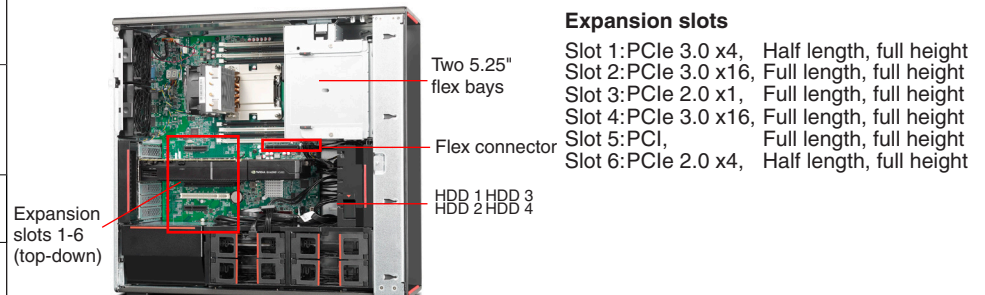


ThinkStation P510 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification					
Chipset	Intel C612 Platform Controller Hub (PCH)					
System mgmt	Intel Active Management Technology 9					
Processor	Up to one 145W Intel Xeon E5-2600 v4 or E5-1600 v4 family processors. 22 cores up to 2.2GHz, 16 cores up to 2.6GHz, 14 cores up to 2.6GHz, 12 cores up to 2.2GHz, 10 cores up to 2.4GHz, 8 cores up to 3.4GHz, 6 cores up to 3.6GHz, 4 cores up to 3.7GHz Or up to one Intel Xeon E5-2600 v3 or E5-1600 v3 processors (not available in EMEA).					
Coprocessor	None					
Memory DIMM slots	8 DIMM sockets, 4-channel capable. RDIMM, ECC, DDR4, 2400MHz					
Memory capacity	256GB					
Graphics, GPU computing	Two PCIe 3.0 x16 slots for graphics and GPU computing adapters. Up to two NVIDIA Quadro M5000 SLI					
Supporting Graphics and GPU computing	Adapter	Cores	Memory	Power	SLI	Connector***
	NVS 310	48	1GB	19.5W		2xDP
	NVS 315	48	1GB	19.5W		2xDVI-I SL/2xDP
	NVS 510	192	2GB	35W		4xmini DP
	NVS 810	1024	4GB	68W		8xmini DP
	Quadro K420	192	2GB	41W		DVI-I DL+DP
	Quadro K620	384	2GB	45W		DVI-I DL+DP
	Quadro K1200	512	4GB	45W		4xmini DP
	Quadro K2200	640	4GB	68W		DVI-I DL+2xDP
	Quadro K4200	1344	4GB	108W		DVI-I DL+2xDP
	Quadro K5200	2304	8GB	150W	SLI	DVI-I DL+DVI-D DL+2xDP
	Quadro M2000	768	4GB	75W		4xDP
	Quadro M4000	1664	8GB	120W		4xDP
	Quadro M5000	2048	8GB	150W	SLI	DVI-I DL+4xDP
Quadro M6000	3072	24GB	250W		DVI-I DL+4xDP	
Tesla K40	2880	12GB	235W			
RAID controller	Supports one of the following: RAID 0, 1, 5, 10 with onboard SATA controller in chipset, SATA 6Gb/s. RAID 0, 1, 5, 10 with optional LSI RAID flex adapter, 12Gb/s SAS and SATA. RAID 0, 1, 5, 6, 10 with optional LSI 9364-8i PCIe adapter, 1GB memory, 12Gb/s SAS and SATA					
Drive Bays	Two external 5.25" flex bays for flex module, optical drives, or optional disk drives. Four 3.5" internal bays. Each 3.5" bay can support dual drives on selected models (see right).					
Supporting storage	3.5" HDD, 7.2K SATA6Gbs		500GB/1TB/2TB/3TB/4TB, 1TB/2TB hybrid			
	2.5" HDD, 15K SAS12Gbs		300GB/600GB			
	2.5" SSD, SAS12Gbs		200GB/400GB/800GB			
	2.5" SSD, SATA6Gbs		180GB/240GB/256GB/480GB with OPAL, 256GB/512GB/1TB without OPAL			
	PCIe SSD, U.2		400GB			
	PCIe SSD, M.2		256 GB/512GB			
Flex connector	PCIe SSD, PCIe adapter		400GB			
	One flex connector, supports one of the following: • Up to one LSI RAID flex adapter for SATA/SAS RAID • Up to one Multi-I/O flex adapters for one 2.5" PCIe SSD • Up to one M.2 flex adapters for one M.2 PCIe SSD					
Network interfaces	Integrated one Gigabit Ethernet (Intel i218LM), supports Wake-on-LAN. Optional discrete Ethernet is available					
HD Audio	Realtek ALC662 codec					
TPM	TCG 1.2-compliant					
Power supply	One fixed 490 watts, autosensing, 90%, 80 PLUS Gold qualified. Or one fixed 650 watts, autosensing, 92%, 80 PLUS Platinum qualified					

Components	Specification												
Front ports	Four USB 3.0 (one Diagnostic, one Always On), one combo audio/microphone jack (3.5mm)												
Rear ports	Four USB 2.0, four USB 3.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in), two PS/2												
Add-on ports	Supports the following optional ports: Two IEEE 1394 (one on rear and one on front flex module) via PCIe adapter, up to one adapter per system. Two rear USB 3.0 per PCIe adapter, up to three adapters per system. One rear Thunderbolt via PCIe adapter. One front eSATA (on flex module), or one rear eSATA via cable (also needs one PCIe slot), up to one eSATA port per system. One internal USB 3.0 port via cable, cannot be intermixed with 29-in-1 reader												
Media reader	9-in-1 USB 2.0 or 29-in-1 USB 3.0 card reader												
Mechanical	<ul style="list-style-type: none"> 36-liter: 175mm/6.89" W x 470mm/18.5" D x 440mm/17.32" H (with feet) Tool-less parts: all except CPU fansink 48.94 lb (22.2kg) max configuration 												
Environmental specification	<table> <tr> <td>Temperature - operating</td><td>50 °F to 95 °F (10 °C to 35 °C)</td></tr> <tr> <td>Temperature - non operating (no package)</td><td>14 °F to 140 °F (-10 °C to 60 °C)</td></tr> <tr> <td>Temperature - non operating (with package)</td><td>-40 °F to 140 °F (-40 °C to 60 °C)</td></tr> <tr> <td>Altitude - operating</td><td>(Unpressurized): 0-10000ft (0-3048m)</td></tr> <tr> <td>Humidity - operating</td><td>10%-80%, non-condensing</td></tr> <tr> <td>Humidity - storage (with package)</td><td>10%-90%, non-condensing</td></tr> </table> <p>RoHS-compliant, GREENGUARD on all models. EPEAT Gold rating, ENERGY STAR 6.1 qualified on selected models.</p>	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)	Temperature - non operating (no package)	14 °F to 140 °F (-10 °C to 60 °C)	Temperature - non operating (with package)	-40 °F to 140 °F (-40 °C to 60 °C)	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)	Humidity - operating	10%-80%, non-condensing	Humidity - storage (with package)	10%-90%, non-condensing
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Humidity - operating	10%-80%, non-condensing												
Humidity - storage (with package)	10%-90%, non-condensing												
Base warranty	3-year limited onsite service with 9x5/NBD												



Expansion slots

Slot 1: PCIe 3.0 x4, Half length, full height
Slot 2: PCIe 3.0 x16, Full length, full height
Slot 3: PCIe 2.0 x1, Full length, full height
Slot 4: PCIe 3.0 x16, Full length, full height
Slot 5: PCI, Full length, full height
Slot 6: PCIe 2.0 x4, Half length, full height

Drive Bays

HDD 1-4: Standard 3.5" HDD bay, up to four 3.5" or 2.5" disk drives.
On selected models, each 3.5" bay can support 2.5" (9mm or less) drive plus 3.5" drive, or two 2.5" (15mm or less) drives.

Flex bay: Two 5.25" flex bays, for HH optical drives.
Or up to one optional flex module (Flex module supports one or more of the following options: 9.5mm optical/29-in-1 USB 3.0 reader/front IEEE 1394/front eSATA).
Or up to two HDD bays for two drives, 3.5" or 2.5" each, SATA only.

For the list of ISV certifications, please visit www.thinkworkstations.com/isv-certifications
For a list of all supported options, please visit https://download.lenovo.com/pccbbs/options_iso/ocm_july_2016.xlsx sheet

Model	30B5000N++
Product	ThinkStation P510
Region	EMEA
Machine Type	30B5
TopSeller	TopSeller
Processor	Xeon E5-1620 v4 4C/3.5GHz/ 10MB/140W/DDR4-2400
Graphics	Open
Memory	1x8GB RDIMM DDR4-2400 ECC
RAID Controller	Onboard
Max Drives in 3.5" Bays	4
Storage	1x1TB Hybrid HDD 7.2K 3.5" SATA6Gbs
Optical	HH DVD±RW
Media Reader	9-in-1
Power Supply	650W 92%
Add-on Ports	None
Keyboard / Mouse	USB / USB Optical
Operating System	Windows 10 Pro 64
Warranty	3-year
Global	No
Ann Date (mm/yy)	06/16