

Lenovo ThinkCentre M91p Small and Tower

ThinkCentre®



Lenovo ThinkCentre M91p
Small and Tower



Lenovo ThinkCentre M91p Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M91p Small



Lenovo ThinkCentre M91p Small
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Lenovo ThinkCentre M91p Tower



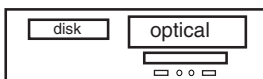
Lenovo ThinkCentre M91p Tower

ThinkCentre® M91p Small (4480) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ⁸	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
4480-A4U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-A5U	4x3	Core i7-2600	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B1U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B3U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>							Preloaded operating system					
Processor	Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket							Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none"> • Rescue and Recovery™ • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW) 					
Implementation	Processor in LGA1155 socket												
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets												
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>												
DP dongle	None												
Disk	SATA 6.0Gb/s 7200 rpm												
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1												
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar												
eSATA port	None												
Media reader	None												
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	Internal speaker for business audio												
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®												
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)												
Modem	None												
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo												
Floor Stand	System floor stand for vertical orientation												
Power supply	240 watts, autosensing, 85% PSU												
Machine	<ul style="list-style-type: none"> • Business black color; metal case • 13.3" W X 14.5" D X 3.9" H • 337mm W X 369mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk and optical drive removal • Toolless adapter retention 												
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader							Security <ul style="list-style-type: none"> • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Serial port I/O control • Individual USB port disablement 					
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3							EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant					
								Supports ThinkVantage Technologies					
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information

US model announced August 23, 2011; previous models on March 1, 2011

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Partial list of accessories supported on ThinkCentre M91 and M91p

Memory

Eco Ultra Small 0266/5067/7516 use notebook memory:
 1GB PC3-10600 DDR3 L-H SODIMM 55Y3709 *ann 03/02/10*
 1GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4415 *ann 03/02/10*
 2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 *ann 03/02/10*
 2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 *ann 03/02/10*
 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 *ann 03/02/10*

Small 4518/4480/7033, and Tower 4524/7052/7034 use desktop memory:
 1GB PC3-10600 DDR3 Low-Halogen UDIMM 57Y4389 *ann 01/12/10*
 1GB PC3-10600 DDR3 L-H UDIMM (25-Pack) 57Y4419 *ann 01/12/10*
 2GB PC3-10600 DDR3 Low-Halogen UDIMM 57Y4390 *ann 01/12/10*
 2GB PC3-10600 DDR3 L-H UDIMM (25-Pack) 57Y4420 *ann 01/12/10*
 4GB PC3-10600 DDR3 UDIMM 0A36527 *ann 04/12/11*

More information at www.lenovo.com/support/desktopmemorycompatibility

Optical

All:
 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max⁴ 41N5618 *ann 09/26/06*
 Lenovo® Super Multi-Burner SATA Drive 0A65618 *ann 08/23/11*
Tower 4524/7052/7034 support:
 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 *ann 03/31/09*

Storage and removable storage
 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 *ann 01/24/06*
 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 *ann 11/06/07*
 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 *ann 08/19/08*
 USB 2.0 Portable 320GB Hard Disk 45K1689 *ann 03/17/09*
 USB 2.0 Portable 500GB Hard Disk 45K1690 *ann 05/26/09*
 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 *ann 11/18/08*
 eSATA/USB 2.0 Secure 500GB Hard Drive⁵³ 57Y4400 *ann 01/07/10*
 Slim USB Portable DVD Burner 0A33988 *ann 06/14/11*
⁵³ USB-only attach.

Graphics

Small 4518/4480/7033 support Low Profile:
 NVIDIA® Quadro® 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles)⁶¹ 0A36528 *ann 04/26/11*
 NVIDIA Quadro 512MB 400 (DP, DVI with a DVI to VGA converter)⁶¹ 0A36535 *ann 06/28/11*
 NVIDIA Quadro 1GB 600 (DP, DVI with a DVI to VGA converter)⁶¹ 0A36183 *ann 10/26/10*
 NVIDIA GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)⁶¹ 57Y4167 *ann 03/02/10*
Tower 4524/7052/7034 support 75 watts max:
 NVIDIA Quadro 512MB NVS 300 DMS59⁶¹ 0A36528 *ann 04/26/11*
 NVIDIA Quadro 512MB 400 (DP, DVI)⁶¹ 0A36535 *ann 06/28/11*
 NVIDIA Quadro 1GB 600 (DP, DVI)⁶¹ 0A36183 *ann 10/26/10*
 NVIDIA GeForce 310 512MB DMS59⁶¹ 57Y4167 *ann 03/02/10*
⁶¹ Simultaneously use the graphic card monitor ports along with the systems integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.

More information at www.lenovo.com/support/graphiccards

Keyboard

Preferred Pro USB Keyboard 73P5220 *ann 06/21/05*
 Preferred Pro Full Size PS/2 Keyboard 31P7415 *ann 06/04/02*
 Enhanced Performance USB Keyboard 73P2620 *ann 03/23/04*
 Ultralim Plus Wireless Keyboard and Mouse⁵² 0A34032 *ann 04/05/11*
 ThinkPad® USB Keyboard with TrackPoint 55Y9003 *ann 08/18/09*
 Lenovo USB Fingerprint Keyboard 73P4730 *ann 02/22/05*
 Lenovo USB Smartcard Keyboard 51J0155 *ann 03/24/09*
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at www.lenovo.com/support/keyboards

Mouse

Lenovo Optical Mouse (USB) 06P4069 *ann 05/21/03*
 Lenovo ScrollPoint® Mouse(USB, Optical) 31P7405 *ann 08/27/02*
 Lenovo Laser Mouse (USB) 41U3074 *ann 01/23/07*
 Lenovo Wireless Laser Mouse - Black⁵² 45K1696 *ann 11/25/08*
 Lenovo Wireless Laser Mouse - Red/Black⁵² 51J0198 *ann 11/25/08*
 ThinkPad USB Laser Mouse 57Y4635 *ann 12/15/09*
 Lenovo Optical Mouse A6010 57Y6255
 Lenovo Mini Optical Mouse M20B 55Y2091
 Lenovo Wireless Mouse N30B 55Y9360

More information at www.lenovo.com/support/mice

Multimedia

ThinkPad In-Ear Headphones with mic⁶⁰ 57Y4488 *ann 01/07/10*
 Lenovo Mini Speakers M220 55Y2033 *ann 01/07/10*
 Lenovo Headphone P550 55Y2065
⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Security

Kensington® MicroSaver® Cable Lock⁵⁶ 73P2582 *ann 12/29/03*
 Kensington Twin Head Cable Lock⁵⁶ 45K1620 *ann 09/30/08*
 Lenovo Security Cable Lock 57Y4303 *ann 08/24/10*
 USB Gemplus GemPC Smart Card Reader 41N3040 *ann 02/21/06*
⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Monitors

Lenovo D186 Wide 18.5" Monitor 2580AB1 *ann 01/12/10*
 ThinkVision® L1711p 17" Monitor 5047HB2 *ann 10/20/09*
 ThinkVision L1900p 19" Monitor 4431HE1 *ann 11/11/08*
 ThinkVision L1951p Wide 19" Monitor 2448HB6 *ann 10/20/09*
 ThinkVision L2250p Wide 22" Monitor 2572HB6 *ann 10/20/09*
 ThinkVision L2251p Wide 22" Monitor 2572HD6 *ann 10/20/09*
 ThinkVision L2251x Wide 22" Monitor 2578HB6 *ann 10/20/09*
 ThinkVision L2321x Wide 23" Monitor 4014HB6 *ann 06/10/10*
 ThinkVision L2440p Wide 24" Monitor 4420HB2 *ann 09/17/08*

More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Eco Ultra Small 0266/5067 support:
 Lenovo Vertical PC and Monitor Stand II 41R4474 *ann 01/27/09*
All:
 Lenovo USB-to-DVI Monitor Adapter 45K5296 *ann 05/12/09*
 DisplayPort™ to Single-link DVI-D Cable 45J7915 *ann 08/05/08*
 DisplayPort to VGA Monitor Cable 57Y4393 *ann 08/04/09*
 ThinkVision USB Soundbar 40Y7616 *ann 08/23/05*
 ThinkVision Soundbar 45K1263 *ann 09/16/08*
 Kensington MicroSaver Cable Lock⁵⁶ 73P2582 *ann 12/29/03*
 Kensington Twin Head Cable Lock⁵⁶ 45K1620 *ann 09/30/08*
 Lenovo Security Cable Lock 57Y4303 *ann 08/24/10*
 ThinkCentre Extend Arm 57Y4352 *ann 07/06/10*
⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems