

# ThinkStation



Lenovo ThinkStation S20



Lenovo ThinkStation S20 (left)  
Lenovo ThinkStation D20 (right)



Lenovo ThinkStation S20



Lenovo ThinkStation S20 (left)  
Lenovo ThinkStation D20 (right)



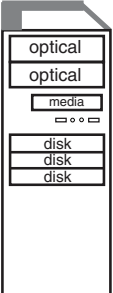
Lenovo ThinkStation Graphics Card Option  
NVIDIA® Quadro® FX 4800 (45K1674)



Lenovo ThinkStation S20  
with Lenovo ThinkVision Monitor

Name	Type-model	Slot x bay	Processor	GHz	Memory DIMMs	Memory speed	Disk(s)	Disk size	RAID	SATA optical	Diskette or Media reader	Graphics adapter(s)	1394 adptr	ENERGY STAR 5.0	Preload	Avail date
S20	4105-11U	5x6	W3520	2.66	2 x 1GB	1066MHz	1 x 250GB <sup>2</sup>	3.5"		DVD±RW	Media 1 x FX380			ES50	Bus32	Mar 09
S20	4105-12U	5x6	E5504	2.00	2 x 1GB	1066MHz	1 x 500GB	3.5"		DVD±RW	Media 1 x FX1800	1394		ES50	Bus32	Mar 09
S20	4105-13U	5x6	E5506	2.13	2 x 2GB	1066MHz	1 x 500GB	3.5"		DVD±RW	Media 1 x FX1800	1394		ES50	Bus64	Mar 09
S20	4105-14U	5x6	E5540	2.53	2 x 2GB	1066MHz	2 x 500GB	3.5"	0	DVD±RW	Media 1 x FX4800			ES50	Bus64	Mar 09
S20	4105-15U	5x6	E5506	2.13	2 x 1GB	1066MHz	1 x 150GB	2.5"		DVD±RW	Media 1 x FX1800	1394		ES50	Bus32	Mar 09
S20	4105-16U	5x6	W5580	3.20	2 x 2GB	1333MHz	2 x 300GB	2.5"	0	DVD±RW	Media 1 x FX4800			ES50	Bus64	Mar 09
S20	4105-38U	5x6	E5540	2.53	4 x 1GB	1066MHz	1 x 250GB	3.5"		DVD±RW	Media 1 x V5700			ES50	Bus64	Mar 09
S20	4105-39U	5x6	W3540	2.93	2 x 1GB	1066MHz	1 x 250GB	3.5"		DVD±RW	Media 1 x V3700			ES50	Bus32	Mar 09
S20	4105-41U	5x6	E5506	2.13	3 x 1GB	1066MHz	1 x 250GB	3.5"		DVD±RW	Media 1 x FX1800			ES50	Pro64	Mar 09

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Processor	<b>Intel® Xeon® Processor W3520 or W3540 with quad-core,</b> 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 1066MHz DDR3 memory controller, and 8MB cache or <b>Intel Xeon Processor E5504 or E5506 with quad-core,</b> 4.8GT/s QPI, 800MHz DDR3 memory controller, and 4MB cache or <b>Intel Xeon Processor E5540 with quad-core,</b> 5.86GT/s QPI, 1066MHz DDR3 memory controller, and 8MB cache or <b>Intel Xeon Processor W5580 with quad-core,</b> 6.4GT/s QPI, 1333MHz DDR3 memory controller, and 8MB cache Processor uses FC-LGA8 package, one LGA1366 socket		<b>Tower</b> <ul style="list-style-type: none"> <li>• Raven black color; metal case</li> <li>• 6.9"W x 19.0"D x 18.8"H (with handle)</li> <li>• 175mm W x 483mm D x 478mm H</li> <li>• 38.5 lb (17.5kg) max configuration</li> <li>• 31-liter</li> <li>• Removable handle on top front</li> <li>• Toolless side cover removal</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Illuminated front icons</li> <li>• Rack shelf support</li> </ul>	
Implementation	Processor uses FC-LGA8 package, one LGA1366 socket			
Memory	<b>2GB, 3GB, or 4GB</b> std, 24GB max, <b>UDIMM, PC3-8500 1066MHz DDR3***</b> or <b>PC3-10600 1333MHz DDR3, ECC,</b> 3-channel capable, six 240-pin DIMM sockets *** System automatically clocks down for processors with 800MHz DDR3 memory controller		Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, open Bay ③ 3.5", 1" high, external, std media reader Bay ④ 3.5", 1" high, internal, std disk Bay ⑤ 3.5", 1" high, internal, std or opt disk Bay ⑥ 3.5", 1" high, internal, opt disk  Slot 1: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 2: full-length, full-height, PCIe 2.0 x4** Slot 3: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 4: full-length, full-height, PCIe x1 Slot 5: full-length, full-height, 32-bit PCI 2.3  ** x16 mechanical	
Graphics	Two PCI Express® x16 adapters required for quad monitor support, * Adapters >75W use auxiliary power connector(s) from PSU Some: <b>NVIDIA® Quadro® FX 380,</b> PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W Some: <b>NVIDIA Quadro FX 1800,</b> PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W Some: <b>NVIDIA Quadro FX 4800,</b> PCIe x16 adapter, 1.5GB, two slot width, two DisplayPort, one dual-link DVI-I****, 121W Some: <b>ATI™ FirePro™ V3700,</b> PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W Some: <b>ATI FirePro V5700,</b> PCIe x16 adapter, 512MB, two DisplayPort, one dual-link DVI-I****, 49W **** Only two display connectors are active at a time			
Media reader	20-in-1 media reader, internal USB 2.0 Some: <b>250GB or 500GB,</b> SATA 3.0Gb/s, 7200 rpm, 3.5" Some: <b>150GB or 300GB,</b> SATA 3.0Gb/s, 10000 rpm, 2.5"		<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Side cover lock (ships with two identical keys)</li> <li>• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)</li> <li>• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• USB port disablement (front or all)</li> </ul> Supports ThinkVantage® technologies	
SATA DVD±RW Disk controller	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals			
Chipset	<b>Intel X58 Express Chipset,</b> Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O			
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in Some: FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear			
IEEE 1394 adptr	High Definition (HD) Audio, Analog Devices AD1988A codec			
Audio	Internal speaker for business audio			
Speaker	One gigabit ethernet on planar, Broadcom® BCM5755			
Ethernet	Broadcom Trusted Platform Module, TCG 1.2-compliant			
Security chip	Preferred Pro USB Keyboard (USB connector), 104-key, black Optical Wheel Mouse (USB connector), black			
Keyboard	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified			
Mouse	3 to 5 fans (power supply, CPU, rear, opt front PCI [>75W graphics], opt front [SAS])			
Power supply	Rack shelf support			
Cooling	<b>Preloaded operating system<sup>20</sup></b>			
Rack mount	<b>Accessories</b>			
	- Some: Genuine Windows® XP Professional 64-bit (preinstalled via downgrade rights in Windows Vista® Business 64) - Some: Genuine Windows Vista Business 32 - Some: Genuine Windows Vista Business 64 † Vista models: Vista Premium logo	1GB PC3-8500 DDR3 ECC UDIMM 51J0503 2GB PC3-8500 DDR3 ECC UDIMM 51J0504 2GB PC3-10600 DDR3 ECC UDIMM 43R2033 4GB PC3-10600 DDR3 ECC UDIMM 57Y4138 750GB SATA 3.0Gb/s Disk (7200 rpm) 43R1991 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Blu-ray™ Burner SATA 1.5Gb/s 45K1675 ThinkVision® L2440p Wide 24" Monitor 4420HB2 Laser Tilt Wheel Mouse (USB) 41U3074 NVIDIA Quadro NVS 290 43R1765 NVIDIA Quadro FX 580 45K1671 ATI FirePro 1GB V7750 51J0511 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
	<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ ThinkPlus™ services available; see <a href="http://lenovo.com/thinkplus/warranty">http://lenovo.com/thinkplus/warranty</a> <ul style="list-style-type: none"> <li>• Onsite service upgrade options (in eligible locations)<sup>7</sup></li> <li>• Post warranty maintenance services</li> </ul> </li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>			

See footnotes for important warranty information  
 US models announced March 31, 2009