

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 v3 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	256GB (RDIMM or LRDIMM)
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: <ul style="list-style-type: none"> 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). 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	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
IEEE 1394	1 front, 1 rear, via 1394 adapter, selected models
Thunderbolt	1 Thunderbolt via optional PCIe adapter. Uses slot 6.
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: 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



Expansion slots 1-6 (top-down)
Flex connector
HDD 1 HDD 3
HDD 2 HDD 4*

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

Supporting NVIDIA graphics and GPU computing list

Adapter	Cores	Memory	Power	SLI	Connector***
NVS 310	48	512MB	19.5W		2xDP
NVS 315	48	1024MB			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	1GB	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 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

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 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
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 model, ENERGY STAR 6.0 qualified on models in **Bold Oblique**

For the latest list of certifications, please visit www.lenovo.com/support/ISV
For a list of all supported options, please see [ThinkStation P500 Options sheet](#).

