

ThinkCentre® M81 Tower (5048) - ENERGY STAR® 5.0 - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 prelad
5048-E7U	4x4	Pentium G620	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E8U	4x4	Pentium G840	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E6U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E9U	4x4	Core i3-2120	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-F1U	4x4	Core i3-2120	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) • 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		optical ② ③ disk □ □ □ □ Security • Security chip (see information on left) • One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for 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 EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	
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			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 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 (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	None			
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			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Machine	• Business black color; metal case • 6.9" W X 17.4" D X 16.3" H • 175mm W X 442mm D X 414mm H • 24.2 lb (11.0 kg) in maximum configuration • Handle on top front • Power button on top handle • Toolless cover removal • Tilted front I/O for easy access • Toolless disk, optical drive removal • Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

