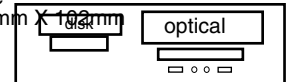


ThinkCentre M93/M93p SFF Pro Platform Specifications

Product Specifications Reference (PSREF)

<p>Processor</p> <table border="1"> <thead> <tr> <th>Processor</th> <th>Cores / Threads</th> <th>Frequency (Base/Max)</th> <th>Cache</th> <th>Memory Types</th> <th>Integrated Graphics</th> </tr> </thead> <tbody> <tr> <td>Core i5-4670</td> <td>4 / 4</td> <td>3.4 GHz / 3.8 GHz</td> <td>6 MB</td> <td>DDR3-1600</td> <td>HD 4600</td> </tr> <tr> <td>Core i5-4570</td> <td>4 / 4</td> <td>3.2 GHz / 3.6 GHz</td> <td>6 MB</td> <td>DDR3-1600</td> <td>HD 4600</td> </tr> <tr> <td>Core i5-4590</td> <td>4 / 4</td> <td>3.3 GHz / 3.7 GHz</td> <td>6 MB</td> <td>DDR3-1600</td> <td>HD 4600</td> </tr> <tr> <td>Core i7-4770</td> <td>4 / 8</td> <td>3.4 GHz / 3.9 GHz</td> <td>8 MB</td> <td>DDR3-1600</td> <td>HD 4600</td> </tr> <tr> <td>Core i7-4790</td> <td>4 / 8</td> <td>3.6 GHz / 4 GHz</td> <td>8 MB</td> <td>DDR3-1600</td> <td>HD 4600</td> </tr> </tbody> </table>	Processor	Cores / Threads	Frequency (Base/Max)	Cache	Memory Types	Integrated Graphics	Core i5-4670	4 / 4	3.4 GHz / 3.8 GHz	6 MB	DDR3-1600	HD 4600	Core i5-4570	4 / 4	3.2 GHz / 3.6 GHz	6 MB	DDR3-1600	HD 4600	Core i5-4590	4 / 4	3.3 GHz / 3.7 GHz	6 MB	DDR3-1600	HD 4600	Core i7-4770	4 / 8	3.4 GHz / 3.9 GHz	8 MB	DDR3-1600	HD 4600	Core i7-4790	4 / 8	3.6 GHz / 4 GHz	8 MB	DDR3-1600	HD 4600	<p>Manageability</p> <p>Intel Active Management Technology 9.0 (Intel AMT 9.0); Intel vPro technology on some models (require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection)</p> <p>Security chip</p> <p>Trusted Platform Module, TCG 1.2-compliant</p> <p>Security features</p> <ul style="list-style-type: none"> One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) Power-on password Administrator password Hard disk password Boot sequence control Boot without keyboard and mouse Individual USB port disablement Optional Chassis intrusion switch
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<p>Memory</p> <p>32GB max, UDIMM, PC3-12800 1600MHz DDR3, four 240-pin DIMM sockets</p> <p>Disk</p> <p>Some: SATA 6.0Gb/s, 2.5" Wide, 7200 rpm Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm Some: 500GB (5400 rpm, 2.5" wide) or 1TB (7200 rpm, 3.5" wide) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide</p> <p>Optical</p> <p>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide Some: DVD-ROM SATA 1.5Gb/s Drive Some: Super Multi-Burner DVD±RW SATA 1.5Gb/s Drive</p> <p>Onboard SATA</p> <p>Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)</p> <p>Media reader</p> <p>Optional 29-in-1 media reader, internal USB 2.0</p>	<p>Keyboard</p> <p>Preferred Pro USB Keyboard (USB connector), Lenovo logo</p> <p>Mouse</p> <p>Enhanced Optical USB Mouse, black, Lenovo logo</p> <p>Mechanical</p> <ul style="list-style-type: none"> SFF Pro (12.9L), business black color; metal case (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 103mm 17.20 lb (7.8 kg) in maximum configuration Toolless cover removal, adapter retention Toolless disk and optical drive removal <p>Bay 1: 5.25", 1.6" high, external, std optical</p> <p>Bay 2: 3.5", 1" high, internal, std disk</p> <p>Bay 3: 2.5", N/A, internal, optional or come with opt 2.5" 2nd disk</p> <p>Bay 4: 3.5", 0.5" high, external, opt reader</p> <p>Slot 1: Low Profile, PCI Express 3.0 x16 (40w max)</p> <p>Slot 2: Low Profile, PCIe 2.0 x1</p> <p>Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max)</p> <p>Slot 4: Low Profile, 32-bit PCI 2.3</p> <p>Optional system floor stand for vertical orientation</p>																																				
<p>Graphics</p> <p>Intel HD Graphics 4400/4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support five independent monitors; Max resolution: 3840x2160 (DP) @60Hz [HD 4x00]; 2560x1600 (DP) @60Hz [Intel HD]; 1920x1200 (VGA) @60Hz (Reduced Blanking) Some: AMD Radeon HD 8570, DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; Max resolution: 4096x2160 (HDMI) @24Hz; 2048x1536 (VGA) @85Hz Some: AMD Radeon™ HD 8470, DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts; Max resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz Some: AMD Radeon™ HD 7450, DirectX 11, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; Max resolution: 2560x1600 (DisplayPort, DVI-I) @60Hz Some: NVIDIA® GeForce® GT 620, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; Max resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz</p>	<p>Floor Stand</p> <p>Optional system floor stand for vertical orientation</p> <p>Power supply</p> <p>240 watts, autosensing, 85% PSU</p> <p>Limited warranty³</p> <p>Some: 3-years, limited onsite service / service upgrades available Some: 3-years, limited onsite service, IWS (International Warranty Service⁹) / service upgrades available For Lenovo service upgrade options, please go to S-TC sheet</p>																																				
<p>DP cable</p> <p>None</p> <p>Chipset</p> <p>Intel Q87 Chipset</p>	<p>Preload</p> <p>Preloaded operating system</p> <p>Some: Windows® 7 Professional 32 Some: Windows 7 Professional 64 Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit</p> <p>Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit</p> <p>Ready to install applications (only some listed)</p> <ul style="list-style-type: none"> Rescue and Recovery™ Password Manager <p>Preloaded applications (only some listed)</p> <ul style="list-style-type: none"> ThinkVantage® Product Recovery ThinkVantage System Update ThinkVantage Communication Utility Desktop Power Manager View Management Utility Lenovo Cloud Storage by SugarSync Lenovo Solution Center Lenovo Message Center Plus Norton™ Internet Security (30 days of virus definitions) Adobe® Reader® Skype™ Microsoft Office preloaded; purchase a product key to activate Cyberlink PowerDVD (DVD±RW, DVD) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) Evernote Intel AppUp Intel Small Business Advantage Nitro Pro 																																				
<p>Front ports</p> <p>Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p> <p>Rear ports</p> <p>Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI on optional graphic card on some models</p> <p>Rear audio ports</p> <p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p> <p>IEEE 1394</p> <p>None</p>	<p>Environment</p> <p>ENERGY STAR® 6.0 (Need 85% PSU and Windows OS); EPEAT™ Gold rating (Need 85% PSU and Windows OS); GREENGUARD®; RoHS-compliant; Cisco EnergyWise compatible; ULE Gold</p>																																				
<p>Audio support</p> <p>High Definition (HD) Audio, Realtek® ALC662 codec / internal speaker (1 watt)</p> <p>WLAN¹³</p> <p>Some: 11b/g/n, PCIe Half Mini Card, Realtek RTL8723BE, Wi-Fi/BT 4.0, 1x1 Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, Intel vPro technology support, 2x2 Some: 11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi/BT 4.0, 2x2 Some: 11ac/a/b/g/n, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + BT combo adapter, Intel vPro technology support, 2x2</p> <p>Bluetooth™</p> <p>Some: Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter</p> <p>Ethernet</p> <p>One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®</p> <p>Modem</p> <p>None</p>	<p>Accessories</p> <p>For compatible accessories, please go to TC-AQP sheet</p>																																				



See footnotes for more detailed information