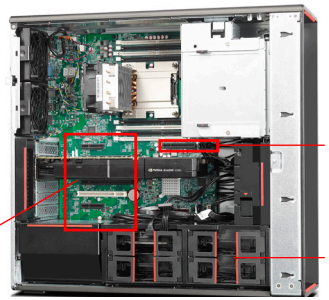
ThinkStation P500 Platform Specifications

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 v3** family processor with 18 cores up to 2.3GHz, 16 cores up to 2.3GHz, 14 cores up to 2.6GHz, 12 cores up to 2.6GHz, 10 cores up to 2.6GHz, 8 cores up to 3.2GHz, 6 cores up to 3.4GHz, 4 cores up to 3.0GHz. Up to 2133MHz memory speed. Up to 45MB cache. Or up to one 140W **Intel Xeon E5-1600 v**3 family processors with 8C up to 3.2GHz, 6C up to 3.5GHz, 4C up to 3.7GHz
Coprocessor	None
Memory DIMM slots	8 DIMM sockets, 4-channel capable. RDIMM and LRDIMM (cannot be intermixed), ECC, DDR4, 2133MHz
Memory capacity	512GB (LRDIMM)/256GB (RDIMM)
Graphics, GPU computing, coprocessors	Two PCIe 3.0 x16 slots, up to 2 graphics, GPU computing adapters per system PSU: Maximum quantity of adapters supported per system 490W: 1x150W+1x75W (only supports onboard SATA controller) 650W: 1x225W+1x75W, or 2x150W
RAID controller	**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, optional 1GB flash with super capacitor, 12Gb/s SAS and SATA
Drive Bays	Two external 5.25" bays, four internal 3.5" bays (see right)
Media reader	Optional 9-in-1 USB 2.0 or 29-in-1 USB 3.0 reader
Flex connector	One flex connectors (see right), 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 PCIe SSD • Up to one M.2 flex adapters for one M.2 SSD
Network interfaces	Integrated one Gigabit Ethernet (Intel i217LM), 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
Front ports	Four USB 3.0 (one Diagnostic, one Always On), one combo audio/microphone jack (3.5mm)
Rear ports	Fou 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
IEEE 1394	1 front, 1 rear, via 1394 adapter, selected models
Thunderbolt	1 Thunderbolt via optional PCIe adapter. Uses slot 6.
Mechanical	• 36-liter: 175mm/6.89" W x 470mm/18.5" D x 440mm/17.32" H (with feet) • Tool-less parts: power supply, disk drive, fans, adapter retention • 48.94 lb (22.2kg) max configuration
Base warranty	3-year limited onsite service with 9x5/NBD

Drive Bays and Expansion slots

2 x 5.25", for half-height optical, 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 optional front HDD bays



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

Note:
1. When LSI RAID flex adapter or 9364-8i adapter is installed, each HDD bay (HDD 1 - 4) can support 2 disk drives (1 x 3.5" drives + 2.5" SATA/SAS SSD, or 2 x 2.5" SATA/SAS SSD).
2. More than 4 drives requires LSI RAID flex adapter or 9364-8i adapter.

Supporting NVIDIA graphics and GPU computing list

Adapter	Cores	Memory	Power	SLI	Connector***
NVS 310	48	1GB	19.5W		2xDP
NVS 315	48	1024MB	19.5W		2xDVI-I SL/2xDP
NVS 510	192	2048MB	33.4W		4xmini DP
Quadro 410	192	512MB	36.7W		DVI-I DL+DP
Quadro K600	192	1GB	41W		DVI-I DL+DP
Quadro K2000	384	2GB	51.1W		DVI-I DL+2xDP
Quadro K2000D	384	2GB	51.1W		DVI-I DL+DVI-D DL+mini DP
Quadro K4000	768	3GB	80W		DVI-I DL+2xDP
Quadro K5000	1536	4GB	122W		DVI-I DL+DVI-D DL+2xDP
Quadro K6000	2880	12GB	225W		DVI-I DL+DVI-D DL+2xDP
Quadro K420	192	2GB	41W		DVI-I DL+DP
Quadro K620	384	2GB	45W		DVI-I DL+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 M4000	1664	8GB	120W		4xDP
Quadro M5000	2048	8GB	150W		DVI-I DL+4xDP
Quadro M6000	3072	12GB	250W		DVI-I DL+4xDP
Tesla K20	2496	5GB	225W		
GRID K2	3072	8GB	225W		

*** DL = Dual link, SL = Single Link, DP = DisplayPort 1.2*

Supporting storage list

(SAS drive needs LSI RAID flex adapter or 9364-8i adapter)

3.5" SATA (7.2K 6Gbs HDD)	500GB/1TB/2TB/3TB/4TB/ 1TB hybrid/2TB hybrid
2.5" SAS (15K 12Gbs HDD)	300GB/450GB/600GB
2.5" SAS SSD (12Gbs)	200GB/400GB/800GB
2.5" SATA SSD (6Gbs)	128GB/180GB/240GB/ 256GB/480GB/ 512GB/1TB (Optional OPAL)
M.2 SSD	256 GB/512GB (Optional NVMe)
PCIe SSD adapter	410GB/1.6TB

Environment specification and certifications

Temperature	
Operating:	50 °F to 95 °F (10 °C to 35 °C)
Storage:	-10 °C to 60 °C, no package -40 °C to 60 °C, with package
Altitude	
Operating:	-50~10000ft (-15.2~3048m)
Humidity	
Operating:	10%~80%, non-condensing
Storage:	10%~90%, non-condensing

RoHS-compliant/EPEAT Gold rating on all models, ENERGY STAR 6.0 qualified on selected models.

For the latest list of ISV certifications, please vist *www.lenovo.com/support/ISV*
For a list of all supported options, please see *https://download.lenovo.com/pccbbs/options_iso/ocm_november_2015.xlsx sheet*

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