ThinkStation P510 Platform Specifications

**Components**

<table>
<thead>
<tr>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chipset</strong></td>
</tr>
<tr>
<td><strong>System mgmt</strong></td>
</tr>
<tr>
<td><strong>Processor</strong></td>
</tr>
<tr>
<td><strong>Coprocesor</strong></td>
</tr>
<tr>
<td><strong>Memory DIMM slots</strong></td>
</tr>
<tr>
<td><strong>Memory capacity</strong></td>
</tr>
</tbody>
</table>

**Graphics, GPU computing**

- Two PCIe 3.0 x16 slots for graphics and GPU computing adapters. Up to two NVIDIA Quadro M5000 SLI adapters.

**Supporting Graphics and GPU computing**

- NVS 310: 48GB/2GB, 19.5W
- NVS 315: 48GB/2GB, 19.5W, 2xDP
- NVS 510: 192GB/2GB, 35W, 4xmini DP
- NVS 810: 1024GB/2GB, 68W, 8xmini DP
- Quadro K2400: 192GB/2GB, 41W, 4xmini DP
- Quadro K2600: 384GB/2GB, 45W, 4xmini DP
- Quadro K2000: 512GB/4GB, 45W, 4xmini DP
- Quadro K2200: 640GB/4GB, 68W, 4xmini DP
- Quadro K2400: 1344GB/4GB, 108W, 4xmini DP
- Quadro K5200: 2304GB/8GB, 150W, 4xmini DP
- Quadro M2200: 768GB/4GB, 75W, 4xmini DP
- Quadro M4000: 1536GB/8GB, 120W, 4xmini DP
- Quadro M5000: 2048GB/8GB, 150W, 4xmini DP
- Quadro M6000: 3072GB/24GB, 250W, 4xmini DP
- Quadro P4000: 256GB/2GB, 30W, 4xmini DP
- Quadro P6000: 512GB/4GB, 40W, 4xmini DP
- Quadro P1000: 640GB/4GB, 47W, 4xmini DP
- Quadro P2000: 1024GB/5GB, 75W, 4xmini DP
- Quadro P4000: 1792GB/8GB, 105W, 4xmini DP
- Quadro P5000: 2560GB/16GB, 180W, 4xmini DP
- Quadro P6000: 3840GB/24GB, 250W, 4xmini DP
- Tesla K40: 2880GB/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).

**Flex bay**

- Two 5.25" flex bays for optical drives, Front Access Storage Enclosure drives, Flex Bay Storage Enclosure drives, or flex module.
  - Up to two half-height optical drives or up to one 9.5mm optical drive, DVD-ROM, DVD±RW, or Blu-Ray burner.
  - Up to one Front Access Storage Enclosure for one 3.5" or 2.5" SATA drive.
  - Up to two Flex Bay Storage Enclosure for two 3.5" or 2.5" SATA drives.

**Supporting storage**

- 2.5" SSD, SAS2Gb: 256GB/512GB, 256GB/1TB with OPAL, 64GB/256GB with OPAL, 128GB/256GB with OPAL
- 2.5" SSD, SATA6Gb: 128GB/256GB/512GB with OPAL, 256GB/512GB/1TB without OPAL
- PCIe SSD, U2: 400GB
- PCIe SSD, M2: 256GB/512GB/1TB
- PCIe SSD adapter: 400GB (up to 3 per system)

**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**

- Integrated one Gigabit Ethernet (Intel i218LM), supports Wake-on-LAN. Optional discrete Ethernet is available.

**HD Audio**

- Realtek ALC662 codec

**PMU**

- TCG 1.2-compliant

**Power supply**

- One fixed 450 watts, autosing, 90%, 80 PLUS Gold qualified. Or one fixed 650 watts, autosing, 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

**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 front 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**

- Tool-less parts: all except CPU fansink
- 48.94 lb (22.2kg) max configuration

**Environmental specification**

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

**Base warranty**

- 3-year limited onsite service with 9x5/NBD

**ISV certifications**

- Please visit www.thinkworkstations.com/isv-certifications/

** 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: PCIe 3.0 x16, 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/flex IEEE 1394/flex eSATA).
  - Or up to two HDD bays for two drives, 3.5" or 2.5" each, SATA only.

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