ThinkStation P510 Platform Specifications

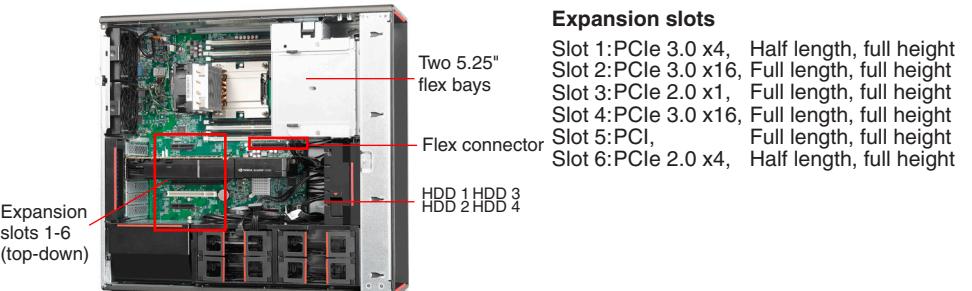| Components	Specification
Chipset	Intel C612 Platform Controller Hub (PCH)
System mgmt	Intel Active Management Technology 9
Processor	Up to one 145W Intel Xeon E5-2600 v4 or E5-1600 v4 family processors. 22 cores up to 2.2GHz, 16 cores up to 2.6GHz, 14 cores up to 2.6GHz, 12 cores up to 2.2GHz, 10 cores 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
Tesla K40	2880	12GB	235W		

Components	Specification
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, optional 1GB flash with super capacitor, 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
PCIe SSD, PCIe adapter	400GB

Components	Specification
Flex connector	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 adpater, 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	• 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

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

RoHS-compliant, GREENGUARD on all models. EPEAT Gold rating, ENERGY STAR 6.1 qualified on selected models.

Components	Specification
Base warranty	3-year limited onsite service with 9x5/NBD

Two 5.25" flex bays

Flex connector

Expansion slots 1-6 (top-down)

HDD 1 HDD 3
HDD 2 HDD 4

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 supports 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_february_2016.xlsx *sheet*

Model	30B50007++
Product	P510
Region	EMEA
Machine Type	30B5
TopSeller	Yes
Processor	Xeon E5-1620 v4 4C/3.5GHz/ 10MB/140W/DDR4-2400
Memory	1x8GB RDIMM DDR4-2400 ECC
Graphics	Open
RAID controller	Onboard
Max drives in 3.5" bays	4
Storage	1x1TB Hybrid HDD 3.5" 7.2K SATA6Gbs
Optical	DVD±RW
Medie reader	9-in-1
Power supply	490W 90%
Add-on ports	No
Keyboard/Mouse	USB Full/USB opt
Preloaded OS	Win10 Pro64
Base Warranty	3-year
Global	No
Ann date	06/16