  - External AC power adapter
  - Compatible with the following monitors: L2440p Wide, L2440x Wide, L2251x Wide, L2251p Wide, L2250p Wide, L1951p Wide, L1900p, L1711p, L215p Wide, L215 Wide, D185 Wide

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

## PRODUCTIVITY ACCESSORIES



- Lenovo 512MB NVIDIA GeForce 310 DisplayPort, VGA Graphics Card (57Y4397)**
- DisplayPort supports 2560 x 1600 and VGA analog supports 2048 x 1536 resolution
  - Attach DVI digital or VGA analog monitors to DisplayPort using optional DisplayPort Cables



- Lenovo USB-to-DVI Monitor Adapter (45K5296)**
- HD Resolution and multiple monitors, is a simple USB connection
  - Attach up to six analog or digital monitors to a single system, each monitor requires a USB-to-DVI Adapter
  - Supports 1920 x 1200 or 2048 x 1152 resolution; includes HD 1080p



- NVIDIA Quadro FX 380 Low-Profile DisplayPort, DVI Graphics Card (57Y4396)**
- Small Form Factor (SFF) only low-profile graphics card
  - Supports DisplayPort and DVI 2560 x 1600 resolution
  - Attach DVI digital or VGA analog monitors to DisplayPort using optional DisplayPort Cables
- [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)



- Low-cost method to boost overall system performance using DDR3 Memory**
- 57Y4389** 1GB DDR3-1333 for Desktop, Tower
  - 57Y4390** 2GB DDR3-1333 for Desktop, Tower
  - 55Y3709** 1GB DDR3-1333 for SFF
  - 55Y3710** 2GB DDR3-1333 for SFF

## 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

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



- Kensington Microsaver Security Cable Lock by Lenovo (73P2582)**
- Secure your ThinkCentre 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: ThinkCentre and ThinkVision flat panel monitor
  - 2nd lock moves along the cable for user adjustment and preference

## ADDITIONAL ACCESSORIES



- Vertical PC and Monitor Stand II (41R4474)**
- Compact, minimal footprint PC and monitor solution for space constrained environments
  - Height, Tilt and Swivel Adjustments
  - Compatible to Ultra Small Form Factor (USFF)

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**lenovo**  
CREATORS OF THINKPAD

**ThinkCentre**

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Produced in the USA October 2006 - All Rights Reserved **Availability:** All offers 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 **Warranty Information:** For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC 27709, Attn: Dept. ZPYA. Lenovo makes no representation or warranty regarding third-party products or services. **Footnotes: [1] Thinness:** may vary at certain points on the system. **[2] Travel weight:** Includes battery and optional travel bezel instead of standard optical drive in Ultrabay, if applicable; weight may vary due to vendor components, manufacturing process and options. **[3] keyboard:** As defined by ISO / IEC 15412. **[4] WWAN Service Providers:** Requires separate agreement with select third party service provider and is subject to credit approval and applicable service agreement / terms, rate plan and coverage maps of the provider. Service is available in select metropolitan markets, not available in all areas. Service provider, not Lenovo, is solely responsible for service. Lenovo customers may be contacted after purchase to activate service. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware and / or subscription to a third-party service may be required for certain solutions / applications. Additional restrictions apply. Offer subject to change **[5] Battery Life:** These model numbers achieved Battery Runtime Time of at least the time shown during testing. A description of the testing is available at [lenovo.com/pc/ww/thinkpad/batterylife](http://lenovo.com/pc/ww/thinkpad/batterylife). Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning and other customer preferences. **[6] Wireless Network Access:** required and not included; access may require subscription and fees may apply. May require compatible wireless-enabled options, sold separately. **[7] Wireless range / speed:** Actual device range and data transfer speed depend upon many factors and are often less than the maximum possible. **The following are trademarks of Lenovo:** ThinkVantage Access Connections, ThinkVantage ImageUltra, ThinkVantage Rescue and Recovery, ThinkVantage Secure Data Disposal, ThinkVantage System Migration Assistant, Think, ThinkCentre, ThinkPad, ThinkVantage. IBM and the IBM logo are registered trademarks of IBM and are used under license. Other company, product and service names may be trademarks or service marks of others. The Verizon name and logo and all related product and service names, design marks and slogans are trademarks, service marks or registered trademarks of Verizon and may not be used in any manner without the prior written consent of Verizon. All other product and service marks are trademarks of their respective owners. This publication was developed for products and services offered in the United States. Lenovo may not offer the products, services or features discussed in this document in other countries. Information is subject to change without notice. Consult your local Lenovo representative for information on offerings available in your area. **Visit [www.lenovo.com/safecomputing](http://www.lenovo.com/safecomputing) periodically for the latest information on safe and effective computing.**